



**SATHYABAMA**

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

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**SCHOOL OF SCIENCE AND HUMANITIES**

**DEPARTMENT OF PHYSICS**

**Academic Year – 2022 – 2023**

**1.3.3 Value Added Courses 2022- 2023**

| <b>S. No.</b> | <b>Title</b>                               | <b>Dates</b>            | <b>No. of Students Enrolled</b> | <b>No. of Students Completed</b> |
|---------------|--------------------------------------------|-------------------------|---------------------------------|----------------------------------|
| 1             | Utilization of solar energy                | 1.8.2022 to 21.8.2022   | 43                              | 43                               |
| 2             | Computer web applications and graphics lab | 3.10.2022 to 21.10.2022 | 42                              | 42                               |
| 3             | Radiology and Safety                       | 2.1.2023 to 21.1.2023   | 50                              | 50                               |



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## **1. UTILISATION OF SOLAR ENERGY**



# **SATHYABAMA**

**INSTITUTE OF SCIENCE AND TECHNOLOGY**

[Deemed to be University]

Accredited by NAAC, approved by AICTE



**School of Science and Humanities,  
Department of Physics**

Organises

**Certificate Course on – Utilisation of Solar Energy**

**1 To 21 August 2022**

### **CHIEF PATRONS**

**Dr. Mariazeena Johnson,  
Chancellor, SIST**

**Dr. Marie Johnson,  
President, SIST**

**Mrs. J. Maria Bernadette  
Tamilarasi**

**Mr. J. Arul Selvam  
Vice Presidents, SIST**

### **PATRON**

**Dr. T. Sasipraba, Vice-Chancellor, SIST**

**Organized by**

**Prof. Dr. S. Ravichandran**  
Head, Department of Physics

**Convenor**

**Dr. P. Malliga**  
Associate Professor  
Department of Physics

**Registration Link:**

<https://forms.gle/Kzka7KNCiYCyVgGdA>

**Free Registration**

**E- Certificates will be provided**



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## Objective of the Course:

After the successful completion of the course, the student shall be able to:

Research in the field

- Marketing aspects of solar cell
- Conceptualize and create a new product
- Encourage journal publications
- Gear them toward research activities

## Schedule:

| S. No. | Resource Person    | Topics Covered                                | Date                    | Duration |
|--------|--------------------|-----------------------------------------------|-------------------------|----------|
| 1      | Dr.S. Ravichandran | Introduction to solar energy                  | 01-08-2022 - 03-08-2022 | 3 hrs    |
| 2      | Dr.S. Anandhi      | Basics of solar energy & Black Body Radiation | 01-08-2022 - 03-08-2022 | 3 hrs    |
| 3      | Dr. Anita Lett     | Origin of Solar Energy                        | 04-08-2022 - 08-08-2022 | 3 hrs    |
| 4      | Dr.C.Rameshkumar   | Properties of Solar Energy.                   | 04-08-2022 - 08-08-2022 | 3 hrs    |
| 5      | Dr.D.S.Jayalakshmi | Interaction of solar energy with atmosphere   | 09-08-2022 - 11-09-2022 | 3 hrs    |
| 6      | Dr.P.Malliga       | Formation and Structure of Solar Cells        | 09-08-2022 - 11-09-2022 | 3 hrs    |
| 7      | Dr.M.Manjula       | Types of Solar Cells                          | 12-08-2022 - 17-08-2022 | 3 hrs    |
| 8      | Dr.Anita Lett      | Solar Energy Storage                          | 12-08-2022 - 17-08-2022 | 3 hrs    |
| 9      | Dr. Ravichandran   | Guidelines for Solar Energy Usage             | 18-08-2022 - 21-08-2022 | 3 hrs    |
| 10     | Dr. Anandhi        | Solar Applications                            | 18-08-2022 - 21-08-2022 | 3 hrs    |

