



**MARUDHARKESARI JAIN COLLEGE FOR WOMEN  
VANIYAMBADI**

(A Project of Sri Marudhar Kesari Jain Trust)



Recognized U/S 2(f) & 12(B) of UGC Act 1956 - Permanently Affiliated to Thiruvalluvar University  
Re-Accredited by NAAC with 'A' Grade (3<sup>rd</sup> Cycle) - An ISO 21001:2018 Certified Institution  
Marudhar Nagar, Chinnakallupalli, Vaniyambadi - 635751, Tirupattur District.

**PG AND RESEARCH DEPARTMENT OF BIOTECHNOLOGY ORGANIZED  
TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY (TNSCST) –  
02.01.2024 to 06.01.2024**

**INVITATION**



**TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY (TNSCST)**  
GOVERNMENT OF TAMILNADU, DOTE CAMPUS, CHENNAI - 600 025  
&  
**MARUDHAR KESARI JAIN COLLEGE FOR WOMEN**  
Recognized u/s 2(f) & 12 (B) of UGC Act, 1956 || Permanently Affiliated to Thiruvalluvar University  
An ISO 21001:2018 (ISO EOMS) Certified Institution || Accredited with "A" Grade by NAAC (3<sup>rd</sup> Cycle)  
**Marudhar Nagar, Chinnakallupalli, Vaniyambadi**

*Cordially invite you for the*  
**" INSERVICE TRAINING TO SCIENCE TEACHERS OF TIRUPATTUR DISTRICT "**  
**(02-01-2024 to 06-01-2024)**

Organized by  
**PG & RESEARCH DEPARTMENT OF BIOTECHNOLOGY**

**VENUE : SEMINAR HALL TIME : 9.30 AM**

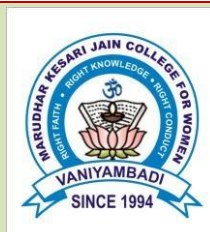
**Welcome Address**  
**Dr. M. GOMATHI**, Programme Co-ordinator  
Assistant Professor & Head, Department of Biotechnology, MKJC, Vaniyambadi

**Presidential Address**  
**Dr. M. INBAVALLI**, Principal  
Marudhar Kesari Jain College For Women, Vaniyambadi

**Inaugural Address**  
**Thiru. M. K. MUNISUBRAYAN**  
Chief Educational Officer, Tirupattur

**Felicitatation**  
**Ms. A.S. AMUTHA**  
District Educational officer (Elementary), Tirupattur

**Vote of thanks**  
**Ms. S. ARUNA**  
Assistant Professor, Department of Biotechnology, MKJC, Vaniyambadi



**TAMIL NADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY**  
**DOTe Campus, Chennai - 600 025**

&

**MARUDHAR KESARI JAIN COLLEGE FOR WOMEN**  
**Vaniyambadi**

**“Inservice Training to Science Teachers”**

**02.01.2024 & 06.01.2024**

**Venue: Seminar Hall**

**PROGRAMME SCHEDULE**

**2<sup>nd</sup> January, 2024 (Day 1)**

<b>9:30 am – 10:00 am</b>	<b>Inauguration</b>
	Training Sessions
<b>10:00 am – 11:30 am</b>	Lecture – I <b>Fundamentals of Biology</b> Mr. J. Sivaraman BT Assistant RamaKrishna Higher Secondary School Tirupattur
<b>11:30 am – 11:50 am</b>	Tea Break
<b>11:50 am – 1:20 pm</b>	Lecture – II <b>Fundamentals of Biology</b> Mr. J. Sivaraman BT Assistant RamaKrishna Higher Secondary School Tirupattur
<b>1:20 pm - 2:00 pm</b>	Lunch Break
<b>2:00 pm - 5:00 pm</b>	Hands on Training – I <b>Biochemistry Lab – Blood Grouping, Bleeding and Clotting Time</b> Ms. R. Malarkodi & Dr. M. Punithavathy Dept. of Biochemitry, MKJC

