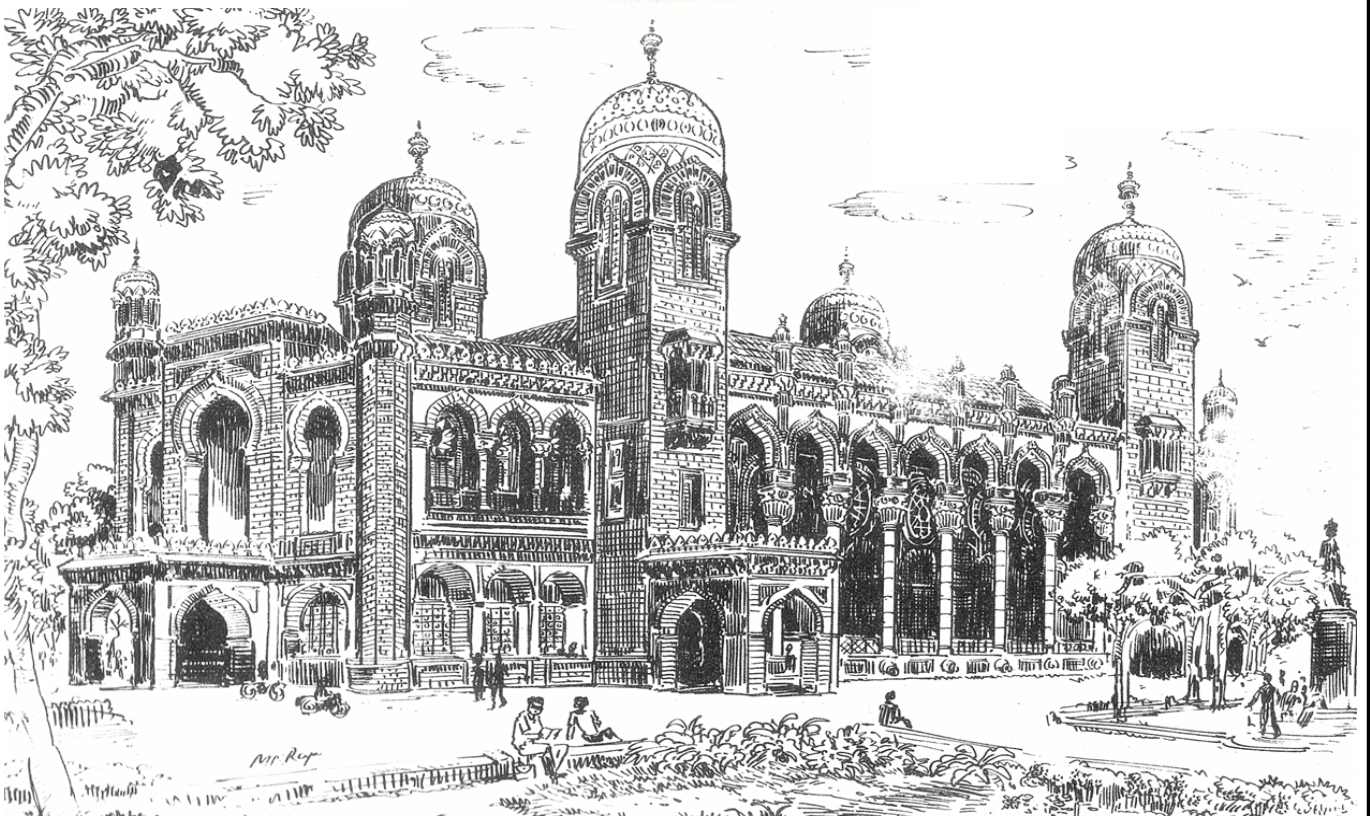


**University of Madras**  
**Rashtriya Uctchar Shiksha Abhiyan**  
**(RUSA 2.0)**  
**Entrepreneurship Career Hub (ECH)**

**Consolidated Report**  
**On**  
**Skill Based**  
**Internship Programmes**



**Inaugural Meeting (Online)**



**Vice-Chancellor**



**The Registrar i/C**



**Co-ordinator  
RUSA 2.0**



**Chief-Guest**



**Conveners, SBIP, RUSA 2.0**



**University of Madras**  
**Rashtriya Uctchar Shiksha Abhiyan (RUSA 2.0)**  
**Entrepreneurship Career Hub (ECH)**

**Consolidated Report**  
**On**  
**(Phase – I)**  
**Skill Based**  
**Internship Programmes**

**Submitted to**  
**Prof. Dr. A. Stephen,**  
**Coordinator, RUSA 2.0**

**Submitted by**  
**Programme Conveners**

**Dr. P. Prabhu**  
**Asst. Professor, Dept. of Physical Chemistry**  
**&**  
**Dr. P. Saraswathi**  
**Asst. Professor, Dept. of Hindi**



# University of Madras

## RUSA 2.0

### Entrepreneurship & Career Hub



21 Days Course  
December 2020 -  
January 2021

Organises

## Skill Based Internship Programme

This programme is aimed at imparting Skill Based Training in Sciences and Social Sciences for Post Graduate Students. Interested students can apply.

**Registration is Free. Seats are limited '**

Course Completion certificates will be awarded based on attendance and performance in the Skill based tests. The list of Programmes with registration links are provided below.

| No | Course Title                                 | Course Co-ordinator   | Registration Link   |
|----|--|---|---|
| 1  | Analytical Instruments                       | Dr. R. Anandhan<br>Dept. of Organic Chemistry                                 | <a href="https://tinyurl.com/vxpg5r52">https://tinyurl.com/vxpg5r52</a>   |
| 2  | Bioanalytical Techniques                     | Dr. R. Manikandan<br>Dept. of Zoology   | <a href="https://tinyurl.com/y35soz64">https://tinyurl.com/y35soz64</a>   |
| 3  | Protein Biology                              | Dr. M. Ravi<br>Dept. of Biochemistry  | <a href="https://tinyurl.com/y27sh3la">https://tinyurl.com/y27sh3la</a>   |
| 4  | Nano-enable Devices                          | Dr. T. Prakash<br>Dept. of Nanoscience & Technology                           | <a href="https://tinyurl.com/y3g9nk7w">https://tinyurl.com/y3g9nk7w</a>   |
| 5  | Materials for Energy Devices                 | Dr. B. Muthuraaman<br>Dept. of Energy   | <a href="https://tinyurl.com/y6ihyvps8">https://tinyurl.com/y6ihyvps8</a> |
| 6  | Networking and Communication                 | Dr. V. Rajakannan<br>Dept. of Biophysics                                      | <a href="https://tinyurl.com/y5ozgz88">https://tinyurl.com/y5ozgz88</a>   |
| 7  | Basic Science and Communication              | Dr. M. Balaji<br>Dept. of Energy  | <a href="https://tinyurl.com/y4ufdmfl">https://tinyurl.com/y4ufdmfl</a>   |
| 8  | E-Publishing & Web- Publishing               | Dr. Fazlunnisa H<br>Dept. of Library & Information Science                    | <a href="https://tinyurl.com/yxafgrwc">https://tinyurl.com/yxafgrwc</a>   |
| 9  | Leadership and Development for Millennial    | Dr. L. Kanagalakshmi &<br>Dr. P. S. Manjula<br>Dept. of Management Studies    | <a href="https://tinyurl.com/yymxzc1">https://tinyurl.com/yymxzc1</a>     |
| 10 | Laboratory course on Animal Sciences         | Dr. R. Rameshkumar<br>Dept. of Anatomy  | <a href="https://tinyurl.com/y4lczktg">https://tinyurl.com/y4lczktg</a>   |
| 11 | Molecular Diagnostic Techniques              | Dr. B. Anandan<br>Dept. of Genetics<br>Dr. D. Prabhu<br>Dept. of Microbiology | <a href="https://tinyurl.com/y3joasea">https://tinyurl.com/y3joasea</a>   |
| 12 | Personal Effectiveness and Managerial Skills | Dr. S. Sasikala<br>Dr. T. Lavanya<br>Dept. of Psychology                      | <a href="https://tinyurl.com/y698e18m">https://tinyurl.com/y698e18m</a>   |

Choose your course and  
CLICK on the links to  
register now!!!