## Course Content:

| S. No. | Topic covered                                 | Syllabus                                                                                                                                                                                                                               | Duration |
|--------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1      | Introduction to solar energy.                 | The role of energy in economic development                                                                                                                                                                                             | 3 hrs    |
| 2      | Basics of solar energy & Black Body Radiation | Brief History of solar energy utilization- Planck's formula in wavelength unit - Wien displacement law - Stefan - Boltzmann law- Photoelectric effect - Einstein's theory of photons -Einstein's derivation of the black-body formula. | 3 hrs    |
| 3      | Origin of Solar Energy                        | Basic parameters of the Sun - Measurement of the solar constant - The structure of the Sun – The origin of solar energy - solar window- atmospheric effects- diffused radiations- Air mass-effect of Air Mass                          | 3 hrs    |



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|    |                                                 |                                                                                                                                                                                                                                                                    |       |
|----|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 4  | Properties of Solar Energy.                     | Rotation and orbital motion of the Earth around the Sun - Solar time, sidereal time - universal standard time, local standard time - Equation of time - Intensity of sunlight on an arbitrary surface at any time.                                                 | 3 hrs |
| 5  | Interaction of solar energy with the atmosphere | Interaction with the atmosphere - Absorption of the molecules – Air mass - Rayleigh scattering - Direct and scattered sunlight.                                                                                                                                    | 3 hrs |
| 6  | Formation and Structure of Solar Cells          | Formation of a PN – junction - Space charge and internal field – Quasi-Fermi levels - The Shockley diode equation - Structure of a solar cell - The solar cell equation - Fill factor and maximum power - Various electron - hole-pair recombination mechanisms    | 3 hrs |
| 7  | Types of Solar Cells                            | Crystalline silicon solar cells - Thin film solar cells: CIGS, Cite, and a – silicon - Tandem solar cells – Dye-sensitized solar cells - Organic solar cells                                                                                                       | 3 hrs |
| 8  | Solar Energy Storage                            | The necessity of storage for solar energy- Chemical energy storage - Thermal energy storage – Thermal Flywheels - Compressed air- Solar thermal electricity using Stirling engine or Ranking engine - Solar photovoltaics with concentration                       | 3 hrs |
| 9  | Guidelines for Solar Energy Usage               | Need of Earthing- regulation on earthing tools and their uses- Electrical safety- electrical safety rules- simple first aid- general safety of tools and equipment- fire extinguishers- types of fire extinguishers-Guideline of Safety measurement in solar plant | 3 hrs |
| 10 | Solar Applications                              | solar water heating system - advantages and disadvantages - Solar Lantern- street light-home light- solar cooking- Rooftop Solar system - Rooftop Solar Programme by Government of India and Objectives of the Programme.                                          | 3 hrs |

## Course Outcome:

After the successful completion of the course, the student shall be able to:

1. Understand the physical significance of solar energy and the relation of Einstein's derivation
2. Apply the Basic parameter of solar energy in tracking sunlight to calculate the atmospheric interaction



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3. Explain the basic physics behind radiation and solar energy collecting devices in detail.
4. Classify the type of energy storage system and implement the safety measurements in installing the energy storage system
5. Acquire relative information on Energy storage applications in diverse aspects

