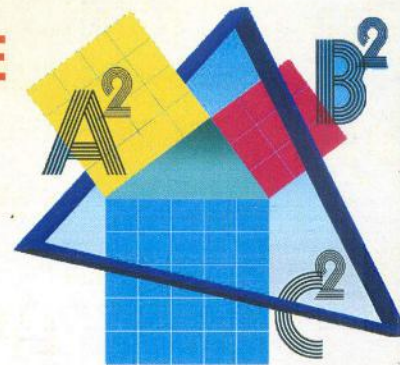




Dr. N. G. P ARTS AND SCIENCE COLLEGE

Coimbatore - 641 048.



"The essence of Mathematics is not to make simple things complicated,
but to make complicated things simple."

News Letter 2014 - 2015

Department of Mathematics

EDITORIAL BOARD

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Mrs. M. Revathy

Assistant Professor of Mathematics

VISION

- To create a new learning environment which will encourage mathematical intelligence.
- To use the mathematical knowledge for problem solving and exploring the subjects by using multiple representations of the mathematical content.

MISSION

- To motivate the students in upgrading their interest in contemporary mathematical techniques.
- To strengthen the students analytical abilities in the field of mathematics.

BRIDGE COURSE

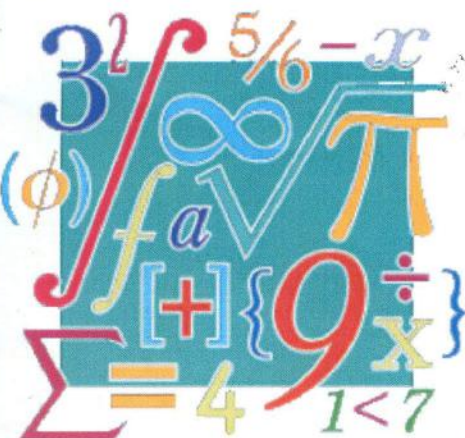
The Bridge course was held for 700 Non-Mathematics students of 1st year UG from other disciplines between 18th and 27th June 2014.

REMEDIAL COURSE

The Remedial course for our students with arrear papers in odd semester was held during 14th July to 7th October 2014 from 3.30 pm to 4.30 pm and for the even semester the course was held during 9th February to 31st March 2015.

FACULTY PUBLICATIONS

- Mr. B. Satheesh Kumar has published a paper entitled "Linear Programming applied to Nurses shifting problems" in IJSR Vol 3 Issue 3, March 2014. ISSN : 2319-7064
- Mr. B. Satheesh Kumar has published a paper entitled "Linear Programming applied to Nurses shifting problems for six consecutive days per week" in IJCS in Vol 6, Issue 3, March 2014. ISSN : 0975-833X
- Mr. B. Satheesh Kumar has published a paper entitled "A Study on Fuzzy Transportation problems under modified vogel's approximation method" in IJSR Vol 3 Issue 3, March 2014. ISSN : 2319-7064
- Mrs. V. Renukadevi, Ms. Tessy Cardoz and Mrs. P. Malarvizhi have Published a paper entitled "Role of Ψ_μ Operator in ideal Supra Topological Spaces" in the International Journal of Mathematics Trends and Technology (IJMTT) vol.9, No.3, May 2014. ISSN: 2231-5373.
- Mrs. S. Gokilamani, Mrs. S. Manimekalai & Mrs. R. Anandhi have published a paper entitled "Friendship Two-Graphs in Route mapping technology" in IJSER Vol 2 Issue 9, September 2014. ISSN: 2437-3878.
- Mr. B. Satheesh Kumar and Mrs. M. Revathy have published a paper entitled "Comparative study of various Methods for solving transportation problems" in IJSR Vol 3 Issue 9, September 2014. ISSN : 2277-8179.