**3<sup>rd</sup> January, 2024 (Day 2)**

<b>9:30 am – 11:30 am</b>	Lecture – III <b>Biotechnology in Medicine</b> Dr. J. Lesitha Jeevakumari Research Associate, Dept. of Biotechnology, MKJC
<b>11:30 am – 11:50 am</b>	Tea Break
<b>11:50 am – 12:50 pm</b>	Lecture –IV <b>Biotechnology in Medicine</b> Dr. J. Lesitha Jeevakumari Research Associate, Dept. of Biotechnology, MKJC
<b>12:50 pm – 1:30 pm</b>	Lunch
<b>1:30 pm - 4:30 pm</b>	Hands on Training – II <b>Chemistry Lab – Organic Compound Analysis</b> Dr. M. Charumathy & Barani Priya

**4<sup>th</sup> January, 2024 (Day 3)**

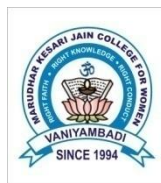
<b>9:30 am – 10:30 am</b>	Lecture – V <b>Basics and Techniques to Teach Chemistry</b> Mr. D. Sundara Sankaran M.Sc., B.Ed., M.Phil., BT Assistant in Science, Government High School, Adiyur, Tirupattur
<b>10:30 am – 11:30 am</b>	Lecture – VI <b>Fundamental concept of Solid State physics</b> Dr.V.Sabari, Research Coordinator Assistant Professor of Physics, MKJC
<b>11:30 am – 11:50 am</b>	Tea Break
<b>11:50 am – 12:50 pm</b>	Lecture – VI <b>Fun with Maths</b> Dr. S. Subramani State General Secretary, Tamilnadu Science Forum
<b>11:50 am – 12:50 pm</b>	
<b>12:50 pm – 1:30 pm</b>	Lunch
<b>1:30 pm - 3:00 pm</b>	Lecture – VII <b>Pharmaceutical Biotechnology</b> Dr. R. Jesu Jaya Sudan Research Coordinator, Dept. of Biotechnology, MKJC
<b>3:00 pm - 4:30 pm</b>	Hands on Training –III <b>Bioinformatics Lab – Drug Designing</b> Dr. R. Jesu Jaya Sudan Research Coordinator, Dept. of Biotechnology, MKJC

**5<sup>th</sup> January, 2024 (Day 4)**

<b>9:30 am – 11:30 am</b>	Lecture – VIII <b>Detailed Discussion in Physics</b> Mr. K. Sudandhiran M.Sc., M.Ed., M.Phil., Block Resource Teacher Educator, Block Resource Centre, Natrampalli.
<b>11:30 am – 11:50 am</b>	Tea Break
<b>11:50 am – 12:50 pm</b>	Hands on Training – IV <b>Physics Lab – Pin &amp; Microscope &amp; Hooke's Law</b> Dr. C. Pavithra Head & Assistant Professor, Department of Physics, MKJC
<b>12:50 pm – 1:30 pm</b>	Lunch
<b>1:30 pm - 3:00 pm</b>	Hands on Training – V <b>Physics Lab – Determination of Viscosity &amp; Interfacial Surface Tension</b> Ms. P. Praveena & M. Astalakshmi, Assistant Professor, Department of Physics, MKJC
<b>3:00 pm - 4:30 pm</b>	Hands on Training –VI <b>Biotechnology Lab – Paper and Thin Layer Chromatography</b> Ms. S. Aruna & Ms. S. Santhiya Assistant Professor , Department of Biotechnology, MKJC

**6<sup>th</sup> January, 2024 (Day 5)**

<b>9:30 am – 11:00 am</b>	Lecture – IX <b>ICT Tools for Effective Teaching</b> Dr. K. Priya Head, Department of Computer Science MKJC
<b>11:00 am – 11:20 am</b>	Tea Break
<b>11:20 am – 12:50 pm</b>	Lecture – X <b>Office Package for Teaching and Learning</b> Ms. S. Abirami Head, Department of Computer Applications MKJC
<b>12:50 pm – 1:30 pm</b>	Lunch
<b>1:30 pm - 4:30 pm</b>	Hands on Training – VII <b>Computer Science Lab – Canva Designing</b> Dr. K. Priya & Ms. S. Abirami MKJC
<b>4:30pm – 5:00pm</b>	Valediction Certificate Distribution



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GOVT.OF TAMILNADU

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## **“Inservice Training to Science Teachers”**

### **REPORT**

The “Inservice Training to Science Teachers” of Tirupattur district was organized from 02.01.2024 to 06.01.2024 at Marudhar Kesari Jain College for Women, Vaniyambadi by the Department of Biotechnology. The objective of this programme is to train Government school science teachers handling classes from 6<sup>th</sup> to 8<sup>th</sup> standard with recent concepts and latest developments in science. 51 teachers from various blocks of Tirupattur district were selected by DEO to participate in the Inservice training. 29 female and 22 male participants registered for the programme. Participants were provided with training kit which includes folder, notepad, pen and manual.