| List of Participants |                        |                    |        |                      |                   |
|----------------------|------------------------|--------------------|--------|----------------------|-------------------|
| S. No.               | Name                   |                    | S. No. | Name                 |                   |
| 1.                   | ANANDHI S              | III B.Sc., Physics | 24.    | JESSICA A            | II M.Sc., Physics |
| 2.                   | GOMATHI D              | III B.Sc., Physics | 25.    | J KAVITHA            | II M.Sc., Physics |
| 3.                   | HARIS KUMAR N          | III B.Sc., Physics | 26.    | KEERTHANA PRIYA G    | II M.Sc., Physics |
| 4.                   | BELLAM HARSH           | III B.Sc., Physics | 27.    | LOKESHWARI G         | II M.Sc., Physics |
| 5.                   | MADHAVI P              | III B.Sc., Physics | 28.    | MANISHA S            | II M.Sc., Physics |
| 6.                   | MANOJ R                | III B.Sc., Physics | 29.    | NILA K               | II M.Sc., Physics |
| 7.                   | PANDIMEENA S           | III B.Sc., Physics | 30.    | PRIYADHARSHINI C     | II M.Sc., Physics |
| 8.                   | PREMALATHA N           | III B.Sc., Physics | 31.    | RAJESH R             | II M.Sc., Physics |
| 9.                   | SAMINA S               | III B.Sc., Physics | 32.    | SAARWIN S S          | II M.Sc., Physics |
| 10.                  | SANJAY S               | III B.Sc., Physics | 33.    | SANTHOSH D           | II M.Sc., Physics |
| 11.                  | SETH SORENG            | III B.Sc., Physics | 34.    | SARANYA K            | II M.Sc., Physics |
| 12.                  | SHARMILA A             | III B.Sc., Physics | 35.    | S.SIVARAMALAKSHMI    | II M.Sc., Physics |
| 13.                  | SRIVANI V              | III B.Sc., Physics | 36.    | SRIPRIYA R R         | II M.Sc., Physics |
| 14.                  | SWATHI BALASUBRAMANIAM | III B.Sc., Physics | 37.    | STALIN MARIVALAN R   | II M.Sc., Physics |
| 15.                  | TAMILARASI K           | III B.Sc., Physics | 38.    | SUNDARESAN M         | II M.Sc., Physics |
| 16.                  | VIJAYAN B              | III B.Sc., Physics | 39.    | TAMILARASAN P        | II M.Sc., Physics |
| 17.                  | ANITHA A               | II M.Sc., Physics  | 40.    | THENMOZHI L          | II M.Sc., Physics |
| 18.                  | AUXILIA V              | II M.Sc., Physics  | 41.    | S.VAISHALI           | II M.Sc., Physics |
| 19.                  | DHARSHINI V            | II M.Sc., Physics  | 42.    | VENIS MANO J         | II M.Sc., Physics |
| 20.                  | DIVYA D                | II M.Sc., Physics  | 43.    | M.R.YOGAJOTHIESHWAAN | II M.Sc., Physics |
| 21.                  | DIVYALAKSHMI S         | II M.Sc., Physics  |        |                      |                   |
| 22.                  | JEMIMA T               | II M.Sc., Physics  |        |                      |                   |
| 23.                  | JENOLIN SHALOM S       | II M.Sc., Physics  |        |                      |                   |



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## Certificate (Sample)

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INSTITUTE OF SCIENCE AND TECHNOLOGY  
*Department of Physics*

**Certificate of Participation**

This is to certify that **Mr. B. Vijayan, II B.Sc. Physics** is awarded for his participation in the course on **"Utilisation of Solar Energy"** conducted on **1-25, August 2022** organised by Department of Physics, Sathyabama Institute of Science and Technology, Chennai

*P. Malliga*  
Co-ordinator  
Asso. Prof./Physics

*Dr. S. Ravichandran*  
Head / Department of Physics



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## 2. COMPUTER WEB APPLICATIONS AND GRAPHIC



# SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

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ACCREDITED WITH NAAC A BY NBA

## Department of Physics

*Organizes*

Certificate Course on  
On

## Computer Web applications and Graphics

from October 3 to 21, 2021

### CHIEF PATRONS

**Dr. Mariazeena Johnson**  
**Chancellor**

**Dr. Marie Johnson**  
**President**

**Mrs. J. Maria Bernadette Tamilarasi**  
**Vice Presidents, SIST**

**Mr. J. Arul Selvam**

### PATRON

**Dr. T. Sasipraba**  
**Vice-Chancellor**

### Convenors:

**Dr. S. Murugesan, Asso. Prof.,**  
**Dr. J. Anita Lett, Ass. Pro.**  
**Dr. S. Anandhi, Ass. Prof.,**

### Organizer:

**Prof. S. Ravichandran,**  
**Head – Department of Physics**  
**Dr. K. Gobi Saravanan,**  
**Scientist, IRC**

*Click here to Register :*

<https://forms.gle/HfEzATVjN4onCbg37>



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## Course Objectives:

After the successful completion of the course, the student shall be able to:

Research in the field of

- Marketing aspects of web designing
- Interdisciplinary studies in computer applications
- Conceptualize and create a new product
- Encourage journal publications
- Gear them toward research activities