**RUSA 2.0 Coordinator**

**Prof.A Stephen**

Dept. of Nuclear Physics

**Programme Convenors**

**Dr. Prabhu P**

Dept. of Physical Chemistry

**Dr. P. Saraswathi**

Dept of Hindi

# ANALYTICAL INSTRUMENTS



**Dr. R. ANANDHAN,**  
Programme Coordinator,  
Asst. Professor,  
Dept. of Organic Chemistry

## Scope of the Course

### Programme Duration

21<sup>st</sup> December  
2020 - 19<sup>th</sup>  
January 2021

- To acquire basic principles and instrumentations of various analytical instruments and techniques with emphasis on good laboratory practice.
- To develop operational skills essential in handle and operate sophisticated analytical instruments.
- To calculate the qualitative and quantitative analysis of various process streams.

### Skills Trained

- Trained Molecular Spectroscopy, Thermal analysis, X-ray diffraction (XRD), Morphological techniques and Nuclear Magnetic Resonance (NMR) spectroscopy.
- Handed and characterized the samples of all the above instruments.
- Trained to calculate the qualitative and quantitative analysis of various samples.
- Trained total 57 students participated skill based program from various institute.

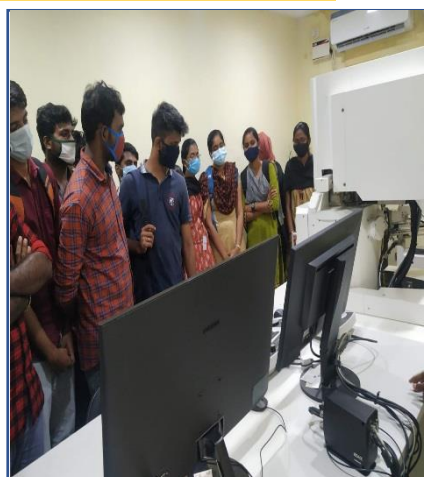
### Programme outcome

- Acquired the basic principles and application of Analytical instruments
- Had a hand on training to 57 students

### Student Feedback

- All the students are very happy and enthusiasm to learn the basics and hand on training of analytical instruments

### Photos



# PROTEIN BIOLOGY



**Dr. Ravi Manoharan, Ph.D**  
Programme Coordinator &  
Assistant Professor  
Department of Biochemistry

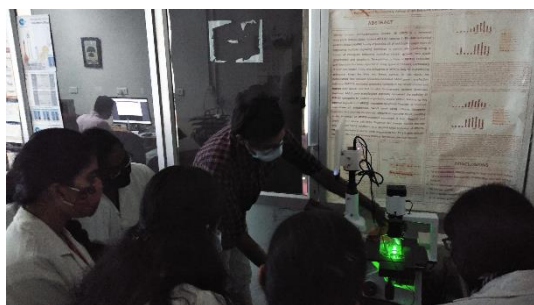
**Programme  
Duration  
10-12-2020  
to  
06-01-2021**

## Scope of the Course

- To acquire the principles and application of the protein extraction, purification and characterization methods.
- To inherit the function of protein in physiological setting and disease condition.
- To acquire picture about the application of protein in drug discovery

## Skills Trained

- Basics of Cell culture
- Protein Purification and Characterization Techniques
- In silico approaches in protein sequencing and structural studies.



## Students Feedback

- It was very informative.
- It gave us a great insight into research field.
- It helped us to learn animal cell culture and techniques in molecular biology.
- Slight insight and a great overview about bioinformatics was very fascinating.

# NANO-ENABLED DEVICES



**Dr. T. PRAKASH, Ph.D**  
Programme Coordinator &  
Assistant Professor  
National Centre for Nanoscience  
& Nanotechnology

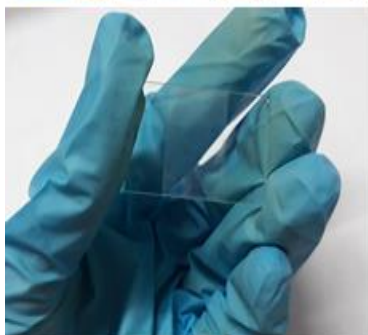
**Programme  
Duration  
12-12-2020  
to  
04-01-2021**

## Scope of the Course

Nanotechnology is an emerging technology that is already transforming the world. There is a broad range of commercial uses and the number of newly discovered uses is increasing at an exponential rate. Each new discovery of this advanced technology creates an opportunity for pioneering entrepreneurs. Hence the objective of this skill based internship program is to fulfill the demand on technologist by providing them hands-on-training towards gaining knowledge in the following employable skills.

## Skills Trained

- Inter-digitized electrode (IDE): wet etching derived Cu and immersion plated Sn
- Bactericidal (nano-ZnO) tiles by spin coating process
- Thermo-chromic paints : Preparation and testing
- Calorimetric sensors using Colloidal Gold and Egg White
- Direct conversion X-ray Sensors for low-doses (mGy): Fabrication and Testing
- Riet-veld refinement
- Visible region active photocatalytic activity of Sol-Gel derived nanocrystalline titania
- Computational Nanoscience: Melting point depression of Sn nanocrystals
- Computational Nanoscience:  $E_g$  widening using effective mass approximation
- Self-cleaning coatings using nanostructured ZnO and polystyrene thin films
- UV filter or blocking windows



# NANO-ENABLED DEVICES



## Students Feedback

- It was an informative hand's on training program, it gave us a great insight into research field
- This program helped us to learn nanoscience concepts and its products.
- I appreciate the organizer for arranging the industrial visits.



# LEADERSHIP AND DEVELOPMENT FOR MILLENNIALS



**Dr. L. Kanagalakshmi,**  
Course Coordinator,  
Asst. Professor,  
Dept. of Management  
Studies,  
University of Madras.



**Dr. P.S. Manjula,**  
Course Coordinator,  
Asst. Professor,  
Dept. of Management  
Studies,  
University of Madras.

**Programme  
Duration  
10.12.2020  
to  
12.01.2021  
(21 days)**

## Scope of the Course

This Course aims to improve the students' understanding of leadership in organization and the ability to lead people to achieve more effectively towards increased organizational performance.

## Skills Trained

- Group Dynamics and team Building Skills
- Trained on comprehensive set of practical skills and tools to enhance leadership skills.
- Effective communication skills.
- Manage interpersonal relations at work and engage a cross cultural team.
- Skills to negotiate as well as resolve conflicts.
- Importance of being an ethical leader and becoming one.

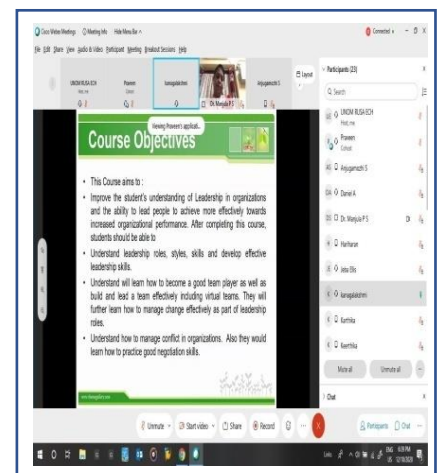
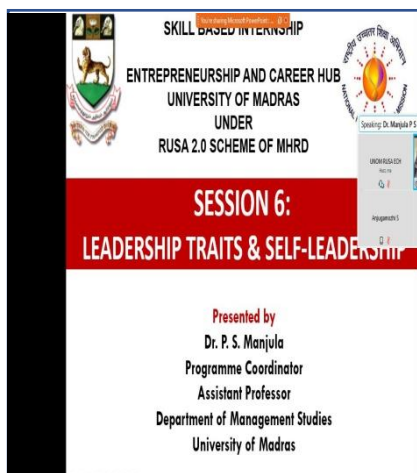
## Programme outcome

- Knowledge of self as a leader
- Create self awareness
- Embrace Human Diversity
- Enhance interpersonal skills
- Foster ability to work in teams
- Help in conflict resolution
- Develop negotiation skills
- Cross Culture Management

## Student Feedback

Received very encouraging feedback from the students. 100% participants rated the programme as a well designed one and that they highly benefitted from it.

## Photos



# LABORATORY ANIMAL SCIENCES FOR RESEARCHERS



**Dr. R. Ramesh kumar,**  
Course Coordinator, Dept. of Anatomy, Dr.ALM PGIBMS  
University of Madras, Taramani campus.

## Scope of the Course

- ❖ To build a better foundation for research students, especially for researchers involved in animal experimentations.
- ❖ To provide all necessary basic skills for researchers to maintain, understand and to work with experimental animal models and to create animal models.
- ❖ To inculcate the idea among the young researchers to establish a state of art experimental animal facility in supporting the inland research community.

### Programme

#### Duration

**Total - 45 Hrs**

**25 hrs- Lecture**

**20 hrs- Hand on/  
Field visit**

### Skills Trained

- Animal ethics, Animal welfare, Rules governing animal welfare and maintaining an experimental animal facility,.
- Maintaining the experimental animals for research and basic procedures to perform animal experiments involving breeding, drug delivery, basic animal surgery, and sample collection from animals for diagnosis.