- Mr. B. Satheesh Kumar and Ms. G. Nagalakshmi have published a paper entitled "The effective use of resources for bus scheduling using linear Programming" in IJSR Vol 3 Issue 9, September 2014. ISSN : 2277-8179.
- Mr. B. Satheesh Kumar, Ms. G. Nagalakshmi & Mrs. R. Anandhi have Published a paper entitled "An advanced method for solving fuzzy transportation problem with robust ranking technique" in IJSRM Vol 2 Issue 10, October 2014. ISSN: 2321-3418.
- Mr. B. Satheesh Kumar and Ms. G. Nagalakshmi have published a paper entitled "A shift sequence for Nurse Scheduling using Linear Programming Problem" in IOSR Vol 3 Issue 6, Nov-Dec 2014.
- Ms. K. Vidhyapaba, Mrs. A. Sivasathya and Mrs. V. Vimala have published a paper entitled "Some properties of Quasi-Normal operators" in IJSRM Vol 2, Issue 12, December 2014. ISSN: 2321-3418.
- Mr. B. Satheesh Kumar and Ms. G. Nagalakshmi have published a paper entitled "A constraint programming and Hybrid approach to Nurse rostering problems" in IJRITCC Vol 3 Issue 3, March 2015. ISSN: 2321-8169

SEMINARS PARTICIPATED/PAPERS PRESENTED BY THE FACULTY

- All the faculty members have participated and presented papers in the International Conference on "Mathematical Science and its Computational Applications" held on 11th & 12th August 2014 at Dr. N.G.P Arts and Science College, Coimbatore.
- Mrs. V. Renukadevi, Mrs. P. Malarvizhi & Ms. Tessy Cardoz have participated in the National Conference on "Echo of Mathematics" on 6th January 2015 at Nirmala College for Women, Coimbatore.
- Mr. B. Satheesh Kumar has participated in the National IQAC Conference on "Relevance of Interdisciplinary approach in Higher Education" at Kristu Jayanti College, Bangalore during 22nd & 23rd of January 2015.
- Mrs. P. Malarvizhi has participated and presented a paper in the National Level Seminar on "Role of teachers in Promoting "Green & Clean India" on 27th January 2015 at Lisieux B.Ed College, Coimbatore.
- Mrs. S. Manimekalai, Mrs. M. Revathy, Mrs. A. Sivasathya, Mrs. V. Vimala, Mr. M. Santhosh Kumar, Mrs. V. Renukadevi and Mrs. P. Malarvizhi have participated and presented papers in the National Seminar on "Emerging trends in fuzzy and its applications" on 30th January 2015 at Kongu Arts and Science College, Erode.
- Mrs. V. Renukadevi has participated and presented paper in the State Level Workshop on "Advanced topics in Graph Theory" on 13th February 2015 at Bharathidasan College of Arts and Science, Erode.
- Mrs. V. Renukadevi has participated in the National Seminar on "Emerging Recent trends in topology" during 19th & 20th February 2015 at Kongu College of Engineering, Erode.
- Ms. K. Vidhyapaba, Mrs. V. Vimala, Mrs. V. Renukadevi and Mrs. P. Malarvizhi have participated and presented papers in the National Conference on "Information and Communication technology in Education- Perception & Professional Practices" on 14th March 2015 at Dr. N.G.P College of Education, Coimbatore.

MEMBERSHIPS IN PROFESSIONAL BODIES

- Mrs.S. Gokilamani, Mrs.S. Manimekalai, Mrs. M. Revathy, Mrs. R. Anandhi, Mrs.V. Renukadevi, Ms.T essy Cardoz & Mrs.P.Malarvizhi have joined as the life time members in "The Association of Mathematics Teachers of India (AMTI)".

FACULTY CERTIFICATIONS

- Mrs. S. Manimekalai, & Mrs. P. Malarvizhi have certified with an online course on "Experimental Psychology".
- Mrs. P. Malarvizhi has certified with an online course on "March Mathness".
- Mrs. V. Renukadevi has certified with an online course on "Math is everywhere: Applications of Finite Math".