## Course Content:

| S. No. | Topic covered                     | Syllabus                                                                                                                                                                                      | Duration |
|--------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1      | Web based applications            | Introduction to the Internet and World Wide Web, Fundamentals of Hyper Text Markup Language (HTML), Cascading Style Sheets (CSS)                                                              | 3 hrs    |
| 2      | Web based applications            | Client-side programming using JavaScript, Fundamentals of Extensible Markup Language (XML).                                                                                                   | 3 hrs    |
| 3      | Introduction to Computer Graphics | Basic of Computer Graphics, Applications of computer graphics, Display devices                                                                                                                | 3 hrs    |
| 4      | Introduction to Computer Graphics | Random and Raster scan systems, Graphics input devices, Graphics software and standards.                                                                                                      | 3 hrs    |
| 5      | Graphics Primitives               | Points, lines, circles and ellipses as primitives, scan conversion algorithms for primitives, Fill area primitives including scan-line polygon filling                                        | 3 hrs    |
| 6      | Graphics Primitives               | inside-outside test, boundary and flood-fill, character generation, line attributes, area-fill attributes, character attributers                                                              | 3 hrs    |
| 7      | 2D transformation and viewing     | Transformations (translation, rotation, scaling), matrix representation, homogeneous coordinates, composite transformations, reflection and shearing, viewing pipeline and coordinates system | 3 hrs    |
| 8      | 2D transformation and viewing     | window-to-viewport transformation, clipping including point clipping, line clipping (cohen-sutherland, liang- bersky, NLN), polygon clipping                                                  | 3 hrs    |
| 9      | 3D transformation and viewing     | 3D scaling, rotation and translation, composite transformation, viewing pipeline and coordinates, parallel and perspective transformation                                                     | 3 hrs    |
| 10     | 3D transformation and viewing     | view volume and general (parallel and perspective) projection transformations                                                                                                                 | 3 hrs    |



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## Course Schedule:

| S. No. | Name of the staff  | Topics Covered                    | Date                     | Duration |
|--------|--------------------|-----------------------------------|--------------------------|----------|
| 1      | Dr.S. Ravichandran | Web based applications            | 03-10-2022 to 05-10-2022 | 3 hrs    |
| 2      | Dr.S. Anandhi      | Web based applications            | 03-10-2022 to 05-10-2022 | 3 hrs    |
| 3      | Dr. Anita Lett     | Introduction to Computer Graphics | 06-10-2022 to 10-10-2022 | 3 hrs    |
| 4      | Dr.C.Rameshkumar   | Introduction to Computer Graphics | 06-10-2022 to 10-10-2022 | 3 hrs    |
| 5      | Dr.D.S.Jayalakshmi | Graphics Primitives               | 11-10-2022 to 13-10-2022 | 3 hrs    |
| 6      | Dr.P.Malliga       | Graphics Primitives               | 11-10-2022 to 13-10-2022 | 3 hrs    |
| 7      | Dr.M.Manjula       | 2D transformation and viewing     | 14-10-2022 to 18-10-2022 | 3 hrs    |
| 8      | Dr.Anita Lett      | 2D transformation and viewing     | 14-10-2022 to 18-10-2022 | 3 hrs    |
| 9      | Dr. Ravichandran   | 3D transformation and viewing     | 19-10-2022 to 21-10-2022 | 3 hrs    |
| 10     | Dr. Anandhi        | 3D transformation and viewing     | 19-10-2022 to 21-10-2022 | 3 hrs    |

