



College of Physicians and Surgeons of Mumbai

Syllabus for CPS-PG-Course

DIART-DIPLOMA IN INFERTILITY AND ASSISTED REPRODUCTIVE TECHNIQUE

College of Physicians and Surgeons of Mumbai

CPS House, Dr. E. Borges Marg, Parel, Mumbai – 400012.

DIART-DIPLOMA IN INFERTILITY AND ASSISTED REPRODUCTIVE TECHNIQUE

COURSE DESCRIPTION

Eligibility Criteria for Candidates:

- i. A candidate should possess MBBS degree/ equivalent degree as per provisions of Indian Medical Council Act.
&
- ii. Candidates having a recognized 3 years degree Qualification (MD/MS/DNB) in Gynaecology
or 2 years Diploma Qualification in Gynaecology specialty/DGO.

Duration of the Course : 2 years

Requirement: Post DGO/MD/DNB/FCPS.

Candidates should maintain a daily logbook.

Candidates should complete one project by the end of two years.

At the end of one year supposed to understand the following curriculum.

Establishing and Maintaining an IVF Laboratory

Setting up an ART Laboratory

Quality Control: Maintaining stability in the laboratory

The ART Laboratory in the era of ISO 1000 and GLP

Gamete Collection, Preparation and Selection

Evaluation of sperm

Sperm Preparation Techniques

Sperm Chromatin Assessment

Oocyte retrieval and selection

Preparation and evaluation of oocytes for ICSI

Oocyte in vitro maturation

Use of in vitro maturation in a clinical setting

Micromanipulation

Equipment and general technical aspects of micromanipulation of gametes and embryos

Intracytoplasmic sperm injection: technical aspects

Assisted Hatching

Human Embryo biopsy procedures

Analysis of fertilization

Culture Systems for human embryo

Evaluation of embryo quality: new strategies to facilitate single embryo transfer

Cryopreservation

The human Oocyte: Controlled rate cooling

The Human Oocyte: Vitrification
The Human Embryo: Slow freezing
The Human Embryo: Vitrification
Managing the cryopreserved embryo bank
Cryopreservation and storage of spermatozoa
Handling and cryopreservation of testicular sperm
Ovarian tissue cryopreservation and other fertility preservation Techniques
Diagnosis of Genetic Disease in Preimplantation Embryos
Severe male factor: genetic consequences and recommendations for genetic testing
Polar body biopsy
Clinical application of polar body
Preimplantation genetic diagnosis for infertility
Genetic analysis of embryo
Proteomic analysis of the embryo
Implantation
Embryonic and maternal dialogue and analysis of uterine receptivity
Quality Management Systems
Quality management in reproductive medicine
Indications for IVF treatment: from diagnosis to prognosis
Initial investigation of the patient (female and male)
Drugs used for controlled ovarian stimulation
The role of FSH and LH in ovulation induction: current concepts
Stimulation Protocols
Endocrine Characteristics of ART cycles
The use of GnRH agonists
GnRH antagonists
Monitoring IVF cycles
Oocyte collection
The luteal phase: luteal support protocols
Treatment strategies in assisted reproduction for the low responder patient
Repeated implantation failure: the preferred therapeutic approach
Technical Procedures and outcomes
Ultrasound in ART
Sperm recovery techniques: clinical aspects
Gamete intrafallopian transfer (GIFT) and zygote intrafallopian transfer (ZIFT)
Embryo Transfer
Anaesthesia and IVF
Medical considerations of single embryo transfer

Special Medical Conditions

Endometriosis and ART

Polycystic ovaries and ART

Prognostic testing for ovarian reserve

Management of hydrosalpinx

Complications of Treatment

Severe ovarian hyper stimulation syndrome

The environment and reproduction

Bleeding, severe pelvic infection and ectopic pregnancy

Iatrogenic multiple pregnancy : the risk of ART

Egg Donation and Surrogate Motherhood

Egg and Embryo Donation

Gestational Surrogacy

Future Directions and Clinical Applications

Human Embryonic Stem Cells

Microfluidics in ART:

current progress and future directions

The Support Team

The evolving role of the ART nurse: a contemporary review

Patient support in the ART program

The relationship between stress and IVF outcome

Ethics and Legislation

The impact of legislation and socioeconomic factors in the access to and global impact of ART

Recent ethical dilemmas in ART

At the end of two years, candidates should be able to do the following

Perform independent diagnostic ultrasounds

Follicular monitoring

Decision of Stimulation protocol for IUI and ART

Oocyte retrieval procedure

Embryo transfer

Fertility enhancing hysteroscopic and laparoscopic surgeries

Perform independent diagnostic & operative hysteroscopy

Perform independent diagnostic laparoscopy

Perform operative laparoscopy like PCO drilling, Salpingectomy for ectopic pregnancy, endometrioma excision.

Able to assist/perform laparoscopic myomectomy and laparoscopic hysterectomy

Embryo Reduction

Chorionic Villous Biopsy

Amniocentesis

DIART-DIPLOMA IN INFERTILITY AND ASSISTED REPRODUCTIVE TECHNIQUE**EXAMINATION PATTERN****Theory Examination:**

PAPER I	PAPER II	PAPER III
ANATOMY & PHYSIOLOGY	THERAPEUTICS	APPLIED SCIENCES & RECENT ADVANCES
Section I	Section I	Section I
Q.1. 10 Marks	Q.1. 10 Marks	Q.1. 10 Marks
Q.2. 10 Marks	Q.2. 10 Marks	Q.2. 10 Marks
Q.3. 10 Marks	Q.3. 10 Marks	Q.3. 10 Marks
Q.4. 10 Marks	Q.4. 10 Marks	Q.4. 10 Marks
Q.5. 10 Marks	Q.5. 10 Marks	Q.5. 10 Marks
Total 50 Marks	Total 50 Marks	Total 50 Marks
Section II	Section II	Section II
Q.6. 10 Marks	Q.6. 10 Marks	Q.6. 10 Marks
Q.7. 10 Marks	Q.7. 10 Marks	Q.7. 10 Marks
Q.8. 10 Marks	Q.8. 10 Marks	Q.8. 10 Marks
Q.9. 10 Marks	Q.9. 10 Marks	Q.9. 10 Marks
Q.10. 10 Marks	Q.10. 10 Marks	Q.10. 10 Marks
Total 50 Marks	Total 50 Marks	Total 50 Marks
Section I + II = 100 Marks	Section I + II = 100 Marks	Section I + II = 100 Marks
Total Theory = 300 Marks, Passing = 150 (i.e. 50%) Marks in aggregate		

Practical Examination:		Marks
Paper - IV	Clinical Practical	100
Paper - V	Oral & Viva	100
Paper - VI	Case	100
Total Marks	Passing = 150 (i.e. 50%) Marks in aggregate	300