STUDENTS' ACHIEVEMENTS

- Ms.S. Gokila of 2012-2014 M.Sc Batch has secured 9th Rank & Ms. M. Karthika of 2011-2014 B.Sc Batch has secured 2nd Rank in Bharathiar University.
- V. Harshini and S. Elakkiya have won the 3rd prize for dance in Adhiyayam'14 held on 12th September 2014 at CMC, Coimbatore.
- R.Tamilselvi and V. Pradeepa have won the 2nd prize for Wealth from Waste and B. Aiswarya and N.Nivetha have won the 3rd prize for Paper Presentation in our college in an Inter Departmental Meet held on 30th July 2014.
- S. Nishitha has won the 1st prize for Poster Presentation in our college in an Inter Departmental Meet held on 31st July 2014.
- R.Tamilselvi has won the 3rd prize for Innovative Tattoo in our college in an Inter Departmental Meet held on 19th August 2014.
- S. Nishitha and V. Keerthana have won the 2nd prize for Poster Presentation and B. Aiswarya has won the 3rd prize for Creative Writing in our college in an Inter Departmental Meet held on 26th August 2014.
- R. Mounika and S. Menaka have won the 3rd prize for Quick food and J. Shervin Paul and Prinkle Stainy have won the 2nd prize for Debugging in our college Inter Departmental Meet held on 15th September 2014.
- J. Shervin Paul has won the 2nd prize for Chinese Whispering in an Inter Departmental Meet held on 26th September 2014 at Kathir college of Engineering, Coimbatore.
- R. Dhana Priya has won the 3rd Prize for Solo Dance in NGP FEST held on 22nd December 2014 in our college.
- G. Gomathi and K. Pushpalatha have won the 2nd prize for BEST from WASTE in the State Level Inter Collegiate Meet held at Sree Ramu College of Arts & Science on 9th January 2015.
- P.Praveen Kumar and R. Bharathi have won the 1st prize for Math Modeling and S. Nishitha and K. Shanmugapriya have won the 3rd prize for Technomath in an Inter Collegiate Meet held at Sri Krishna Arts and Science College on 9th February 2015.
- V. Nandhini and K.R. Suganthi have won the 3rd prize for Math Quiz and T. Hariprasath and J. Shervin Paul have won the 2nd prize for Math Modelling in a one day workshop on Innovations in Learning of Mathematics held at Sri Ramakrishna Mission Vidhyalaya College of Arts and Science on 19th February 2015.
- G. Gomathi and R. Chithrakala have won the 1st prize for Math Modeling in an Inter Collegiate Meet held at Kaamadhenu Arts and Science College on 20th February 2015.

HIGHLIGHTS

- An "Extension Activity-I" was organised by our Department along with our III UG Students on 12th July 2014 in Government Higher Secondary School, Vellanaipatti, Coimbatore on 'Basic Aspects of Aptitude'.
- A two days International Conference on "Mathematical Science and its Computational Applications" was organised on 11th & 12th August 2014. The following were the resource persons who made the conference indelible, Dr. P. Kandasamy, Doshisha University, Kyoto, Japan; Dr. S. Sreenadh, Sri Venkateshwara University, Tirupathi, Andhra Pradesh; Dr. K. Thangavel, Head, Department of Computer Science, Periyar University, Salem; Dr. P. Balasubramaniam, Gandhigram Rural University, Gandhigram; Dr. S. Sivasankaran and Dr. M. Bhuvaneshwari, University of Malaya, Malaysia; Dr. T. Tamizh Chelvam, Manonmaniam Sundaranar University, Tirunelveli; Dr. C. Kailasam, TamilNadu Agricultural University, Coimbatore and Dr.S.Rajan, Erode Arts and Science College, Erode.
- On 24th September 2014, a guest lecture on "You Must Win" was delivered by Dr. V. Ramakrishnan, Principal, Dr. N.G.P College of Education, Coimbatore.
- A guest lecture on "Applications of Differential Equation" was delivered by Dr. S. Karunanithi, Associate Professor, Kongunadu Arts and Science College, Coimbatore on 13th October 2014.

