



# ADVANCE EMBRYOLOGY ACADEMY

## AEA

Cell to Success



### **Post-Graduation**

MSc – Embryology and  
Assisted Reproductive Technology

### **PhD**

Embryology and Reproductive Science

### **Certificate**

Comprehensive Skill Enhancement  
Courses in ART



## *Message from* **Course Dean**

After spending more than two decades in the field of ART, I firmly believe that I have a moral obligation to teach ART aspirants or working professionals who wish to learn.

I am pleased to present AEA and its value based Post-Graduation, PhD and Skill Enhancement Training Modules.

AEA has ultra-modern facility and candidate will have real hands on experience.

Our vision is to be a world class teaching academy visualizing a great future for young ART aspirants and working professionals.

We work with a mission to impart futuristic higher education molding candidate into globally competent empowered ART specialist with relevant professional expertise.

### **Dr. Ved Prakash**



## *Message from* **Chairman**

AEA is a new endeavor that I have initiated to develop high quality skill enhancement training program.

Working professionals from key area of ART like clinician, embryologist, counselor, andrologist, andrology lab technician or a fertility nurse can take up module of this course as per their need.

I welcome you all to be a part of this training program and I assure you that it will add value and credence to your professional career.

### **Dr. Paritosh Shekhar - PhD**





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AEA takes an initiative with a mission to transform reproductive science knowledge through innovative and accessible learning. Our platform combines with cutting edge technology with expert ART leaders paving a way for new era learning. We aim to empower aspiring students and professionals to enhance their skills and knowledge.

Our specially designed skill enhancement courses lead by experts provide wide spectrum of modules. We encourage our students and/or professionals to connect, share their experience and contribute to the growth and advancement of reproductive science.

Along with our academic program we do regularly conduct webinars, CME, Workshop and symposium for knowledge sharing and encouraging students for continuous professional development.

At AEA as a team we are committed to support and empower students and working professionals in their transformative journey.

## COURSES OFFERED:

### **Post-Graduation**

**MSc – Embryology and Assisted Reproductive Technology**

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### **PhD**

**Embryology and Reproductive Science**

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### **Certificate**

**Comprehensive Skill Enhancement Courses in ART**

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## Post-Graduation

### MSc – Embryology and Assisted Reproductive Technology

Two years of post-graduation program in affiliation with Sun Rise University- Rajasthan offers a comprehensive learning experience over four semesters, covering theoretical, practical and clinical aspects of ART. Students will have intensive 'hands-on' practical training in all IVF laboratory procedures. Additionally, students also get a chance to attend workshops, seminars and conferences to interact with experts and broaden their knowledge of ART.

Project work will help students to gain real IVF lab experience and our MSc programme will prepare students for active employment within the clinical embryology/ART sector and/or a research career in reproductive science. We also encourage post graduate students to apply for PhD in AEA.

This post-graduation program is designed to line-up with international standards, UGC regulations, Educational policy and ART act 2021.

### MSc Course Outline

This is two years course with four modules. Semester 1 comprise of Cell biology and physiology, Basic human reproductive biology and endocrinology, Andrology lab techniques and Biochemistry lab techniques. Whereas in semester two students will learn about Genetics and reproductive technology, Clinical aspects of IVF, Assisted Reproductive Techniques and ART lab instrumentation.

Human genetics and embryo culture system, Infertility counselling & ethics, Micromanipulation techniques and Cryobiology techniques will be covered in semester three. Forth semester will cover PGT and introduction to bio informatics, Quality Control and risk management in ART, Understanding ART and Surrogacy law and Research methodology and biostatistics. The forth semester is extended to allow sufficient time for a high quality laboratory project.

## MSc Course Highlights

### Strong Fundamentals:

To provide students with fundamental and applied aspects of subject areas directly related to clinical embryology such as human reproductive biology, embryology, infertility and ART.

### Hands on Experience:

To provide students with intensive 'hands-on' practical training in laboratory skills and ART, particularly gamete micromanipulation, intracytoplasmic sperm injection (ICSI) and preimplantation genetic Testing (PGT).

