SANT HIRDARAM GIRLS COLLEGE, BHOPAL

Department of Biotechnology

Certificate Course: "7 Days Hands on training in Basic Molecular Biology Techniques"

Academic Year- 2021-22

Course Objectives:

Recent developments in molecular biology have introduced a new dimension to the biotechnology laboratory. Molecular biology methods are used extensively in modern day drug discovery, research and development, and diagnostics .It is very important for biotechnology professionals to gain fundamental knowledge of these techniques. In view of the increasing importance of basic molecular biology techniques in R&D application, The Department of Biotechnology, SHGC, Bhopal proposed seven days hands-on training in Molecular Biology Techniques during session 2021-22. The objective of the training programme is to give exposure to the participants to concept, skills and tools of molecular biology and to provide hands-on training on various basic and must know approaches such as DNA isolation and amplification using different techniques. This hands-on training course is intended for participants with science background who are seeking basic level molecular biology training to participate in molecular biology-related and biotechnological research or basic/applied research.

Course Outcome:

This one week course provides **hands-on training** in best practices in the standard molecular biology techniques performed in biotechnology laboratories. Participants will acquire knowledge and skills in bacterial genomic and plasmid DNA isolation, Plant DNA isolation, PCR, restriction digest, gel electrophoresis experimental design and execution.

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Certificate Course on "7 Days Hands on training in Basic Molecular Biology Techniques"

Course Content: The course includes content on techniques involved in the molecular study, its mechanism, mode of applications and its future aspects. This course will make the students familiar with the techniques employed in molecular biology; experiments involved using different techniques and the use of instruments in these techniques. The Molecular biology Techniques course module is designed in such a way to cover the principles, procedure, result in interpretation, the dos, and don't in wet lab procedures.

All Life Science PG students, Bio-professionals who are interested to make their fundamentals strong are eligible to take up the course.

Course Duration: - 7 Days

Fees:- 1000/-

SANT HIRDARAM GIRLS COLLEGE, BHOPAL

Department of Biotechnology

Certificate Course: "15 Days Hands on training in Plant tissue culture techniques"

Academic Year- 2021-22

Course Objectives:

Plant Tissue culture is an important tool for both basic and applied aspects of plant biotechnology as well as its commercial applications. All techniques are skill based and upon systematic learning, can equip a person to effectively utilize the techniques in various areas like basic research, environmental issues and commercial applications. It is a valuable tool for research on crop improvement by biotechnology. Plant Tissue Culture is a practice used to propagate plants under sterile conditions, often used to produce clones of a plant. Different techniques in Plant Tissue culture offer advantages over traditional methods of propagation which includes the production of multiple clones of plants in the absence of seeds or pollinators necessary to produce seeds and mature plants. This course offers a comprehensive hands-on training for learning the basics with an insight to laboratory.

Course Outcome:

The course is intended to share basic tissue culture techniques which include: 1. Principles and application of tissue culture; 2. Preparation of tissue culture media, sterilization; 3. Hands on training for various tissue culture techniques; and 4. maintenance of cultured plant cells

SANT HIRDARAM GIRLS COLLEGE, BHOPAL

Certificate Course: "15 Days Hands on training in Plant tissue culture techniques"

Course Content: Course will cover Orientation lectures along with hands-on experience in a variety of plant tissue culture Techniques like media preparation, sterilization, explants preparation, aseptic inoculation, Callus induction, shoot induction, multiplication, Stock solutions and preparation of MS medium.

Undergraduate students of biotechnology, agriculture science who wish to learn plant tissue culture techniques can participate in this program

Course Duration: - 15 Days

Fees:- 1500/-

Module	Content	Duration
Hands on training	**Basic techniques in molecular biology**	**7 day**
Hands on training	**Plant tissue culture techniques**	**15 days**