



2022-2023

INTENSIVE CERTIFICATE COURSE

IN INTRA-CYTOPLASMIC
SPERM INJECTION (ICSI)

Duration:
3 months

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PROGRAM OVERVIEW



The successful birth of the world's first baby conceived by **in vitro fertilization (IVF)** and **embryo transfer** occurred on July 25, 1978, in the UK. Since then, over five million babies conceived by Assisted Reproductive Technologies (ART) have reportedly been born throughout the world.

The increasing demand for ART has resulted in mushrooming of infertility clinics in India. There is a huge dearth of skilled embryologists and the skills involved to perform ICSI are complex, delicate, and require adequate hands-on practice.

ICSI involves fertilization of an oocyte by injecting a single sperm. It is technically demanding and there is substantial potential for damage to the egg due to poor micro-injection technique, which can cause it to degenerate.

Despite the intricate technical demands of ICSI, it is nevertheless still just a technique. Indeed, it is now considered routine, and fully trained clinical embryologists are usually expected to have attained this skill.

Thus the “Intensive Certificate Course in Intra-Cytoplasmic Sperm Injection (ICSI)” by *Sri Siddhartha Academy of Higher Education* is designed keeping in mind the subject specific academic needs and industry requirements, with the help of subject experts. At the end of the course, the students will be equipped to perform ICSI competently.

This course provides a clear guide to the essentials of the ICSI technique along with suggestions as to how best to troubleshoot the most commonly encountered problems and aims at imparting the best practices of ICSI to achieve high fertilization rates.

The equipment needed by an IVF laboratory to ensure good ICSI procedure and the technical aspects of the ICSI procedure are discussed and demonstrated. Plenty of mouse oocytes and injection pipettes will be provided for hands-on practice.



ELIGIBILITY

Graduates in Biological Sciences / Life Sciences (B.Sc./B.Tech/BE), Veterinary Sciences (BVSc), Medical Sciences (MBBS), Dental Sciences (BDS)

INCLUDES

- Online delivery of learning content
- Classroom learning
- Demonstration & Hands-on practical training
- Assessment & Certification

COURSE HIGHLIGHTS

- Plenty of mice oocytes and injection pipettes will be provided to ensure that candidates become proficient with the microinjection technique
- Expose to the majorly used micromanipulator system - Narishige
- Well equipped lab exclusively for hands-on practice
- Experienced faculty



COURSE CURRICULUM

Paper 1: MICROMANIPULATION SYSTEMS, MEDIA & DISHES

MODULE 1: SETTING UP THE MICROMANIPULATION SYSTEM

- Parts of a micromanipulation workstation system
- Features of the micromanipulation workstation system

MODULE 2: PREPARING MEDIA AND DISHES FOR ICSI - MEDIA, DISHES AND MATERIALS REQUIRED FOR THE FOLLOWING :

- Preparation of spermatozoa
- Preparation of oocytes and
- Micromanipulation procedures

PRACTICAL 1

- Fitting, alignment and equilibration of micropipettes
- Microinjection dish preparation

Paper 2: ICSI

MODULE 1: PREPARING SPERMATOZOA FOR MICROMANIPULATION

- Preparation of spermatozoa from the ejaculated sample
- Preparation of spermatozoa from the sample obtained surgically
- Sperm selection methods

MODULE 2: PREPARING OOCYTES FOR MICROMANIPULATION

- Denudation of Oocytes
- Grading of Oocytes

PRACTICAL 2

- Denudation of oocytes
- Alignment of holding and injection pipette
- Immobilization of spermatozoa
- Microinjection of an oocyte with a spermatozoa

CAREER OPPORTUNITIES

ON SUCCESSFUL COMPLETION OF THE COURSE, CANDIDATES CAN SEEK EMPLOYMENT AS EMBRYOLOGISTS WITH HEALTH CARE PROVIDERS SUCH AS IVF CENTRES / FERTILITY CLINICS / ART CLINICS / HOSPITALS. THEY CAN ALSO WORK AS CONSULTANTS WITH MULTIPLE ORGANISATIONS.



CALENDAR 2022-2023

Commencement (4 Batches in a year)	Online Content Access	Demonstration & Hands-on Practical Training	Assessment & Certification
August 2022	August 2022	September 2022	October 2022
November 2022	November 2022	December 2022	January 2023
February 2023	February 2023	March 2023	April 2023
May 2023	May 2023	June 2023	July 2023

COURSE FEE

Rs. 2,00,000

ADMISSION PROCESS

- Apply online

(The link to apply online is <https://www.momsoonacademy.com/registerpdf.php>)

- Mail scanned copies of certificates for verification to info@momsoonacademy.com
(once verified, you will receive an invitation to proceed further)
- Pay 50% of the course fee and share the transaction details
(you will receive an admission confirmation letter)