### Programme outcome

This course on Laboratory animal sciences has equipped the trainees to take up experimental research involving animal modes comfortably.

This course has provided overall understanding to the trainees to establish a self supportive animal facility to cater the need of current researchers and research institutions.

### Student Feedback

*An excellent informative session s, thank you very much for all the members who provide us with this beautiful course on animal sciences.*  
- A V DEVI MONIKA, Dept. Of Biochemistry

*The sessions were very informative and I got the knowledge about do's and Don't s prior to start the research.* – L.KANEESWARAN , Dept of Anatomy

### Photos



# PERSONAL EFFECTIVENESS AND MANAGERIAL SKILLS



**Dr. T. Lavanya**  
Professor & Head

Programme Coordinator,  
Dept. of Psychology



**Dr. S. Sasikala**  
Assistant Professor

## Scope of the Course

- Provide the knowledge and skills for Entrepreneurship.
- Motivate students for entrepreneurship through interaction with successful entrepreneurs.
- Develop positive attitudes and achievement motivation toward self-employment and to improve confidence to be an entrepreneur.

**Programme Duration**  
45 Hours

## Skills Trained

- Motivation
- Leadership
- Conflict management
- Team building
- Decision making
- Creativity
- Risk Taking
- Interpersonal skills

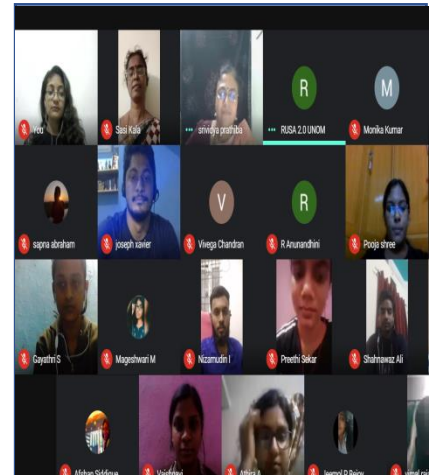
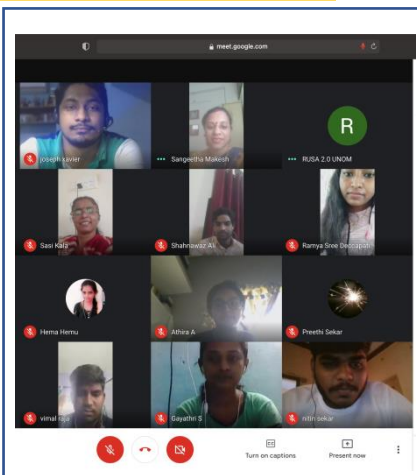
## Programme outcome

- Gained insight on the basics of entrepreneurship and the challenges of becoming an entrepreneur.
- Participants gained the entrepreneurial skills essential for being self-employed.
- Psychological skills needed for an entrepreneur were imparted to the enrolled students.
- The experience shared by few successful entrepreneurs had motivated the participants to be self-employed

## Student Feedback

- Received the wealth of knowledge shared by the Resource People
- Had a rich psychological experience
- Experienced refinement in their communication and interpersonal skills
- Gained knowledge regarding quantitative and qualitative aspects of entrepreneurship.

## Photos





**University of Madras**  
**Rashtriya Uctcharat Shiksha Abhiyan (RUSA 2.0)**  
**Entrepreneurship Career Hub (ECH)**

**Consolidated Report**  
**On**  
**(Phase – II)**  
**Skill Based**  
**Internship Programmes**

**Submitted to**  
**Prof. Dr. A. Stephen,**  
**Coordinator, RUSA 2.0**

**Submitted by**  
**Programme Conveners**

**Dr. P. Prabhu**  
**Asst. Professor, Dept. of Physical Chemistry**  
**&**  
**Dr. P. Saraswathi**  
**Asst. Professor, Dept. of Hindi**

# Inaugural Meeting (Offline)





# UNIVERSITY OF MADRAS

## RUSA 2.0

### Entrepreneurship & Career Hub



Organizes

#### SKILL BASED INTERNSHIP PROGRAMMES, PHASE-II (December 2021 - January 2022)

This programme is aimed at imparting skill based training in Sciences and Social Sciences for Post Graduate Students. Interested students can apply. Registration is Free. Seats are limited. Certificates will be awarded based on attendance and performance in the Skill based tests. The list of Programmes with registration links are provided below.

| No. | Course Titles  | Course Co-ordinators  | Registration links  |
|-----|--|---|---|
| 1.  | Clinical Trial Management for Biomedical Sciences              | Dr. S. Yasmini Sudha Lakshmi<br>Dept. of Medicinal Biochemistry   | <a href="https://tinyurl.com/1CTMBS">https://tinyurl.com/1CTMBS</a>   |
| 2.  | Basic Cell Culture Technology                                  | Dr. E. Sumathi<br>Dept. of Biotechnology  | <a href="https://tinyurl.com/2BCCT">https://tinyurl.com/2BCCT</a>     |
| 3.  | Immunogenetics   | Dr. V. Aravindhan<br>Dept. of Genetics<br>Dr. P. Rajashree<br>CAS in Crystallography & Biophysics           | <a href="https://tinyurl.com/3ImGe">https://tinyurl.com/3ImGe</a>     |
| 4.  | Financial Intelligence   | Dr. S. Usha<br>Dept. of Management Studies  | <a href="https://tinyurl.com/4FlIn">https://tinyurl.com/4FlIn</a>     |
| 5.  | Animal behavior analysis using video tracking system           | Dr. R. Ravindran<br>Dr. G. Sathya Narayanan<br>Dept. of Physiology  | <a href="https://tinyurl.com/5AnEVTs">https://tinyurl.com/5AnEVTs</a> |
| 6.  | Rational Design of Nanomaterial Catalysts                      | Dr. A. Murugadoss<br>Dept. of Inorganic Chemistry   | <a href="https://tinyurl.com/6RDNC">https://tinyurl.com/6RDNC</a>     |
| 7.  | Advanced Techniques for Microalgal Cultivation                 | Dr. S. Nagaraj<br>CAS in Botany   | <a href="https://tinyurl.com/7ATMC">https://tinyurl.com/7ATMC</a>     |
| 8.  | Basic Grammatical Aspects of Tamil                             | Dr. K. Sankara Narayanan<br>Sangappalagai for Tamil Development   | <a href="https://tinyurl.com/8Tamil">https://tinyurl.com/8Tamil</a>   |
| 9.  | Modern Techniques in Urdu Journalism                           | Dr. M. B. Amanulla<br>Dept. of Arabic, Persian & Urdu   | <a href="https://tinyurl.com/9urdu">https://tinyurl.com/9urdu</a>     |
| 10. | Employability through Data Science                             | Dr. S. Sasikala<br>IDE & Dept. of Computer Science  | <a href="https://tinyurl.com/10EDSc">https://tinyurl.com/10EDSc</a>   |
| 11. | Molecular Diagnostic Techniques                                | Dr. D. Prabu<br>Dept. of Microbiology<br>Dr. B. Anandhan<br>Dept. of Genetics                               | <a href="https://tinyurl.com/11Mdi">https://tinyurl.com/11Mdi</a>     |
| 12. | Nanomaterial's for Electrochemical Sensors                     | Dr. T. M. Sridhar<br>Dept. of Analytical Chemistry  | <a href="https://tinyurl.com/12NES">https://tinyurl.com/12NES</a>     |
| 13. | Fungal Biotechnology   | Dr. K. Malarvizhi<br>CAS in Botany  | <a href="https://tinyurl.com/13FuE">https://tinyurl.com/13FuE</a>     |
| 14. | Writing Techniques in French at Advanced Level                 | Dr. N. C. Mirakamal<br>Dept. of French & Other Foreign Languages  | <a href="https://tinyurl.com/14Fre">https://tinyurl.com/14Fre</a>     |
| 15. | Advanced Nano-Enabled Devices and Products                     | Dr. T. Prakash<br>National Centre for Nanoscience and Nanotechnology<br>Dr. K. Jayappriyan<br>CAS in Botany | <a href="https://tinyurl.com/15NEDP">https://tinyurl.com/15NEDP</a>   |
| 16. | Experimental Animal Sciences for Researchers and Entrepreneurs | Dr. R. Ramesh Kumar<br>Dept. of Anatomy   | <a href="https://tinyurl.com/16EASP">https://tinyurl.com/16EASP</a>   |
| 17. | Psychological Training for Entrepreneurship Development        | Dr. T. Lavanya<br>Dr. S. Sasikala<br>Dept. of Psychology  | <a href="https://tinyurl.com/17PsyT">https://tinyurl.com/17PsyT</a>   |

# CLINICAL TRIAL MANAGEMENT FOR BIOMEDICAL SCIENCES



**Dr. S. Yamini Sudha Lakshmi**  
Programme Coordinator,  
Asst. Professor,  
Dept. of Medical Biochemistry

**Programme  
Duration**  
**17<sup>th</sup> Dec 2021 –  
12<sup>th</sup> Jan 2022**

## Scope of the Course

1. For the awareness of the PG students to know about the various level of Clinical Trial Management for a new inventory compound after the *In vivo*, *In vitro* and *In silico* studies (Preclinical studies).
2. Animal models used in Research were learned by the students.
3. The GCP, ICH Guidelines, Drug Regulatory affairs for Clinical trial, phases of Clinical Trial, Placebo and Blinding were taught.
4. Quality control and Quality Assurance, Drug toxicity of new drugs to be formulated were learned by the students.
5. Testing of new drugs, new molecule to drug formulations were also demonstrated in industrial training.
6. Role of CRA and CRO were taught.