### Industry - Academic Partnership:

Partnering with leading IVF clinics our course will aim to bridge the gap between theoretical knowledge and real world application.

### Expert Faculty:

We believe in quality education through a competent faculty that comprises of world-class academics. Our faculty members are industry experts and professionals with high skills in their relevant fields of interest.

### Interdisciplinary Approach:

With such approach students will gain knowledge of diverse fields like genetics, reproductive endocrinology, embryology, andrology, cryobiology and counselling.

### Advanced Research Facilities:

With state of art research facilities students will get platform to do project or even further study and enrol themselves for PhD program.

### MSc Eligibility Criteria:

Graduation in any branch of life sciences [Reproductive Biology, Microbiology, Life Sciences, Bioscience, Biochemistry, Pharmacy, Veterinary science], Medico graduate [MBBS, BDS]

### MSc Admission Process:

Entrance Exam MCQ based online/offline test

## PhD

### Embryology and Reproductive Science

Our PhD Embryology and Reproductive Sciences programme enables students to undertake a research project that will improve understanding of Reproductive Sciences. Our aim is to establish a focused knowledge base and competencies using evidence-based practices in the reproductive clinical sciences. Researchers will be able to apply scientific methodology to independently investigate complex research problems that meet the ever-changing demands of assisted reproductive medicine.

Candidates who has a master of science degree in one of the following areas: Clinical Embryology, Biology, Molecular Biology, Developmental Biology, Reproductive Sciences or Biochemistry.

If you are an established clinical embryologist / andrologist with at least three years of embryology experience. Submit letters of support from employers indicating level of experience and willingness to allow applicant to perform research projects in their current position. Submit a letter of support from your employer, lab director or medical director stating that you will be allowed to conduct research either with us or where ever you are currently working as part of the PhD.