## List of Participants

| S. No. | Name                      | Class              | S. No. | Name                   | Class            |
|--------|---------------------------|--------------------|--------|------------------------|------------------|
| 1.     | ANANDHI S                 | III B.Sc., Physics | 24.    | JOTHIKA R              | I M.Sc., Physics |
| 2.     | GOMATHI D                 | II B.Sc., Physics  | 25.    | KEERTHANA S N          | I M.Sc., Physics |
| 3.     | HARIS KUMAR N             | III B.Sc., Physics | 26.    | KIRTHIKA M             | I M.Sc., Physics |
| 4.     | BELLAM HARSH              | III B.Sc., Physics | 27.    | MARIA INFANT M         | I M.Sc., Physics |
| 5.     | MADHAVI P                 | III B.Sc., Physics | 28.    | MARY SHAMALA V         | I M.Sc., Physics |
| 6.     | MANOJ R                   | III B.Sc., Physics | 29.    | PADMA PRIYA B          | I M.Sc., Physics |
| 7.     | PANDIMEENA S              | III B.Sc., Physics | 30.    | PRATHYUSHA S Y         | I M.Sc., Physics |
| 8.     | PREMALATHA N              | III B.Sc., Physics | 31.    | SANGEETHA V            | I M.Sc., Physics |
| 9.     | SAMINA S                  | III B.Sc., Physics | 32.    | SASHMITHAN A           | I M.Sc., Physics |
| 10.    | SANJAY S                  | III B.Sc., Physics | 33.    | SHALINI T              | I M.Sc., Physics |
| 11.    | SETH SORENG               | III B.Sc., Physics | 34.    | SUBRAMANIAN S M        | I M.Sc., Physics |
| 12.    | SHARMILA A                | III B.Sc., Physics | 35.    | SUDHAKAR S             | I M.Sc., Physics |
| 13.    | SRIVANI V                 | III B.Sc., Physics | 36.    | TAMILSELVAN J          | I M.Sc., Physics |
| 14.    | SWATHI<br>BALASUBRAMANIAM | III B.Sc., Physics | 37.    | THARANI M              | I M.Sc., Physics |
| 15.    | TAMILARASI K              | III B.Sc., Physics | 38.    | VARALAKSHMI<br>VASUDHA | I M.Sc., Physics |
| 16.    | VIJAYAN B                 | III B.Sc., Physics | 39.    | VISHAL R G             | I M.Sc., Physics |
| 17.    | ANURADHA SHARMA           | I M.Sc., Physics   | 40.    | YAZHINI J K            | I M.Sc., Physics |
| 18.    | ARCHANA K L               | I M.Sc., Physics   | 41.    | YOGESHWARAN A          | I M.Sc., Physics |
| 19.    | BHUVANESHUWARI<br>B       | I M.Sc., Physics   | 42.    | YUKESH M               | I M.Sc., Physics |
| 20.    | DIVYABHARATHI S           | I M.Sc., Physics   |        |                        |                  |
| 21.    | DURGADEVI G               | I M.Sc., Physics   |        |                        |                  |
| 22.    | HEMAMALINI P              | I M.Sc., Physics   |        |                        |                  |
| 23.    | IMMANUEL WESLY U          | I M.Sc., Physics   |        |                        |                  |