## Skills Trained

- a. New molecule to Drugs using UV-Visible Spectrometer, GC-MS, FTIR, HPLC, Drug dissolutor, Drug quality analyser, viscometer, Polarimeter, Flame photometer etc were demonstrated during their industrial visit to Green Tree Testing Lab.
- b. Animal Handling by dissecting and different ways by which inducing of toxicity and treatment were taught in lab training.
- c. Phytochemical analysis and antioxidant studies were demonstrated.
- d. Precautions for microbial works like broth and agar preparations, sterilizations were demonstrated.
- e. Visit to Deepam Hospital as part of industrial visit had an awareness of different domains in Hospitals. This may help to get trained in Hospital Management program in future.
- f. Industrial Visit to Armats Biotek Labs exposed them to different domains for preclinical studies like extract preparation by Soxhlet apparatus, PCR, SDS PAGE, Agarose Gel, Nanoparticles preparation were demonstrated.

## Feedbacks

I learnt and had a great insight on the topics (GCP, drug development process, clinical trial) availed in the internship. I personally liked the lab visiting, which piqued up my interest in the field (drug quality control) and it will be useful, if available with future internship there.

– **BATTU PRASANA 2<sup>ND</sup> MSC MEDICAL BIOCHEMISTRY**

# CLINICAL TRIAL MANAGEMENT FOR BIOMEDICAL SCIENCES





## Basic Cell Culture Technology



**Dr. E. SUMATHI,**  
**Programme Coordinator, Assistant Professor,**  
**Department of Biotechnology**  
**University of Madras**  
**Guindy Campus**  
**Chennai – 600 025**

### Duration of the Course

**27/12/2021 to 29/12/2022**

### Scope of the Course

- **To acquire basic knowledge and working skills on basic cell culture techniques with emphasis on Bio-safety & Good Laboratory Practice.**
- **To acquire knowledge on Aseptic Techniques involved in handling cell lines.**
- **To provide practical skills in culturing of cells, Sub-culturing , quantify cell growth & cell viability.**
- **To develop skills to determine the toxicity limits of cytotoxic compounds by MTT cytotoxicity assay.**

### Skills Trained

- **Cell Culture Laboratory Design**
- **Aseptic Techniques to be followed during cell culture techniques**
- **Preparation & Sterilization of Cell Culture Medium**
- **Preparation of Primary cell culture**
- **Sub-Culturing and preparation of secondary cell culture**
- **Cancer Cell Line Morphology studies**
- **Cell Counting & Cell Viability Assays**
- **MTT Cytotoxicity Assay**
- **DNA Fragmentation Assay**
- **DNA Agarose Gel Electrophoresis Technique**
- **Protein SDS-PAGE Technique**
- **Western Blotting Technique**

# Basic Cell Culture Technology

## Programme outcome

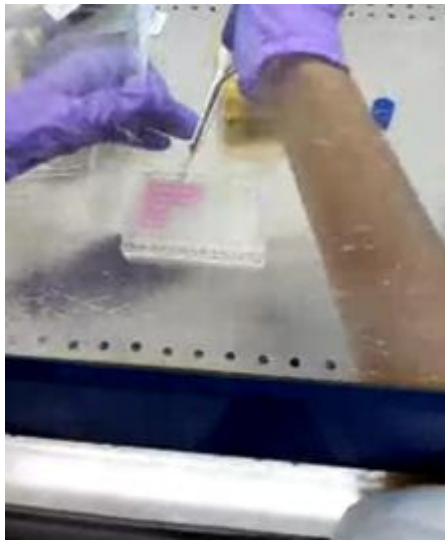
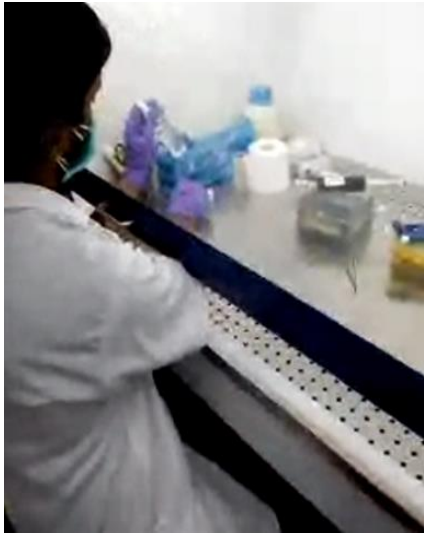
- The students had acquired knowledge and working skills on basic cell culture techniques & also the various Aseptic Techniques involved in handling cell lines.
- The students had acquired practical skills in culturing of cells, Sub-culturing , quantify cell growth & cell viability and also skills to determine the toxicity limits of Cytotoxic compounds by MTT cytotoxicity assay & Cryopreservation Techniques.

## Student Feedback

- ❖ The Internship was very informative, helpful and well organized.
- ❖ The Resource Persons were highly professional and shared vast knowledge on each topic.
- ❖ The program was an eye opener for us.
- ❖ The practical session and Industrial Tour was well organized and informative.
- ❖ The course has provided practical skill in Cell Culture & its techniques.
- ❖ It helped us to acquire knowledge in cell lines, its handling, media preparation, sterilization techniques, about cancer cells & its cell lines, cell growth & cell viability.
- ❖ The SBIP program helped us to learn how Scientists and researchers work on animal models, virus and bacterial borne diseases.
- ❖ The program also familiarized us with drug testing, drug toxicity testing and very much related to pharma.

# Basic Cell Culture Technology

## Practical Session Photos



# IMMUNOGENETICS

Programme Duration 5<sup>th</sup> Jan 2022 – 28<sup>th</sup> Jan 2022



**Dr. V. Aravindhan,**  
Programme Coordinator,  
Asst. Professor, Dept. of Genetics

**Dr. P. Rajasree,**  
Programme Coordinator,  
Asst. Professor,  
Dept. of Biophysics and Crystallography



## Scope of the Course

To acquire basic knowledge and working skills in immunogenetic techniques which are routinely used in diagnostic labs and biotech industry

## Skills Trained

- Hands on training on separation of peripheral blood mononuclear cells, neutrophils, monocytes and non-adherent cells
- ELISA, cell sonication, redox staining, MPO staining
- Industrial visit
- 22 lectures from experts



## Feedbacks

Excellent Internship programme - 2nd M.Sc student

# FINANCIAL INTELLIGENCE TRAINING



**Dr. S. Usha**, Programme Coordinator,  
Asst. Professor, Dept. of Management Studies

**17 December  
2021 -  
31 January  
2022**

## Skills Trained

- Personal Financial Management
- Different asset classes
- Investment types
- Designing Financial goals
- Risk and Return Assessment
- Time value of money
- Inflation concepts
- Mutual Funds and its types
- Role of RBI and SEBI
- Share Market Operations
- Live share Market Trading

## Photos



## Scope of the Course

- To apply a systematic decision-making process to financial planning and investments
- To develop the capacity to assess the risks related to investments & financial management
- To increase the ability for financial planning and prioritizing
- To identify the misconceptions about financial information

## Programme outcome

The training helped the students to develop a sense of comfort, control, and confidence to have financial goals in order to achieve personal financial management

## Student Feedback

The SBIP sessions were interactive, which led to develop ourself in finance. We gained knowledge on different asset classes, investment types. The practical sessions was very interesting and useful.