S.No	Class	Date	Topic
1	II B.Sc Mathematics with Computer Application	11 th June to 13 th September 2014	RDBMS & ORACLE
2	III B.Sc Mathematics with Computer Application	11 th June to 27 th September 2014	Web Designing & HTML

- A Knowledge sharing session on 'Emerging trends in Mathematics and its Applications' was organised on 9th January 2015. The resource persons were Dr.Paola Tardelli, Department of Industrial and Information, University of L'Aquila, Italy and Dr.J.Prakash, Professor in Mathematics, University of Botswana, Gaborone, Botswana shared their views on 'Applications of Mathematics & economics' and Beauty and Fun in Mathematics respectively.
- An "Extension Activity-II" was organised by our Department along with our III UG Students on 10th January 2015 in 'The United Orphanage for Disabled', Kurumbapalayam, Coimbatore on 'Development Program for Disabled Persons'.
- A three day "Placement Readiness" programme was organized by the Department of Mathematics from 21st to 23rd January 2015. Dr.K.Mangayarkarasi, Assistant Professor, K.P.R School of Business, Arasur, Coimbatore and Dr.A.Vimala & Mrs.S.Meenakshi, Assistant Professors, Department of Extension, Career Guidance and Students Welfare, Bharathiar University, Coimbatore were served as the resource persons.
- A two day workshop on "Mathematical Softwares-Advanced Level" was organised by the Department of Mathematics on 30th and 31st January 2015. Mr. P. Senthil Kumar, Bannariamman Institute of Technology, Sathy and Dr. J. Vernold Vivin, University College of Engineering, Nagerkovil were served as the resource persons for the productive workshop.
- A state level 'Inter Collegiate Meet: MATH FEST-2015' was organised on 10th February 2015. The meet was enrouted by Dr.C.Kailasam, Director of Science & Humanities, Dr.N.G.P Institute of Technology. Dr.V.Ramakrishnan, Principal, Dr.N.G.P College of Education and Dr.K.Duraiaraj, Vice Principal, Dr.N.G.P Arts & Science College.
- A guest lecture was delivered by Mr.L.Nanjundan, an expert Mathematician on "Vedic Mathematics" on 20th February 2015.
- A NET/SLET coaching classes were conducted for the final year PG students and the faculty members of our department on every Sunday in the month of March 2015 in our college campus by the dexterous person Mr.K.Karupiah, Department of Mathematics, Bharathiar University, Coimbatore-641 046.
- A guest lecture on the topic "How to do a good project" was delivered by Dr.D.Geetha Ramani, Associate Professor, Dr.N.G.P Arts and Science College, Coimbatore on 19th March 2014.

STUDENTS ARTICLE

1. THE HISTORY OF ZERO

"From placeholder to the driver of calculus, zero has crossed the greatest minds and most diverse border since it was born many centuries ago. Today, zero is perhaps the most pervasive global symbol known. In the story of zero, something can be made out of nothing."

Zero, zip, zilch - how often has a question been answered by one of these words? Countless, no doubt. Yet, behind this seemingly simple answer, conveying nothing, lays the story of an idea that took many centuries to develop, many countries to cross, and many minds to comprehend. Understanding and working with zero is the basis of our world today; without zero we would lack calculus,

financial accounting, the ability to make arithmetic computations quickly and especially in today's connected world, computers. The story of zero is the story of an idea that has aroused the imagination of great minds across the globe.

When anyone thinks of One Hundred, Two Hundred, or Seven Thousand, the image in his or her mind is of a digit followed by a few zeros. The zero functions as a placeholder; that is, three zeroes denote that there are seven thousands, rather than only seven hundreds. If we were missing one zero, that would drastically change the amount. Just imagine having one zero erased (or added) to your salary! Yet, the number system we use today - Arabic, though it in fact came originally from India - is relatively new. It was the Indians who began to understand zero both as a symbol and as an idea.