### **Day 1 (02.01.2024)**

The programme was started with inaugural session on 02.01.2024 at 9:30 am in seminar hall with prayer song followed by Tamil Thai vazhthu.

The session begins with Welcome address by Dr. M. Gomathi, Programme Coordinator, Presidential address by Dr. M. Inbavalli, Principal of Marudhar Kesari

Jain College for Women, Vaniyambadi. Sri. M. Vimmal Chand Jain and Sri. C. Lickmi Chand Jain honoured Mr. C. Gunasekaran & Mr. K.S. Karthikeyan. The Inaugural address was given by Mr. C. Gunasekaran, Assistant Project Officer (APO), Tirupattur district. He stated that he was very much privileged for attending the programme. Teachers were advised to learn recent advances in Science.

Mr. K.S. Karthikeyan, District Training Coordinator, Tirupattur district felicitated the gathering. He shared his views in learning science with fun and joy.

The first session was started by Mr. J. Sivaraman, BT Assistant, Ramakrishna (Aided) Hr.Sec.School, Tirupattur on “Fundamentals of Biology”. He explained Respiration and circulation in simplest way. After tea break he continued the second session by explaining the relationship of Heart with lungs. He also briefed about oxygenated and deoxygenated blood.

The Afternoon session started in Biochemistry lab wherein the teachers were introduced with various instrumentation facilities available in the lab followed by hands on training on “Blood Grouping” by Ms. R. Malarkodi, Head & Assistant Professor, Department of Biochemistry, Marudhar Kesari Jain College for Women, Vaniyambadi. The main purpose of this experiment is to understand the basic concept of the ABO blood Group system and to know our own blood group type. She also explained about bleeding time and clotting time. The next session was continued by Dr. M. Punithavathi, Assistant Professor, Department of Biochemistry, Marudhar Kesari Jain College for Women on “Estimation of Haemoglobin by Salhi’s

Method". The purpose of this experiment is to give awareness on the importance of Haemoglobin level in blood and to understand the range of haemoglobin in order to lead healthy life.

### **Day 2 (03.01.2024)**

The second day programme started at 9:30am in seminar hall. The forenoon session was started by Dr. J. Lesitha Jeevakumari, Research Associate, Department of Biotechnology, Marudhar Kesari Jain College for Women on the topic "Biotechnology in Medicine". The lecture was initiated by giving a glimpse of the beauty of life and living system. The participants were taught about the complexity of life on earth. A superficial view of the organization of life was provided, in that, the role of the organ systems and their coordinated functions were explained. The importance of protein and its structure in drug discovery process was narrated. An overview on the current medication system was given, in which the complications in drug discovery process were highlighted. The current challenges we face in this era due to mysterious diseases and disorders as well as the varied dimensions of existing diseases were explained.

The Afternoon session started in Chemistry lab wherein the teachers were introduced various instrumentation facilities available in the lab followed by hands on training on "Analysis of Organic compounds" by Ms. S. Baranipriya, Assistant Professor, Department of Chemistry, Marudhar Kesari Jain College for Women, Vaniyambadi. She gave detailed explanation on various tests like solubility test,



sodalime test, Ferric Chloride test, Tollen's reagent test, sodium fusion test and lead acetate test. The session continued with tests for identifying functional groups like Litmus test, sodium bicarbonate test, sodium hydroxide test, phenolphthalein test, fluorescein test, Libermann's test, etc.,

### **Day 3 (04.01.2024)**

The third day programme started at 9:30am in seminar hall. The forenoon session was started by Mr. D. Sudara Sankaran, BT Assistance in Science, Government High School, Adiyur, Tirupattur on the topic "Basic Techniques to Teach Chemistry". He taught different techniques to teach chemistry in simple way. The second session was carried by Dr. V. Sabari, Research Coordinator & Assistant Professor of Physics, Marudhar Kesari Jain College for Women on "Fundamental Concept of Solid state physics". She gave a brief note on basic fundamental law of Physics, such as, Newton's law, law of forces, Thermodynamics law etc., and she explained how to derive unit from simple derivation like Displacement, Velocity, Acceleration, angular Velocity, angular momentum, Linear Momentum, Force , Pressure, Stress, Strain etc.,. She also explained about the state of matter and its types, application of solid state in the field of medical , industry and research.