E. Sarvesh, Student Participant



**SKILL BASED INTERNSHIP PROGRAMME -**

**ANIMAL BEHAVIOR ANALYSIS USING VIDEO TRACKING SYSTEM**

**COURSE COORDINATORS**



**Dr. R. Ravindran,**  
Associate professor & HOD,  
Department of Physiology



**Dr. G. Sathya Narayanan,**  
Assistant Professor,  
Department of Physiology

**SCOPE OF THE COURSE**

- ✓ To provide theoretical knowledge about the physiology of behavior, learning and memory as well as motor coordination.
- ✓ To acquire knowledge about animal behavioral testing in the laboratory.
- ✓ To analyze the animal behavior using video tracking software that captures each and every frame of the animal movement in the arena.
- ✓ Course comprises 42 hours which includes Theory, Practical, Industrial visit & Assessment.

**SKILLS TRAINED**

**Rodent Behavioral tests:**

- ✦ Anxiety behaviour – Open Field, Elevated Plus Maze, Light & Dark, Hole Board
- ✦ Learning & Memory behaviour– Eight arm radial maze, T-maze, Y-maze
- ✦ Motor Co-ordination– Rotorod, Narrow beam, Broad beam, Staircase, Gait

**Zebrafish Behavioral tests:**

- ✦ Anxiety behaviour– Novel tank, Open field, Light and Dark, Place preference
- ✦ Learning & Memory behaviour– Fish maze and T- maze
- ✦ Sexual behaviour

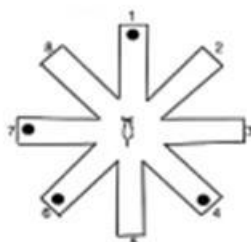
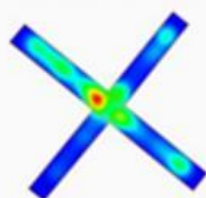
**ANYMAZE software – Video Tracking and Analysis Of Behaviour**

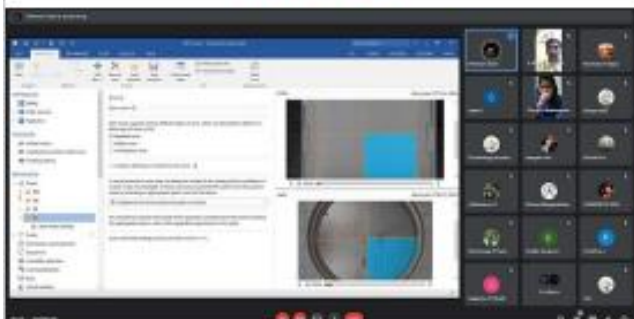
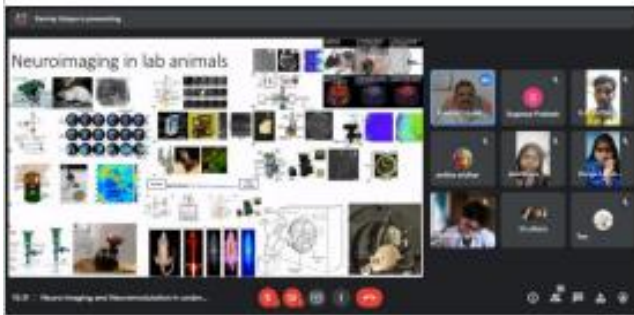
**PROGRAMME OUTCOME**

- ✓ Students acquired a sound knowledge on animal behavior and how to use the experimental apparatus.
- ✓ Hands on experience with zebra fish and rat handling.
- ✓ Students were trained with ANYMAZE - an advanced video tracking software that analyzes the animal behavior.

**STUDENTS FEEDBACK**

- ✦ "Highly informative and interesting"
- ✦ "Acquired practical knowledge about behavioral apparatus"
- ✦ "The basic knowledge obtained can be implemented in my future research and is reproducible"
- ✦ "The expert talk gave us a deep insight about the physiology of behavior and their clarity & experience on the field instilled our interests"
- ✦ "We were able to learn advanced techniques like software analysis of behavior"





# Advanced Techniques for Microalgal Cultivation



**Dr. S. Nagaraj, M.Sc., M.Phil., Ph.D.,**  
Programme Coordinator, Asst. Professor, CAS in Botany

## Scope of the Course

### Programme Duration

**16.12.2021**  
to  
**05.01.2022**

- ❖ Collection of microalgae from different freshwater habitats
- ❖ Basic and advanced microalgae isolation and purification techniques
- ❖ Strain selection and screening criteria of microalgae for bioactive molecules
- ❖ Measurement of algal growth parameters
- ❖ Culturing techniques for microalgae
- ❖ Maintenance and preservation of microalgae strains
- ❖ Practice for taxonomical identification of microalgae using standard monographs; Isolation of single cell from the consortium and methods for Serial dilution & Streak plate.
- ❖ To give the laboratory practice on screening criteria based on desired use or product for which microalgae are being exploited.

## Skills Trained

- ❖ Introduction and fundamental concept of Algology; Collection of microalgae from different freshwater habitats: (Microalgae collection methods and techniques and Preparation of microscopic slides).
- ❖ Basic and Advanced microalgae isolation and purification techniques: Taxonomical identification of microalgae using standard monographs; Isolation of single cell; Serial dilution & Streak plate and other advanced techniques.
- ❖ Strain Selection and Screening Criteria of Microalgae for bioactive molecules: About the Screening criteria based on desired use or product for which microalgae are being exploited.
- ❖ Measurement of Algal Growth parameters: Determination of algal growth through estimation of algal pigments; Determination through spectrometry; Microalgae cell count through Haemocytometer.

## Programme outcome

This course has enhanced the knowledge on microalgae cultivation concepts, paying special attention to scale-up processes, large scale cultivation and downstream processing. Also, sessions were designed through online and offline sessions targeting algal biotechnology in terms of a global approach to aid humanity

## Student Feedback

Interesting to know about the applications of microalgae in biofuel, bioethanol production along with waste water treatment & CO<sub>2</sub> sequestration – **A. Rajashree**

Today learnt about isolation, enrichment, identification methods and the culture techniques of microalgae. Lecture is Very useful and informative – **V. Vigneshwari**

## Photos





# Basic Grammatical Aspects of Tamil



**Dr. K. Sankara Narayanan,**  
Programme Coordinator, Asst. Professor, Sangappalagai for  
Tamil Development (IDE)

## Scope of the Course

**Programme  
Duration  
20.12.2021  
to  
27.01.2022**

- தமிழின் அடிப்படை இலக்கணக் கூறுகளான எழுத்து, சொல், யாப்பு, அணியிலக்கணங்களை அறிதல்
- இலக்கணம் கற்பதில் ஏற்படும் சிக்கல்களை இனம்கண்டு, தவறின்றித் தமிழில் எழுதப் பயிற்சியுடன் பயிற்றுவித்தல்
- தமிழக அரசின் அனைத்துப் போட்டித் தேர்வுகளில் தமிழ்ப் பாடம் கட்டாயமாக்கப்பட்டுள்ள நிலையில் போட்டித் தேர்வுகளுக்கிரிய தமிழின் அடிப்படை இலக்கணக் கூறுகளுக்கான திறன்களைக் கற்பித்தல்
- விருப்பமுள்ள பிறதுறைசார்ந்த மாணவர்களுக்குத் தமிழின் அடிப்படை இலக்கணக் கூறுகளை இனம் காணச் செய்து, தமிழ்மொழியின் இலக்கண அமைப்பினை அறியச் செய்தல்

## Programme outcome

- தமிழ்மொழியை முதன்மைப் பாடமாகப் பயிலும் மாணவர்களும் தமிழ் மீது விருப்பமுள்ள பிற துறைசார்ந்த மாணவர்களும் தமிழ் இலக்கணக் கூறுகள் தொடர்பான அடிப்படையான திறனைப் பெறலாம்
- எழுத்து, சொல், யாப்பு, அணி தொடர்பான அடிப்படையான இலக்கணக் கூறுகளை அறிவதால் தமிழ்மொழிக் கட்டமைப்பின் தொன்மையினையும் சிறப்பினையும் அறியலாம்
- இலக்கணம் என்றால் கசக்கும் என்ற நிலைமாறி, இலக்கணம் என்பது கற்கண்டு போன்றது என்பதை மாணவர்கள் உணரலாம்
- விண்ணப்பம், கடிதம், ஆய்வேடு, முன்னுரை, தமிழ் இதழியல் தொடர்பான எழுத்தாக்கத்தின் போது தவறின்றித் தமிழை எழுதும், பேசும் திறனை வளர்த்துக் கொள்ளலாம்.
- தமிழை மொழிப்பாடமாக எடுத்துப் பயிலாதவர்கள், தமிழின் அடிப்படையான இலக்கணக் கூறுகள் தொடர்பான திறனைப் பெற்றுப் பயன்பெறலாம்.
- தொலைதூரக் கல்வியின் வழியாகப் பயிலும் மாணவர்களுக்கும், நேரடிக் கல்வி மற்றும் தொலைதூரக் கல்வி முறையில் இளங்கலையில் தமிழை முதன்மைப் பாடமாக எடுத்துப் பயிலாதவர்கள் முதுகலையில் தமிழ் இலக்கியத்தைக் கற்கும் மாணவர்களுக்கும் தமிழ்மொழியின் கட்டமைப்பினை அறிய பேருதவியாக இருக்கும்.