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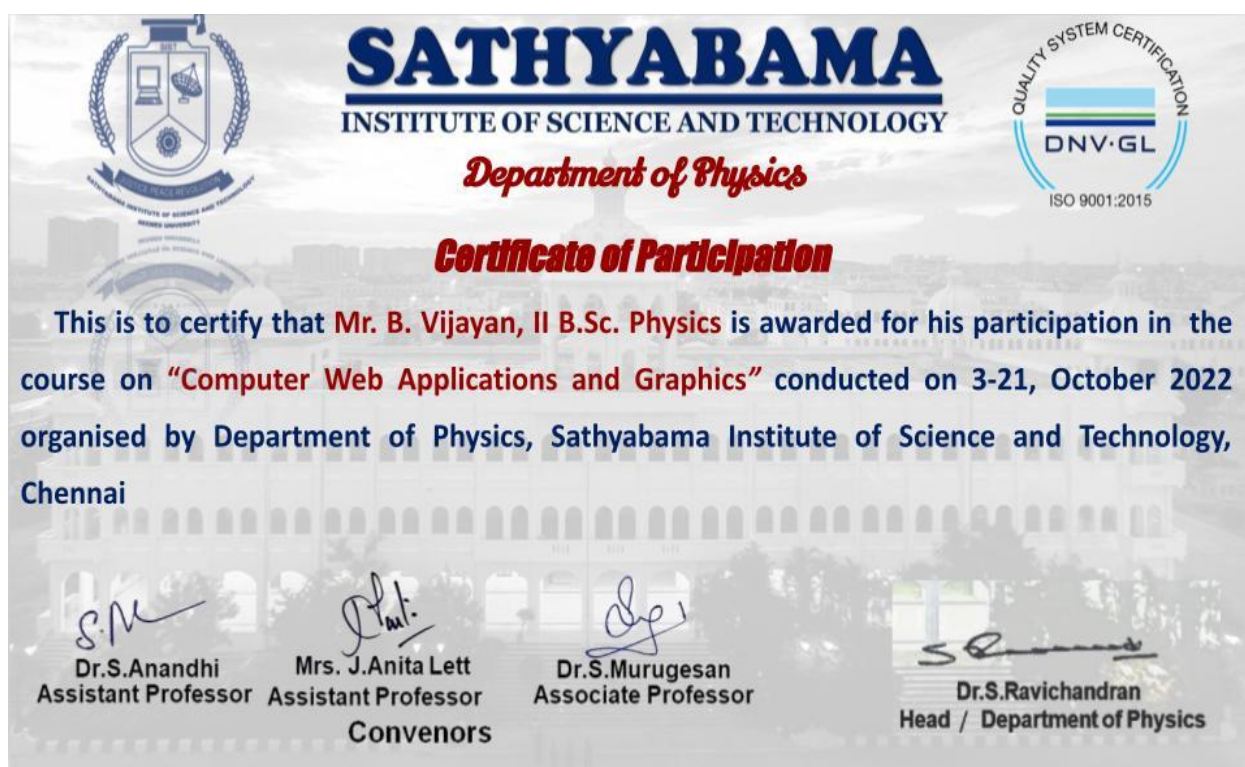
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## Course Outcome:

After learning the course, the students should be able to:

1. To understand the various computer graphics hardware and display technologies.
2. 2D and 3D viewing technologies
3. Various 2D and 3D objects transformation techniques

## Certificate (Sample):





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### 3. ADIOLOGY AND SAFETY



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**APPROVED BY AICTE**

**School of Science and Humanities**

**Department of Physics**

**Certificate Course on**

## **Radiology and safety**

## **புரடீயாலஜி and safety**

**02 - 21 January 2023**

**6 - 8 PM**

### **CHIEF PATRONS**

**Dr. Mariazeena Johnson,  
Chancellor, SIST**

**Dr. Marie Johnson,  
President, SIST**

**Mrs. J. Maria  
Bernadette Tamilarasi**

**Mr. J. Arul Selvam  
Vice Presidents, SIST**

### **PATRON**

**Dr. T. Sasipraba, Vice-Chancellor, SIST**

**Convenor:**

**Dr. S. Murugesan  
Associate Professor  
Dr. S. Anandhi  
Dr. J. Anitalett  
Assistant Professor**

**Organizer:**

**Dr. S. Ravichandran  
HOD & Professor**





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## Course Objectives:

- Understanding nuclear radiation and its biological effects.
- Radiation measurement, technique for detecting the intensity and characteristics of ionizing radiation, such as alpha, beta, and gamma rays
- Radiation Safety is to Prevent Harmful effects that are, in principle, preventable. Reduce the risk of cancer and heritable effects to the extent reasonably achievable.