Brahmagupta, around 650 AD, was the first to formalize arithmetic operations using zero. He used dots underneath numbers to indicate a zero. These dots were alternately referred to as '*shunya*', which means empty. Brahmagupta wrote standard rules for reaching zero through addition and subtraction as well as the results of operations with zero. The only error in his rules was division by zero, which would have to wait for **Isaac Newton and G.W. Leibniz** to tackle.

But it would still be a few centuries before zero reached Europe. First, the great Arabian voyagers would bring the texts of Brahmagupta and his colleagues back from India along with spices and other exotic items. Zero reached Baghdad by 773 AD. In the ninth century, **Mohammed ibn-Musa al-Khowarizmi** was the first to work on equations that equaled zero, known as Algebra today. He also developed quick methods for multiplying and dividing numbers known as Algorithms (a corruption of his name). Al-Khowarizmi called zero '*sifr*', from which our *cipher* is derived. By 879 AD, zero was written almost as we now know it, an oval - but smaller than the other numbers. And thanks to the conquest of Spain by the Moors, zero finally reached Europe.

The Italian mathematician, **Fibonacci**, built on Al-Khowarizmi's work with algorithms in his book *Liber Abaci*, or "**Abacus book**," in 1202. Fibonacci's developments quickly gained notice by the Italian merchants and German bankers, especially the use of zero. Accountants knew their books were balanced when the positive and negative amounts of their assets and liabilities equaled zero.

The next great mathematician to use zero was **Rene Descartes**, the founder of the Cartesian coordinate system. Anyone who has to graph a triangle or a parabola should know, Descartes' origin (0,0). Although zero was now becoming more common, the developers of calculus, Newton and Leibniz, would make the final step in understanding zero.

Adding, subtracting, and multiplying by zero are relatively simple operations. But division by zero has confused even the great minds. How many times does zero go into ten? Or, how many non-existent apples go into two apples? The answer is undefined, but working with this concept is the key to calculus. For example, when one drives, the speed of the car is never constant. But how would one find the speed of the car at one particular instant? This is where zero and calculus enter the picture.

If you wanted to know your speed at a particular instant, you would have to measure the changes in speed that occur over a set period of time. By making that set period smaller and smaller, you could reasonably estimate the speed at that instant. In effect, as you make the change in time approach zero, the ratio of the change in speed to the change in time becomes similar to some number over zero - the same problem that stumped Brahmagupta.

In the 1600's, Newton and Leibniz solved this problem independently and opened the world to tremendous possibilities. By working with numbers as they approach zero, calculus was born without which we wouldn't have Physics, Engineering, and many aspects of Economics and Finance.

In the twenty-first century zero is so familiar that to talk about, it seems like a "do about nothing". But it precisely understands and working with this 'nothing' that has allowed civilization to progress. The development of zero across continents, centuries, and minds has made it one of the greatest accomplishments of human society. Because math is a global language, and calculus its crowning achievement, zero exists and is used everywhere. But, like its function as a symbol and a concept meant to denote absence, zero may

still seem like nothing at all. Yet, recall the fears over 'Y2K' and zero no longer seems like a tale told by an idiot.

- R. Dhana priya and Shantiya M.
II M.Sc Mathematics

2. ROAD TO SUCCESS

Road to success is not created as easily as it look; it requires a lot of hard and smart work. We could attain success by many ways but visualizing success.

Visualizing your dream and working for attaining, those dreams need hard work and sacrifice. Visualizing however is not something reserved solely for singers, athletes or movie stars. We need to visualize what we need to become in future from our childhood. Visualizing can be described as movie for mind, inner picture or image that could lead us to our dreams. Some tips that could help you to reach your dream,

- Take responsibility of your visualization.
- Accept what happened in the past and change it.
- Create new visual and move forward.
- Relax and focus your mind.