## Skills Trained

- ☐தமிழின் அடிப்படை இலக்கணக் கூறுகளான எழுத்து, சொல், யாப்பு, அணி ஆகியவற்றை தற்கால எடுத்துக்காட்டுகளுடன் அறிந்து கொண்டமை
- ☐தவறின்றிப் பேசும் திறனை வளர்த்தமை
- ☐தமிழ்நாடு அரசு நடத்தும் போட்டித் தேர்வுகளுக்கான இலக்கணக் கூறுகளைச் சான்றுகளுடன் கற்றறிந்தமை
- ☐வல்லினம் மிகும் மற்றும் மிகா இடங்களை இனம் காண்பதன் மூலம் தமிழைப் பிழையில்லாமல் எழுதும் திறனை வளர்த்துக் கொண்டமை
- ☐பிறதுறை சார்ந்த மாணவர்களும் தமிழ் மொழியின் இலக்கண அமைப்பினை அறிந்து வியந்து போற்றியமை

## Student Feedback

- ❖தொலைதூரக் கல்வி வழியாகப் பயில்வதால் இணைய வழியில் நடத்தியமை சிறப்பு
- ❖அடிப்படை இலக்கணக் கூறுகளை அறிந்து கொண்டமை மிகவும் பயனுடையது
- ❖புலம்சார்ந்த ஆசிரியர்களைக் கொண்டு பயிற்றுவித்தமை
- ❖நடப்பியல் சார்ந்த எடுத்துக்காட்டுகளுடன் பயிற்சி வகுப்பு நடத்தியமை
- ❖இலக்கணம் கற்பதில் உள்ள சிக்கல்கள் தீர்ந்தமை
- ❖தவறின்றித் தமிழைப் பேசவும் எழுதவும் பயிற்றுவித்தமை அருமை

REC

4 ஊர்ச்சி → 68-69 ஆம் திணைவேலை

மதிப்பீட்டி + சினைநிலை  
 $\frac{1}{2}$  + சினைபுள்ளி  
 பரண + எல்பாட்.

Munivar Anusaya Vinayagamoorthy

முனைப்பினர் - தமிழ்ச்சி அலுவலர்

You

MANGANDAN G

Abdulhader Z.M.

33 others

REC

Sanku Karanathi

18:04 | தமிழ் மொழிபெயர்ப்புகளின் வரலாறு - 6...

Abirya Ajay

MANGANDAN G

S. Pooja

Anthony Selvi

Saa. Kabilasan@ Saa...

தீதர்வ மார்டர்

Prabakaran Kumar

23 others

You

REC

Kalyanasami Selvamani is presenting

அவள் கடைக்குப் போனாள்  
 அவள் கடைக்குப் போனாள்  
 அவர் கடைக்குப் போனார்கள  
 அவர்கள் கடைக்குப் போனார்  
 அது வீட்டிற்குள் நுழைந்தன  
 அவை வீட்டிற்குள் நுழைந்தது  
 அங்கே நூல்கள் சிதறியுள்ளது  
 நாய்கள் குரைக்கின்றது  
 நானை பெருத்துகள் ஒடாது  
 திரையாடல்கள் நிரம்பி வழிகின்றது

X அவள் கடைக்குப் போனாள்  
 X அவள் கடைக்குப் போனாள்  
 X அவர் கடைக்குப் போனார்  
 X அவர்கள் கடைக்குப் போனார்கள்  
 X அது வீட்டிற்குள் நுழைந்தது  
 X அவை வீட்டிற்குள் நுழைந்தது  
 X அங்கே நூல்கள் சிதறியுள்ளன  
 X நாய்கள் குரைக்கின்றன  
 X நானை பெருத்துகள் ஒடாது  
 X திரையாடல்கள் நிரம்பி வழிகின்றன

Kalyanasami Selvamani

NIMLA munsamy

34 others

18:41 | மொழிபெயர்ப்புகள் 2 - முனைவர் ப...

REC

தீதர்வ மார்டர் is presenting

tamilvargal.org

தமிழ் மார்டர்

Abirya Ajay

MANGANDAN G

S. Pooja

Anthony Selvi

Saa. Kabilasan@ Saa...

தீதர்வ மார்டர்

Prabakaran Kumar

29 others

You

19:04 | தமிழ் மொழிபெயர்ப்புகளின் வரலாறு - 6...

REC

Benjamin LEZOU

18:20 | இணைப்பு தனிப்பட்ட கணவர் மொழிபெயர்ப்பு பிழை...

Paithira Palani

peter johnson

தீதர்வ மார்டர்

Thara

Sinel Soy

Ahira

Jaya lakshmi

Sylvia Supphine

Shifa Anocka m...

Jaya Sacha

27 others

You

REC

தீதர்வ மார்டர் is presenting

www.vanani.com

வானனி

Abirya Ajay

MANGANDAN G

S. Pooja

Anthony Selvi

Saa. Kabilasan...

தீதர்வ மார்டர்

Prabakaran Ku...

Govi selvaraj

Mythili Mathar...

23 others

You

19:05 | தமிழ் மொழிபெயர்ப்புகளின் வரலாறு - 6...

# “MODERN TECHNIQUES IN URDU JOURNALISM”



## Dr. Amanulla M. B.

Assistant Professor, Department of Arabic Persian and Urdu,  
University of Madras, Chennai- 600005

## Objectives of the Course

- To provide a wider perspective on communication in India.
- To create placement opportunities for students of language and literature.
- To familiarize and equip them with a range of communication skills.
- To develop proper communication skills in priority areas.
- To define opportunities for journalists / communicators in view of emerging technologies.
- To give exposure to new/evolving techniques of reporting/editing/production/distribution.
- To impart extensive theoretical and practical knowledge required for Urdu Journalism etc.,

**Programme  
Duration  
Dec 2021 to  
Jan 2022**

## Skills Trained

- Urdu New Writing
- Urdu Editorial Writing
- Urdu Satellite Channels Functioning
- Urdu Mass Media Techniques
- Contemporary Requirements Urdu Journalism.
- Medical Journalism –Reporting Techniques
- Radio Journalism Techniques
- Science Journalism Techniques
- Urdu Print & Electronic Media Techniques
- Urdu Audio-Visual Techniques
- Urdu Mass Communications Techniques
- Journalism and its Ethical values
- Urdu Journalism in the perspective of Indian Composite Culture
- Industrial visit to the Printing Press

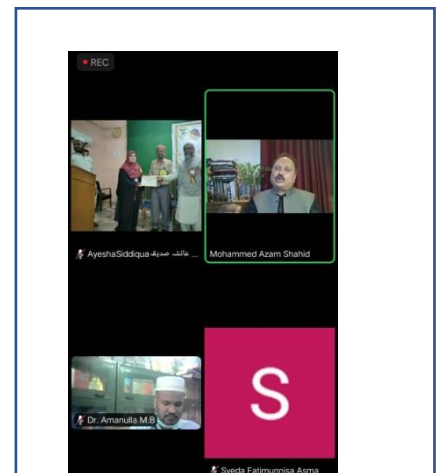
## Programme outcome

Totally 88 Students have registered out of which 40 students have been selected and trained in this internship programme. 20 Tutorial Lectures organised on different topics of the theme, in practical sessions the students are trained to develop the working knowledge of Urdu Journalism, Print and Electronic Media, Editorial and News Writing and Editing, all the participants had actively participated and healthy discussions were held to avail the expertise of the resource persons in the field of Urdu Journalism.

## Student Feedback

Your feedback about this programe Excellent Good session excellent Valuable information about journalism and indept lecture about channels معلوماتی لکچر good Very nice session thanks Good Good - Good society information Good Lecturer was brilliant and informative " اردو زبان کے ہندوسٹیٹلائٹ چینلس کی ترقی اور " اہمیت پر پروفیسر احتشام خان صاحب نے معلوماتی خطبہ پیش کیا " بہت لکچر رہا۔ Lecturer was excellent and informative Very nice

## Photos





REC



Zoom

Q&A

Leave



Dr. Amanulla M B University of ...