## Course Content:

| S. No. | Topic covered                   | Syllabus                                                                                                                                                                                                                                                                                                                     | Duration |
|--------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1      | Radiation Quantities and Units: | Radiation- Radioactivity- Sources of radiation - natural radioactive sources -cosmic rays-terrestrial radiation - man made radiation sources. Units of radiation Exposure- Activity concentration - Absorbed dose-Equivalent Dose Weighting Factors-Effective Dose - Occupational Exposure Limits - Dose limits to public.   | 3 hrs    |
| 2      | Biological Effects of radiation | Ionization, excitation and free radical formation, hydrolysis of water, action of radiation on cell - Chromosomal aberration and its application for the biological dosimetry- Effects of whole body and acute irradiation, dose fractionation, effects of ionizing radiation on each of major organ system including fetus. | 3 hrs    |
| 3      | Radiation detection             | Radiation detection: Ionization of gases- Fluorescence and Phosphorescence -Effects on photographic emulsion. Ionization Chambers – proportional counters- G.M counters- scintillation detectors – liquid semiconductor detectors –                                                                                          | 3 hrs    |
| 4      | Radiation Measurements          | Gamma ray spectrometer. and Measurements: secondary standard dosimeters – film dosimeter – chemical dosimeter - Thermoluminescent Dosimeter - Pocket Dosimeter-Radiation survey meter- wide range survey meter -zone monitor-contamination monitor - their principle-function and uses.                                      | 3 hrs    |
| 5      | Radiation Hazard evaluation     | Philosophy of Radiation protection, effects of time, Distance & Shielding. Calculation of Work load, weekly calculated dose to radiation worker & General public good work practice in Diagnostic Radiology.                                                                                                                 | 3 hrs    |



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|    |                                  |                                                                                                                                                                                                              |       |
|----|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 6  | Radiation control                | Planning consideration for radiology, including Use factor, occupancy factors, and different shielding material.                                                                                             | 3 hrs |
| 7  | Radiation protection             | Radiation protection of self and patient- Principles of radiation protection, time - distance and shielding, shielding - calculation and radiation survey –ALARA personnel dosimeters (TLD and film batches) | 3 hrs |
| 8  | Occupational Exposure Guidelines | occupational exposure - ICRP, NRPB, NCRP and WHO guidelines for radiation protection, pregnancy and radiation protection. Guidance level for patient's dose reduction in radio-diagnosis.                    | 3 hrs |
| 9  | Regulatory Requirements          | International Commission on Radiation Protection (ICRP) / National Regulatory body (AERB - Atomic Energy Regulatory Board).                                                                                  | 3 hrs |
| 10 | Radiation Responsibilities       | Responsibilities, organization, Safety Standard, Codes and Guides, Responsibilities of licenses, registrants & employers and Enforcement of Regulatory requirements.                                         | 3 hrs |

## Course Schedule:

| S. No. | Resource Person    | Topics Covered                   | Date                     | Duration |
|--------|--------------------|----------------------------------|--------------------------|----------|
| 1      | Dr.S. Ravichandran | Radiation Quantities and Units   | 02-01-2023 to 04-01-2023 | 3 hrs    |
| 2      | Dr.S. Anandhi      | Biological Effects of radiation  | 02-01-2023 to 04-01-2023 | 3 hrs    |
| 3      | Dr. Anita Lett     | Radiation detection              | 05-01-2023 to 07-01-2023 | 3 hrs    |
| 4      | Dr.C.Rameshkumar   | Radiation Measurements           | 05-01-2023 to 07-01-2023 | 3 hrs    |
| 5      | Dr.D.S.Jayalakshmi | Radiation Hazard evaluation      | 09-01-2023 to 11-09-2023 | 3 hrs    |
| 6      | Dr.P.Malliga       | Radiation control                | 09-01-2023 to 11-09-2023 | 3 hrs    |
| 7      | Dr.M.Manjula       | Radiation protection             | 12-01-2023 to 14-01-2023 | 3 hrs    |
| 8      | Dr.Anita Lett      | Occupational Exposure Guidelines | 12-01-2023 to 14-01-2023 | 3 hrs    |
| 9      | Dr. Ravichandran   | Regulatory Requirements          | 19-01-2023 to 21-01-2023 | 3 hrs    |
| 10     | Dr. Anandhi        | Radiation Responsibilities       | 19-01-2023 to 21-01-2023 | 3 hrs    |