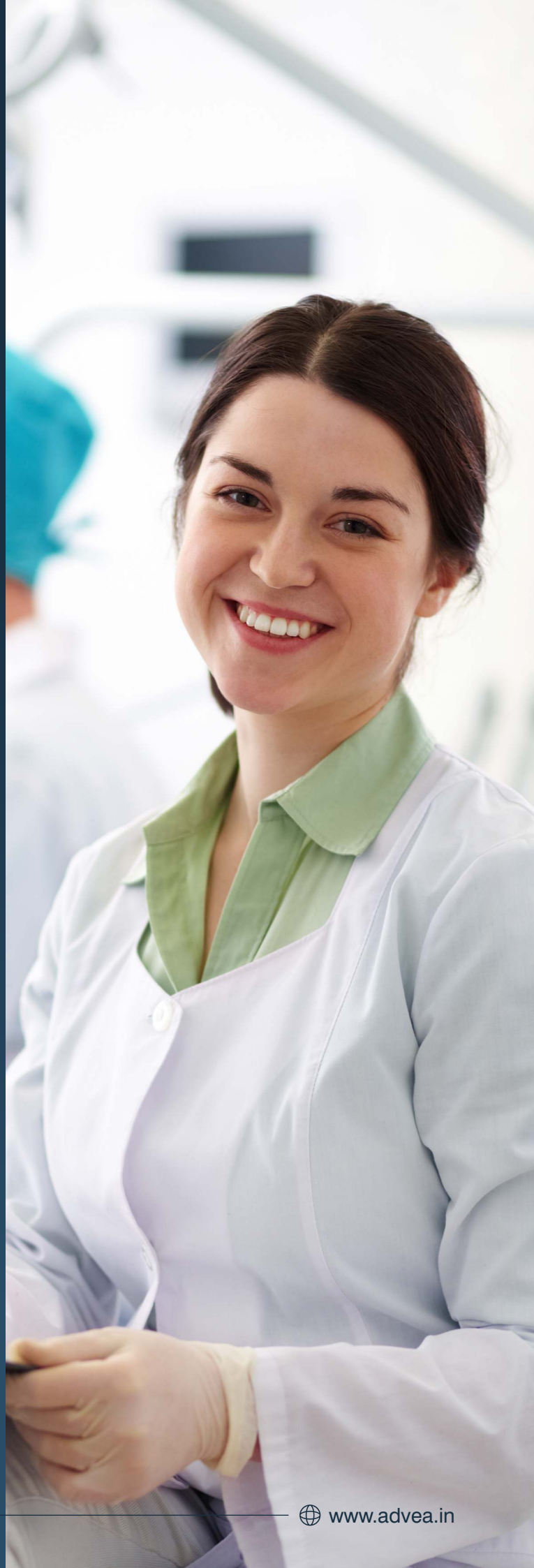
## Certificate

### Comprehensive Skill Enhancement Courses in ART

This is an AEA certification course which aims to provide in depth knowledge of all ART procedures with intensive hands on training.

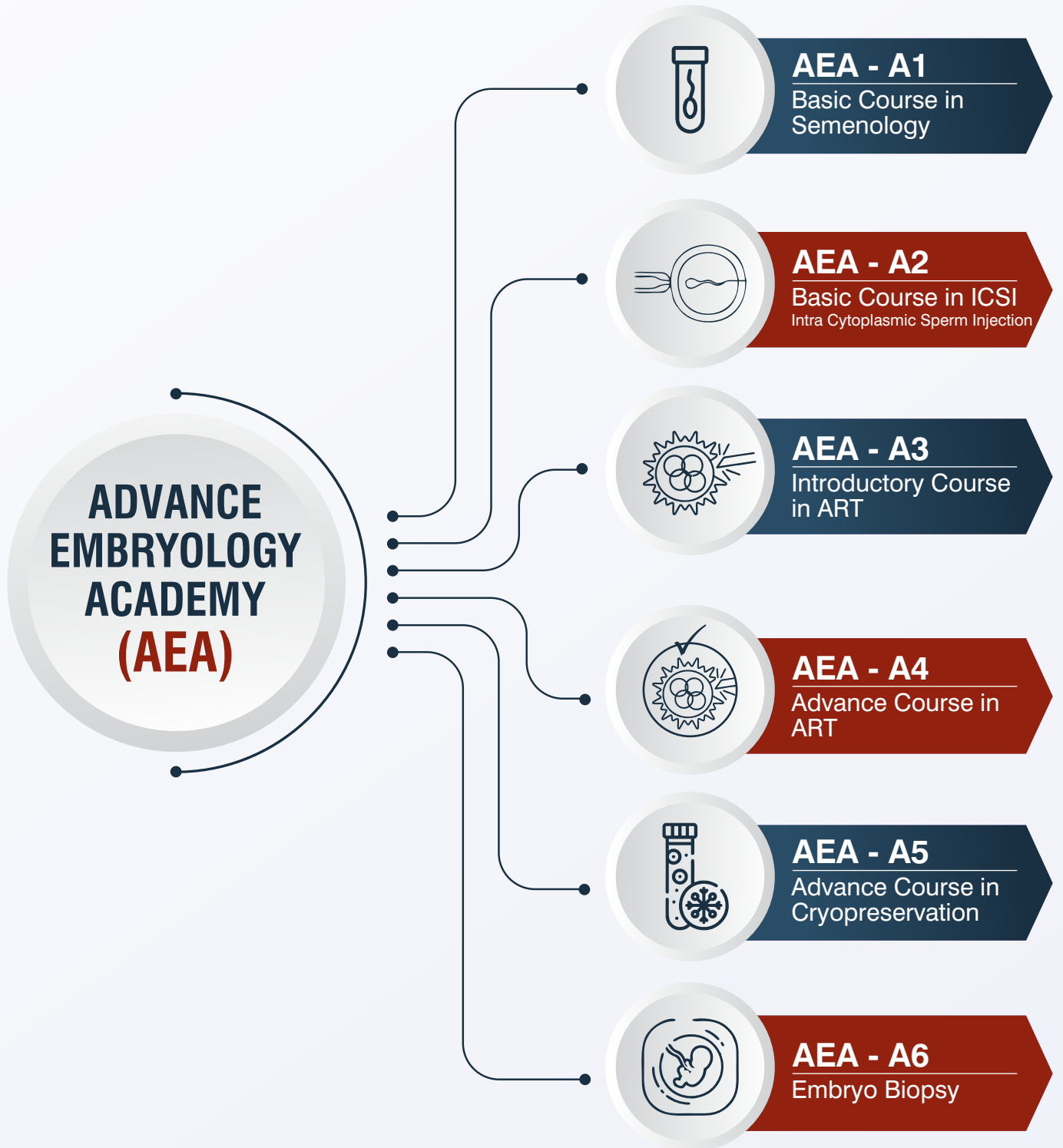
We have designed a high quality training programs in key areas of reproductive science for aspiring clinicians, embryologists, Andrologist, andrology lab technician, counsellors, and nurses.