After tea break the session was continued by Dr. S. Subramani, State General Secretary, Tamilnadu Science Forum on "Fun with Maths". He gave many puzzles



and the participants actively involved in solving the puzzle. He also appreciated the volunteers with gift.

The afternoon session was started by Dr. R. Jesu Jaya Sudan, Research Coordinator, Department of Biotechnology, Marudhar Kesari Jain College for Women on “Pharmaceutical Biotechnology”. He gave a detailed note on the production of pharmaceutical products, its processing and marketing. Computational methods in drug discovery or Computer Aided Drug Design (CADD) allow rapid screening of a large compound library and determination of potential binders through modeling/simulation and visualization techniques. He have taught (drug database, drug structure visualization tool) the basic process of drug development with history that could be help to the teachers to create the awareness of CADD among the school students and also could teach them the toxic effects of active and poisonous drugs. He continued the next session in Bioinformatics lab, where hands on training were given to access drug databases, observe protein structures and how they interact with pathogenic proteins were explained. The session ended with a positive note that modern day biotechnological interventions play a vital role in treating challenging diseases and disorders..

#### Day 4 (05.01.2024)

The fourth day programme started at 9:30am in seminar hall. The forenoon session was started by Mr. K. Sudandhiran, Block Resource Teacher Educator, Block Resource Center, Natrampalli on “Detailed Discussion in Physics”.

After tea break the session continued by Dr. C. Pavithra, Head & Assistant Professor, Department of Physics, Marudhar Kesari Jain College for Women in Physics Laboratory. She gave hands on training to the teachers on “Pin & Microscope and Hooke’s Law”.

After lunch break the hands on training continued in physics lab by Ms. P. Praveena & Ms. M. Astalakshmi, Assistant Professors, Department of Physics, Marudhar Kesari Jain College for Women on “Determination of Viscosity & Interfacial Surface Tension”. During this session training were given to find the surface tension, to find the density of different liquids, to calculate the focal length of lens, to understand the elasticity for determining the spring constant and demonstrated the refractive index of the prism.

The next Hands on Training session was continued in Biotechnology lab by Ms. S. Aruna & Ms. S. Santhiya, Assistant Professors, Department of Biotechnology, Marudhar Kesari Jain College for Women on “Paper and Thin Layer Chromatography”. This technique is used to identify and separate carbohydrate and proteins/ aminoacids from plant samples.

### Day 5 (06.01.2024)

The fifth day programme started at 9:30am in seminar hall. The forenoon session was started by Dr. K. Priya, Head, Department of Computer Science, Marudhar Kesari Jain College for Women on “ICT tools for Effective teaching”. Information and Communication Technology (ICT) in education to support, enhance, and optimize the delivery of education to the students. It is essential for the teachers to learn and master the latest technologies in order to be ready for today’s scenario which helps to engage students in long term learning.

After tea break the session was continued by Ms. S. Abirami, Head, Department of Computer Applications, Marudhar Kesari Jain College for Women on “Office package for Teaching and Learning”. She explained the importance of office fundamentals in education system like maintaining student information in excel (Biodata, mark etc.), how to present data using power point presentation (PPT), how to store data from mobile to computer and computer to mobile.

After lunch break the afternoon session started with hands on training in Computer Science lab on “Excel, Worksheet Preparation and Canva Designing”. During this session tools like,

- CANVA to create interactive presentation, invitation, banner, logo, Interactive quizzes and etc.
- MS office(Word, /Excel/ Powerpoint)

- Excel formulas, text editing, table creation and chart creation
- Students database creation using MS Excel
- Online content preparations (Google to word document) were taught to the participants.

As an overall the five days training programme boosted the Science teachers with new technology and innovations in Science.

### **VALEDICTORY SESSION**

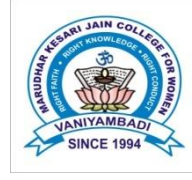
The valedictory session started at 4:30pm. Participants gave feedback and shared their experience on these five days training programme. Certificates were distributed to all the participants by Dr. M. Inbavalli, Principal, Marudhar Kesari Jain College for Women. Finally the program ended with Vote of Thanks followed by National Anthem.