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### List of Participants

| S. No | Name               | Class             | S. No. | Name                | Class            |
|-------|--------------------|-------------------|--------|---------------------|------------------|
| 1.    | ANITHA A           | II M.Sc., Physics | 25.    | ANURADHA SHARMA     | I M.Sc., Physics |
| 2.    | AUXILIA V          | II M.Sc., Physics | 26.    | ARCHANA K L         | I M.Sc., Physics |
| 3.    | DHARSHINI V        | II M.Sc., Physics | 27.    | BHUVANESHUWARI B    | I M.Sc., Physics |
| 4.    | DIVYA D            | II M.Sc., Physics | 28.    | DIVYABHARATHI S     | I M.Sc., Physics |
| 5.    | DIVYALAKSHMI S     | II M.Sc., Physics | 29.    | DURGADEVI G         | I M.Sc., Physics |
| 6.    | JEMIMA T           | II M.Sc., Physics | 30.    | HEMAMALINI P        | I M.Sc., Physics |
| 7.    | JENOLIN SHALOM S   | II M.Sc., Physics | 31.    | IMMANUEL WESLY U    | I M.Sc., Physics |
| 8.    | JESSICA A          | II M.Sc., Physics | 32.    | JOTHIKA R           | I M.Sc., Physics |
| 9.    | J KAVITHA          | II M.Sc., Physics | 33.    | KEERTHANA S N       | I M.Sc., Physics |
| 10.   | KEERTHANA PRIYA G  | II M.Sc., Physics | 34.    | KIRTHIKA M          | I M.Sc., Physics |
| 11.   | LOKESHWARI G       | II M.Sc., Physics | 35.    | MARIA INFANT M      | I M.Sc., Physics |
| 12.   | MANISHA S          | II M.Sc., Physics | 36.    | MARY SHAMALA V      | I M.Sc., Physics |
| 13.   | NILA K             | II M.Sc., Physics | 37.    | PADMA PRIYA B       | I M.Sc., Physics |
| 14.   | PRIYADHARSHINI C   | II M.Sc., Physics | 38.    | PRATHYUSHA S Y      | I M.Sc., Physics |
| 15.   | RAJESH R           | II M.Sc., Physics | 39.    | SANGEETHA V         | I M.Sc., Physics |
| 16.   | SAARWIN S S        | II M.Sc., Physics | 40.    | SASHMITHAN A        | I M.Sc., Physics |
| 17.   | SANTHOSH D         | II M.Sc., Physics | 41.    | SHALINI T           | I M.Sc., Physics |
| 18.   | SARANYA K          | II M.Sc., Physics | 42.    | SUBRAMANIAN S M     | I M.Sc., Physics |
| 19.   | S.SIVARAMALAKSHMI  | II M.Sc., Physics | 43.    | SUDHAKAR S          | I M.Sc., Physics |
| 20.   | SRIPRIYA R R       | II M.Sc., Physics | 44.    | TAMILSELVAN J       | I M.Sc., Physics |
| 21.   | STALIN MARIVALAN R | II M.Sc., Physics | 45.    | THARANI M           | I M.Sc., Physics |
| 22.   | SUNDARESAN M       | II M.Sc., Physics | 46.    | VARALAKSHMI VASUDHA | I M.Sc., Physics |
| 23.   | TAMILARASAN P      | II M.Sc., Physics | 47.    | VISHAL R G          | I M.Sc., Physics |
| 24.   | THENMOZHI L        | II M.Sc., Physics | 48.    | YAZHINI J K         | I M.Sc., Physics |
| 25.   | S.VAISHALI         | II M.Sc., Physics | 49.    | YOGESHWARAN A       | I M.Sc., Physics |
| 26.   | VENIS MANO J       | II M.Sc., Physics | 50.    | YUKESH M            | I M.Sc., Physics |



# SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY  
(DEEMED TO BE UNIVERSITY)

Accredited "A" Grade by NAAC | 12B Status by UGC | Approved by AICTE

[www.sathyabama.ac.in](http://www.sathyabama.ac.in)

## Course Outcome:

After the successful, completion of the course, the student shall be able to:

1. The students should be able to understand
  - basic concepts in nuclear physics
  - properties of ionizing radiation
  - their applications
  - methods of radiation detection
2. Regulation of radiation practices according to internationally accepted methods.
3. Obtaining vital signs, handling equipment used for various procedures.
4. Protecting the patients, occupational workers and general public from secondary radiation.
5. Using sterilized techniques to reduce the chances of infection in work practices.

## Certificate (sample):