We are aiming to establish a benchmark globally in the field of training in reproductive science through this module.





# SET - 1







## **AEA - A1**

### **Basic Course in Semenology**

#### **IUI Intra Uterine Insemination**

This course is designed for beginners to provide insight of Semenology.

#### **Methodology of Training**

Semen analysis as per WHO standard, Sperm Morphology and Vitality test, Sperm Function test [HOS test, sperm survival test] , Basic Sperm preparation methods and Sperm DNA fragmentation test.

**Course Duration - 3 Days**



## **AEA - A2**

### **Basic Course in ICSI - Intra Cytoplasmic Sperm Injection**

This course is designed to learn all technical aspects of ICSI.

#### **Methodology of Training**

Basic instrumentation - Inverted microscope and micro manipulator, Micromanipulation set up, Gamete handling and preparing ICSI dish, ICSI procedure, Sperm preparation from surgically retrieved sperm - [TESE/TESA/PESA/MESA].

**Course Duration: 5 Days**



## **AEA - A3**

### **Introductory Course in ART**

A comprehensive course coupled with theory and hands on of all the ART techniques with basic knowledge of instrument.

#### **Methodology of Training**

Basic to advanced semen analysis, Sperm preparation techniques for IUI and IVF, Media handling, storage and maintenance, Dish preparation for IVF and ICSI, Gamete and embryo handling and transferring from dishes, IUI catheter loading, Embryo loading in catheter for embryo transfer, learning about micromanipulator and alignment of needles, Sperm immobilization and ICSI procedure, to learn about Total Quality Management System. This is five days' course.

**Course Duration: 5 Days**





## **AEA - A4** **Advance Course in ART**

An extension to introductory course in ART this module facilitate candidate to visit IVF center to observe real lab functioning. The special feature of this module is intense hands on training and one to one interaction with faculty.

**Course Duration: 30 Days**

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## **AEA - A5** **Advance Course in Cryopreservation**

This course covers theoretical and practical aspects of sperm and embryo cryopreservation.

### **Methodology of Training**

Sperm freezing, Embryo freezing by vitrification method, Cryo media handling and Cryo tank handling.

**Course Duration: 3 Days**

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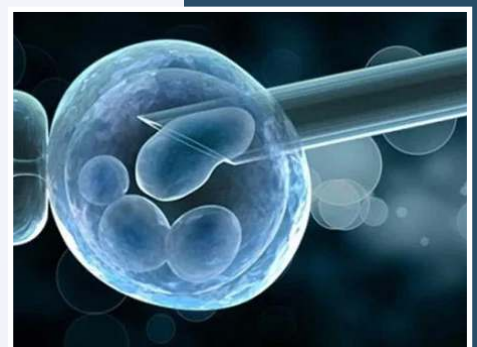
## **AEA - A6** **Embryo Biopsy**

To provide a comprehensive overview of embryo biopsy techniques and consider the various approaches to genetic analysis. The workshop will explore methods for Trophectoderm biopsy.

### **Methodology of Training**

Candidate who are well versed with ICSI technique, Candidate who has experience handling laser, Lab preparation for biopsy, Theory of PGT- Pre implantation Genetic Testing, Tubing and Sending samples to Genetic lab. Five days is the course time.