Dr. Amanulla M B University of ...

AyeshaSiddiqua عائشه صديقه ...

AyeshaSiddiqua عائشه صديقه ...



Mazharul Uloom College



REC

REC

REC

REC



Dr. Amanulla M B University of ...

AyeshaSiddiqua صديقه ...

AyeshaSiddiqua عائشه صديقه ...



Ayesha Yousuf



Fathima Suman



Mazharul Uloom College

University Of Madras

Dr. Amtiaz Ahmed to Hosts and Panelists

ویڈیو میں نظر نہیں آ رہے ہیں سر



MD ROUSHAN ALI

Muhammed Shalu sahal

## Student Feedback

Good Session Excellent I hope in furture that type of workshop should be conducted. Informative lecture Good Thank alot Mashaallah Very nice session thanks Program was good good Informative عمدہ بہت لیکچر رہا۔ بہت کچھ جاننے کو ملا Excellent Lecturer was excellent اور الحمد للہ عمدہ اور بہترین گفتگو بہت بہت شکریہ Pls arrange more and share widely beforehand - مشترکہ : اردو صحافت Good ہندوستانی تہذیبی تناظر میں کے موضوع پر پروفیسر ضیاء الرحمن صدیقی کا نہایت معلوماتی اور بصیرت افروز لکچر رہا، موصوف نے ہر پہلو پر مفضل طور پر تشفی بخش جواب دیے جس سے طلبہ اور ریسرچ اسکالرس مستفید ہوئے۔

Good session Informative lecture I hope in furture that type of skill workshops should be conducted. True facts about journalism and the best lecture really had very interesting topic. Excellent No Very nice session thanks Useful information عمدہ اور معلوماتی سیشن Good Very useful Good نہایت معلوماتی لکچر رہا۔ صحافت کے موضوع ماشاء اللہ -پر بہترین اور کارآمد پروگرام excellent... بہترین پروگرام

excellent Informative lecture Good پر مغز اور معلوماتی لکچر Good session Slides lecturer was good Informative Very nice session thanks - Good Lecturer was good Excellent Good lectures Informative اردو میں سائنسی " lecture thank you sir. کے موضوع پر ڈاکٹر اسد 'و طبی صحافت فیصل فاروقی صاحب کا لکچر نہایت کامیاب رہا۔ موصوف نے مختلف رسائل و جرائد کے پہلووں پر روشنی ڈالی جہاں سے سائنس کو فروغ ملا۔ جس سے ہم تشنگان علم و ادب کے لیے یہ لکچر انمول خزانے سے کم نہیں۔

# EMPLOYABILITY THROUGH DATA SCIENCE



**Dr. S. Sasikala**, MCA, MPhil, Ph.D.,  
Associate Professor of Computer Science,  
Institute of Distance Education,  
Head Incharge of Centre for  
Web based Learning,  
University of Madras, Chennai-5.

**Programme  
Duration  
27/12/2021  
to  
31/01/2022**

## Programme Outcome

- Analytical skills for employment
- Apply to data science projects
- To enhance their career as data analyst or data scientist
- To implement data science projects in python language
- To enhance soft skills for attending a interview

EMPLOYABILITY THROUGH DATA SCIENCE  
UNIVERSITY OF MADRAS

Class code: ifbqe4l

Upcoming: Join for tomorrow's session on K-Nearest Neighbor, Naive Bayes and Random Forests at 10 am.

```
df.shape
Out[4]: (981, 11)
```

```
df.describe()
Out[5]:
```

|       | DisasterData | Application  | Cooperation  | LoanAmount | Loan_Amount_Term | Credit |
|-------|--------------|--------------|--------------|------------|------------------|--------|
| count | 981.000000   | 981.000000   | 981.000000   | 984.000000 | 961.000000       | 982    |
| mean  | 0.811799     | 5179.785107  | 1801.918330  | 142.511930 | 342.201873       | 0      |
| std   | 1.258823     | 5685.104833  | 2718.772386  | 77.421743  | 65.103802        | 0      |
| min   | 0.000000     | 0.000000     | 0.000000     | 0.000000   | 0.000000         | 0      |
| 25%   | 0.000000     | 2875.000000  | 0.000000     | 100.000000 | 300.000000       | 1      |
| 50%   | 0.000000     | 3800.000000  | 1110.000000  | 128.000000 | 300.000000       | 1      |
| 75%   | 2.000000     | 5516.000000  | 2385.000000  | 162.000000 | 300.000000       | 1      |
| max   | 4.000000     | 81000.000000 | 41987.000000 | 700.000000 | 480.000000       | 1      |

# MOLECULAR DIAGNOSTIC TECHNIQUES



## Programme Coordinators

**Dr. D. Prabu**  
Assistant professor  
Department of Microbiology  
University of Madras

**Dr. B. Anandan**  
Assistant professor  
Department of Genetics  
University of Madras



**Programme Duration 28/01/2022 to 10/02/2022**

## Course Introduction:

Molecular Diagnostics are the tools based on the principles of Molecular Diagnosis. It is the process of identifying a disease by understanding the molecules, such as DNA, RNA and Proteins in a tissue or fluid, which forms the markers of the diseases directly or indirectly.

Molecular techniques related to the development and use of diagnostics such as polymerase chain reaction (PCR), quantitative real time PCR (qRT-PCR), DNA sequencing and DNA bioinformatic tools will be emphasized. The laboratory exercises are designed to provide a hands-on context for the topics being presented in the syllabus

## Scope of the Course

- To impart extensive theoretical and practical knowledge required for molecular diagnostics
- To create and train scientific workforce to meet the growing pace of molecular techniques in health care settings.
- To train and conduct research on valid clinical subjects
- The course will be enriched with several application examples and will also provide a description of pathologies or potential ethological agents where the specific techniques can be applied

## Skills trained

- To impart extensive theoretical and practical knowledge required for molecular diagnostics
- To create and train scientific workforce to meet the growing pace of molecular techniques in health care settings.
- To train and conduct research on valid clinical subjects
- The course will be enriched with several application examples and will also provide a description of pathologies or potential ethological agents where the specific techniques can be applied



# NANOMATERIALS FOR ELECTROCHEMICAL SENSORS



**Dr. T. M. Sridhar**

Assistant Professor Department of Analytical Chemistry,

## Scope of the Course

- This Workshop was focused on the recent advances in the areas of sensors such as gas sensor, biosensor, metal ion detection, hydrogen production etc., from bench to scale up.
- Fundamentals of advanced nano materials, synthesis, sensor fabrication and electrochemical techniques for sensor application was covered and translated into applications.
- Specialist's lectures were taken up by experienced professionals in the field of sensors from industry and academicians working in this field

## Programme Duration

**Total hours - 48 hours**

**Theory - 30 hours**

**Practical - 14 hours**

**Assessment - 1 hours**

**Industrial visit -3 hours**

## Skills Trained

- ✓ Nanomaterials and graphene Synthesis
- ✓ Introduction to various types of sensors
- ✓ Nanomaterials and its composites for various sensor application
- ✓ Nanomaterials Characterization tools and techniques
- ✓ Introduction to Electrochemical Impedance Spectroscopic techniques
- ✓ Various types of sensors from sweat, food, gases, pharmaceutical compounds were trained.