The success stands for :

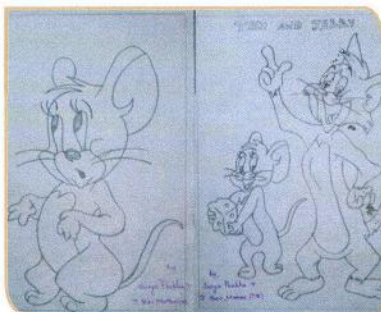
- See your goal
- Understand the obstacles
- Create positive energy
- Clear your mind
- Embrace the challenge
- Stay on track
- Show the world, who you are?

Precisely Success means:

Stop imaging and **Start** doing.

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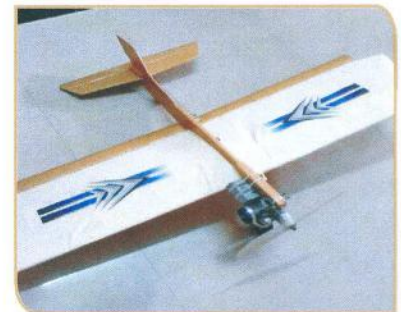
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Art By: T.Surya Prabha - II B.Sc Maths (CA)



Art By: R.Mounika - II B.Sc Maths (CA)
Art By: C.Madhumila - I B.Sc Maths (CA)



CONTROL LINE-AEROMODEL
Designed by-
PRAVEEN KUMAR. P II M.Sc Mathematics

Knowledge sharing session on 09.01.2015

Applications of Mathematics and Economics



*Dr. Paola Tardelli,
Department of Industrial and Information,
University of L'Aquila, Italy.*

**Beauty and Fun in Mathematics and
some suggested ways for a happy living
and good learning**



*Dr. J. Prakash, Professor,
Department of Mathematics,
University of Botswana, Gaborone, Botswana.*

Guest Lecture on "You must win"



*Dr.V.Ramakrishnan, Principal,
Dr. N.G.P college of Education. At multipurpose hall*



Math Fest on 10.02.2015 at Valluvar Arangam Dr.C.Kailsam and Dr.V.Ramakrishnan



*Extension Activity on 17.07.2017 & 10.01.2015 Government middle school
Vellanaipatti and The United Orphanage Kurumbalayam*

**International Conference in Mathematical Science and Its Computational
applications on 11th and 12th August 2014**



*Dr. P. Balasubramaniam, Gandhigram Rural University, Gandhigram.
Solution of Cubic Equations and Stability Analysis of Differential Equations using Neural Networks*

*Dr. T. Tamizh Chelvam,
Manonmaniam Sundaranar, University, Tirunelveli.
Efficient Dominating Sets in Cayley Graphs*



*Dr. S. Sreenadh, Sri Venkateswar University,
Tirupathi, Andhra Pradesh.
Mathematical Models for Peristaltic Transport of Bio fluids*



*Dr. K. Thangavel Periyar University,
Salem Soft Set Theory: A Review*



*Dr. S. Sivasankaran, University of Malaya, Malaysia.
Recent Trends in Computational Fluid Dynamics*

Workshop in Mathematical Software on 30.01.2015 and 31.01.2015 at lab VII

MATLAB



*Mr. P. Senthikumar Assistant Professor in Mechanical Engineering,
Bannariamman Institute of Technology, Sathyamangalam.*

LATEX



*Dr. J. Vernold Vivin Assistant Professor in Mathematics,
University College of Engineering, Nagercoil.*

Workshop in Placement Readiness Program on 21/01/2015 to 23/01/2015 at Audio Visual Room



*Mrs. S. Meenakshi, Department of Extension, Career
Guidance and Students Welfare, Bharathiar University,
Coimbatore. Personality Development*



*Dr. K. Mangayarkarasi Department of Extension,
Career Guidance and Students Welfare, Bharathiar
University, Coimbatore. Quantitative Aptitude*



*Dr. A. Vimala, Department of Extension, Career
Guidance and Students Welfare, Bharathiar University,
Coimbatore. Leadership Quality*



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Kalapatti Road, Nehru Nagar, Coimbatore - 641048

Phone : 0422 2369252 | Fax : 0422 - 2369206