**HOD SIGN**



**PRINCIPAL SIGN**



**TAMIL NADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY**  
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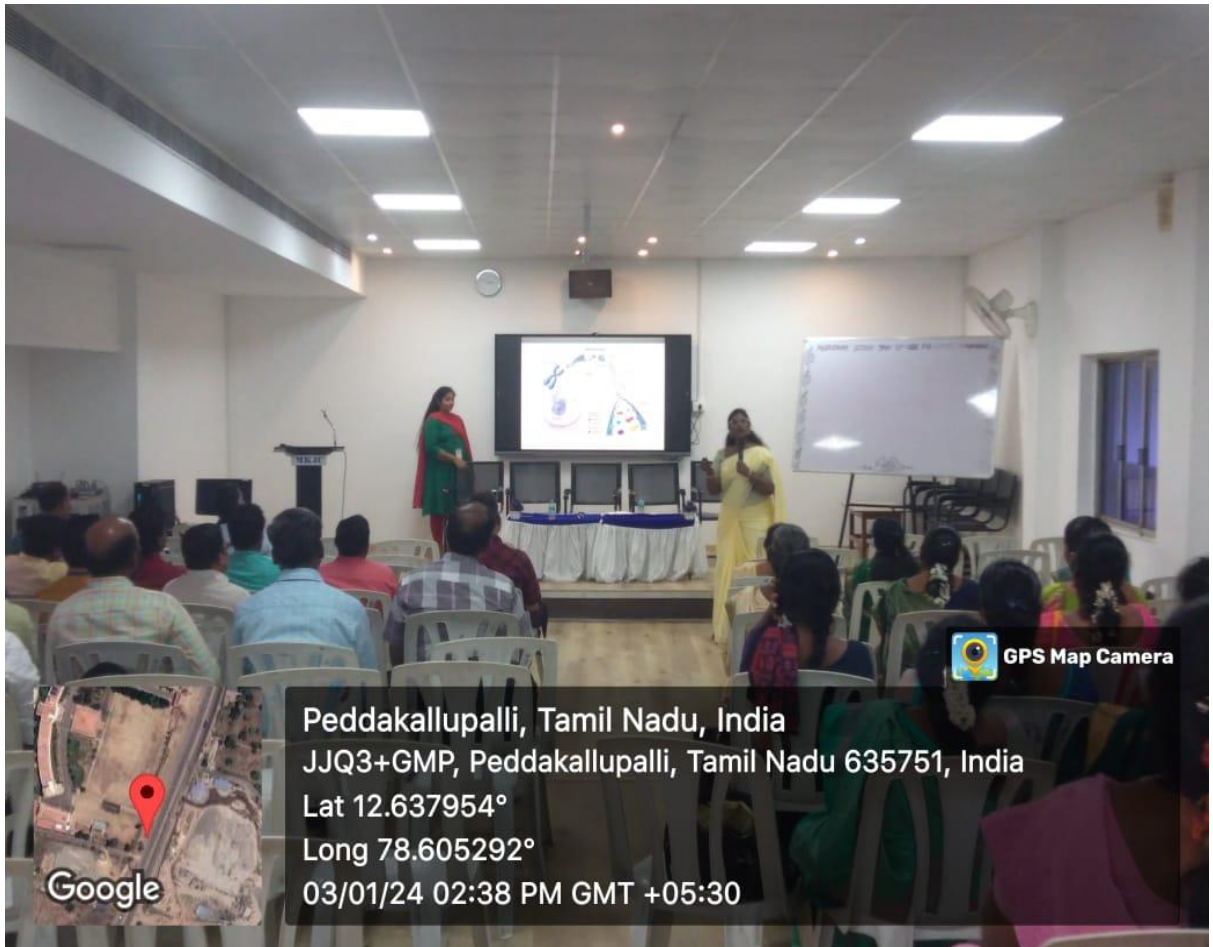
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Vaniyambadi

**"Inservice Training to Science Teachers"**  
02.01.2024 & 06.01.2024

### PHOTOS





Peddakallupalli, Tamil Nadu, India  
JJQ3+GMP, Peddakallupalli, Tamil Nadu 635751, India  
Lat 12.637954°  
Long 78.605292°  
03/01/24 02:38 PM GMT +05:30