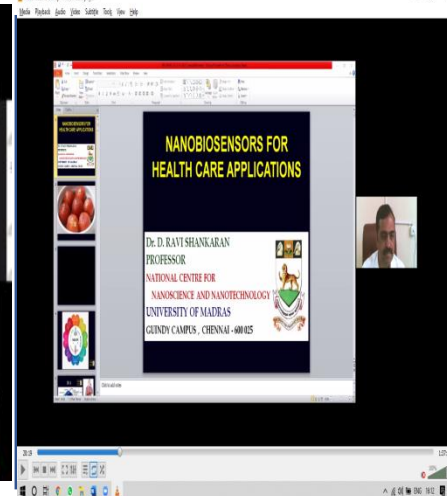
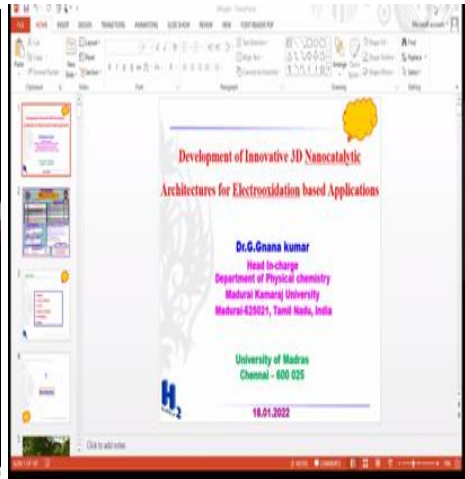
## Programme outcome

- Students can improve their skillset (theory & practical) on the Nanomaterials & graphene synthesis, sensor fabrication, testing and analysis. Innovate on new designs for sensor fabrication

## Student Feedback

Nanomaterials and sensors is an ocean of topics with scope for practical applications, go new world of exposure an skills

## Photos



# FUNGAL BIOTECHNOLOGY



**Dr. K. Malarvizhi, M.Sc., M.Phil., Ph.D.,**  
**Programme Coordinator &**  
Assistant Professor ,  
Centre for Advanced Studies in Botany

## Scope of the Course

**Programme Duration**  
**28/01/2022 to 10/02/2022**

- Impart knowledge on fundamentals of fungal biology
- Understand the biosynthetic pathway of fungal metabolites
- Aware of various fungal enzymes
- Know the importance the utility of enzymes in various industries
- Knowledge on large scale production of fungi



**a. Mushroom collection in the Field**



**b. Mushroom identification using microscope**



**c. Participants learning culturing of fungi**



**d. Training on Spawn production**



## Programme Outcome

- Benefitted the participants on recent trends/developments on fungal systematics and culturing's techniques.
- Acquired knowledge on industrially important enzymes/metabolites, bioanalytical methods involved characterization.
- Provided basic knowledge on various instruments used in bioanalytical methods.
- Qualify the students to take up job opportunities in mushroom cultivation, pharmaceutical companies, research centres etc.

# WRITING TECHNIQUES IN FRENCH AT ADVANCED LEVEL



## Dr. N. C. MIRAKAMAL

Assistant Professor & Head i/c, Department of French & Other Foreign Languages  
Programme Coordinator

Dec 21, 2021-  
Jan 21, 2022

## Scope of the Course

- Review and develop fundamental notions of the language : spelling, grammar, conjugation, etc.
- Enhance and Enrich your vocabulary
- Acquire writing methods: punctuation, organization of text and syntax, logical articulators...
- Know how to summarize and synthesize
- Understanding the different language registers
- Master different types of texts and writings: argumentative, narrative, injunctive text...

## Programme outcome

- Enhance and enrich their vocabulary
- Use correctly grammar
- Identify different language registers
- Identify different types of texts
- Put to use different writing techniques
- Write dissertation, a summary, an analysis, a report, etc.

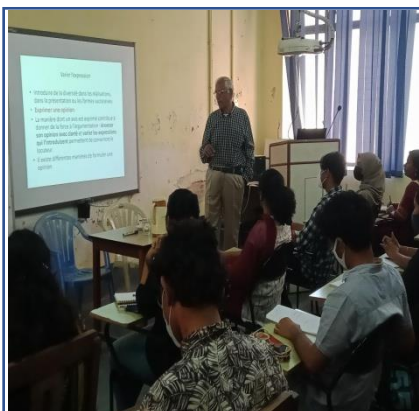
## Skills Trained

- Students' analytical skills were developed to present ideas with clarity
- Their knowledge of grammar rules were put to correct usage
- Their general language skills were honed for effective communication
- Their critical thinking was sharpened to write different types of French texts

## Student Feedback

- Students appreciated the relevance of such internships
- Developed specific skills in written French
- Acquired new vocabulary and tips to present ideas with clarity
- Leant the importance of each type of texts

## Photos



# Experimental Animal sciences for Researchers and Entrepreneurs



Dr. R. Ramesh kumar,  
Course Coordinator, Dept. of Anatomy,  
Dr.ALM PGIBMS, University of Madras,  
Taramani campus.

## Scope of the Course

### Programme

#### Duration

Total - 45 Hrs

25 hrs- Lecture

20 hrs- Hand on/  
Field visit

❖To build a better foundation in understanding experimental animals used for research and their maintenance, especially for earlier carrier researchers involved in animal experimentations.

❖To provide all necessary basic skills for researchers to maintain, understand and to work with experimental animals and to create animal models.

❖To inculcate the idea among the young researchers to establish a state of art and certified experimental animal research hub in supporting the inland research community.

## Skills Trained

•Animal ethics, Animal welfare, Rules governing animal welfare and maintenance of experimental animal facility.

•Maintaining the experimental animals for research as per guidelines of Animal welfare committee.

•Basic procedures to perform animal experiments involving breeding, drug delivery, animal surgery, and sample collections from animals for diagnosis.

## Programme outcome

This course on Experimental animal sciences has equipped the trainees to take up experimental research involving animal models comfortably abiding the guidelines of animal welfare committee.

This course has provided overall understanding and skills to the trainees to establish a self supportive animal research facility to cater the need of current researchers and research institutions.

## Student Feedback

*The sessions were very well detailed, understandable and inspiring.*

*Interesting sessions, learning about animal and modeling animals for disease conditions has fascinated me.*

*Vast information through sessions , may require more time to reappraise and practice all dealt through the course .*

## Photos



# PSYCHOLOGICAL TRAINING FOR ENTREPRENEURSHIP DEVELOPMENT



**Dr. T. Lavanya**  
Professor & Head

Programme Coordinator,  
Department of Psychology



**Dr. S. Sasikala**  
Assistant Professor

## Scope of the Course

- Provide the knowledge, skills, and attitudes in Entrepreneurship skill training.
- Expose and give direct experiential feel of interacting with Entrepreneurs and their business units/organizations
- Develop positive attitudes and achievement motivation toward self-employment and to improve confidence to be an entrepreneur.

**Programme Duration**  
45 Hours

## Programme outcome

- Gained insight on the basics of entrepreneurship and the challenges of becoming an entrepreneur.
- Participants gained the entrepreneurial skills essential for being self employed.
- Psychological skills needed for an entrepreneur were imparted to the enrolled students.
- The experience shared by few successful entrepreneurs had motivated the participants to be self-employed

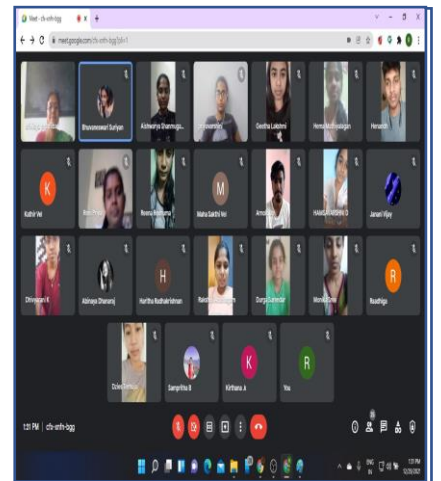
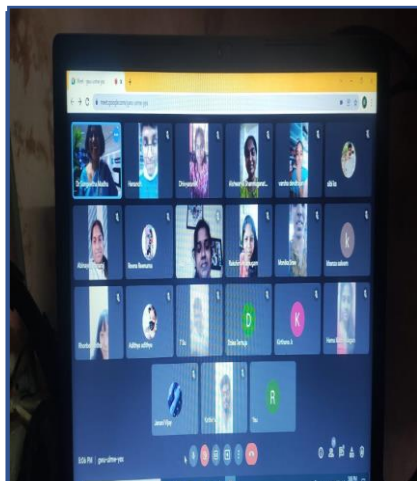
## Skills Trained

- Motivation
- Leadership
- Conflict management
- Team building
- Decision making
- Creativity
- Risk Taking
- Interpersonal skills
- Emotional Management
- Time Management

## Student Feedback

- Directly exposed to the Resource People's treasure of information.
- Had a wide range of training experiences both in offline and online mode.
- Students felt their communication and interpersonal abilities have been fine-tuned.
- A better understanding of the quantitative and qualitative components of entrepreneurship has been gained.

## Photos





# Sincere thanks to



**Prof. Dr. S. Gowri, Ph.D (IITM)**  
Vice – Chancellor  
University of Madras



**Prof. Dr. N. Mathivanan, Ph.D**  
The Registrar i/c  
University of Madras



**Prof. Dr. A. Stephen, Ph.D**  
Coordinator, RUSA 2.0  
University of Madras



## **Programme Conveners**

**Dr. P. Prabhu**

Asst. Professor, Dept. of Physical Chemistry

&

**Dr. P. Saraswathi**

Asst. Professor, Dept. of Hindi



**Special Thanks to  
RUSA office & Team**