**Course Duration: 5 Days**

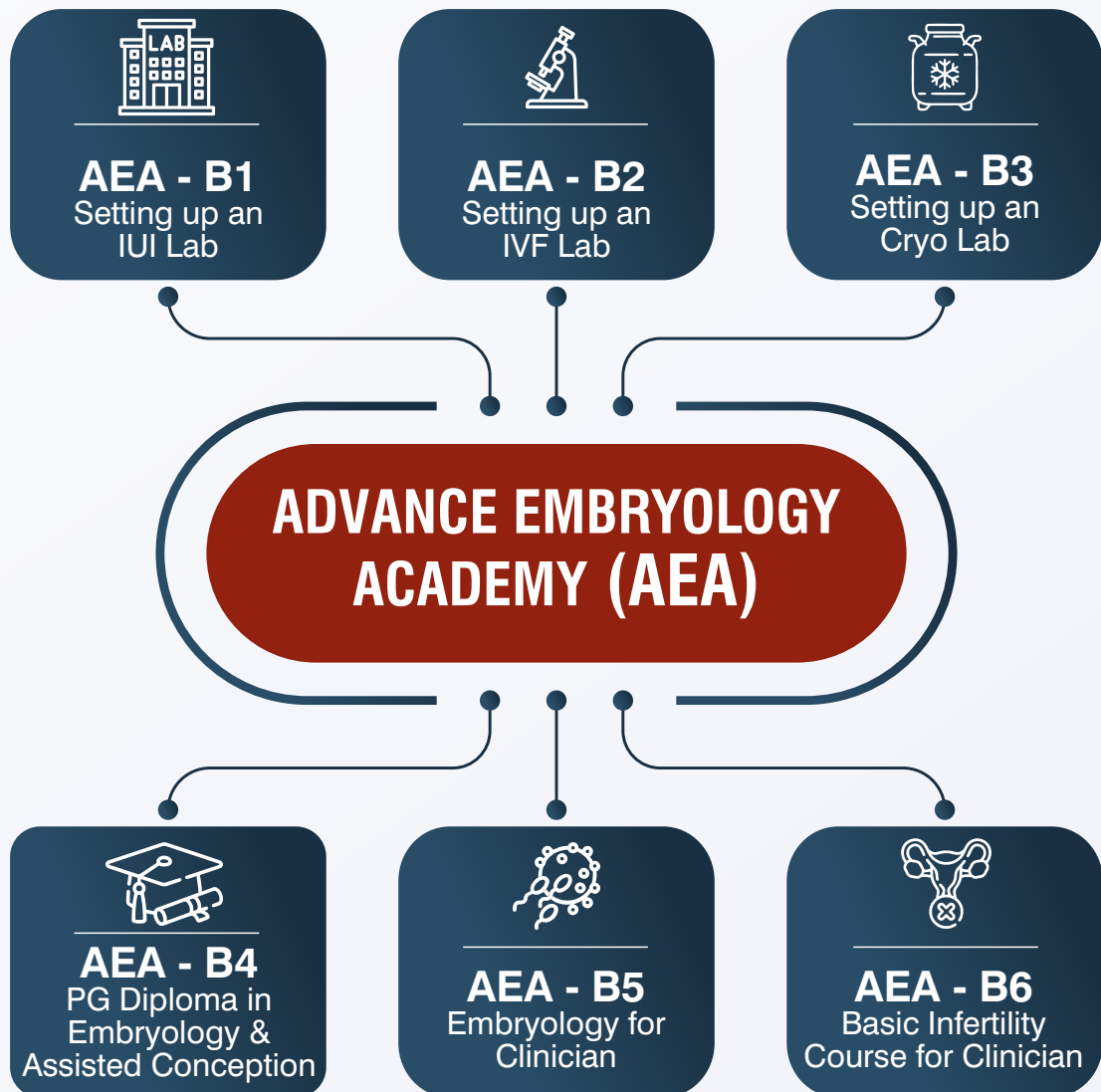






## SET - 2

Other AEA Certified Modules





## **AEA - B1** Setting up an IUI Lab

AEA offers comprehensive IUI lab set up and Andrology procedure training.

### **Methodology of Training**

IUI lab designing, Instrument, disposables and media requirements for an IUI lab set up, Total Quality Management System, Theory and practical knowledge about semen analysis and sperm preparation methods.

**Course Duration - 2 Days**

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## **AEA - B2** Setting up an IVF Lab

AEA offers comprehensive IVF lab set up and embryology procedure training.

### **Methodology of Training**

IVF lab designing, Instrument, disposables and media requirements for an IVF lab set up, Total Quality Management System, Theory and practical knowledge about semen analysis and sperm preparation methods and Theory and practical knowledge about oocyte and embryo grading, embryo handling, embryo freezing.

**Course Duration: 4 Days**

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## **AEA - B3** Setting up an Cryo Lab

AEA offers comprehensive IVF-Cryo lab set up and vitrification procedure training.

### **Methodology of Training**

IVF cryo lab designing ,Instrument, disposables and media requirements for an IVF cryo lab set up, Total Quality Management System, Theory and practical knowledge about cryo preservation, Theory and practical knowledge about embryo grading, embryo handling and embryo freezing and Theory and practical about semen freezing.

**Course Duration: 4 Days**





## AEA - B4

### Post Graduation Diploma in Embryology and Assisted Conception

AEA offers university affiliated full-time one-year Diploma in Embryology. This certificate course includes interactive lectures, small group learning, seminars and assignments, demonstration, laboratory rotations, hands-on training on lab equipment.

#### Methodology of Training

Basic knowledge about semen analysis, basic to advanced sperm preparation and sperm DNA fragmentation. Basic knowledge about setting up an IVF lab, gamete handling, oocyte grading, embryo grading, Fertilization methods- conventional IVF and ICSI, embryo culture till blastocyst, embryo freezing and embryo transfer, Basic knowledge about embryo biopsy and Total Quality Management System

**Course Duration - 1 Year**



## AEA - B5

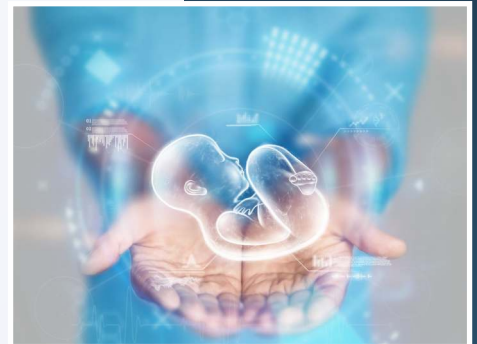
### Embryology for Clinician

It is must to know and understand basics of embryology for all partitioning fertility clinicians. This three days' course will provide insight of all embryological procedures and that will definitely help for better joint decision in IVF lab.

#### Methodology of Training

Semen analysis and its interpretation, Basic to advance sperm preparation and selection technique, Oocyte and Embryo morphology assessment, Gamete and embryo freezing, Embryo loading on transfer catheter, Documentation and auditing and Factors that affect IVF outcome

**Course Duration: 3 Days**



## AEA - B6

### Basic Infertility for Clinician

AEA offers one-week training program for clinicians. This program helps to improve their skills and make betterment in their regular practice.

#### Methodology of Training

Evaluation of male and female infertility, IUI – concept to practice, when to refer couple for an IVF, Ovulation induction for an IUI and IVF cycle, Design and set up of IUI lab, Hands on practice for oocyte pick up on a stimulator, Mock embryo transfer and embryo loading on catheter and Brief understanding about embryological lab procedures

**Course Duration: 5 Days**





## Unique Features

**Academic  
Excellence**

**Blended  
Learning**

**Specialized  
Course  
Module**

**Cutting  
Edge  
Technology**

**Diverse  
Pedagogies**

**Hands on  
Training**

**Intense  
Knowledge**

**Professional  
Mentoring**

**Values and  
Ethics**

**One to One  
Approach**

**Customized  
Course  
Option**

**Academy  
Certificate**

**Study  
Material**

**State of Art  
Facilities**

**Located  
in Heart of  
Pune City**

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ACADEMY - AEA**

**Cell to Success**



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