International Fertility & Reasearch Centre

Experience the Miracle

Affiliated to Sri Venkateswaraa University

Course Offering

Msc Clinical Embryology

Course Duration 2 Years - With Research Project

Course Director

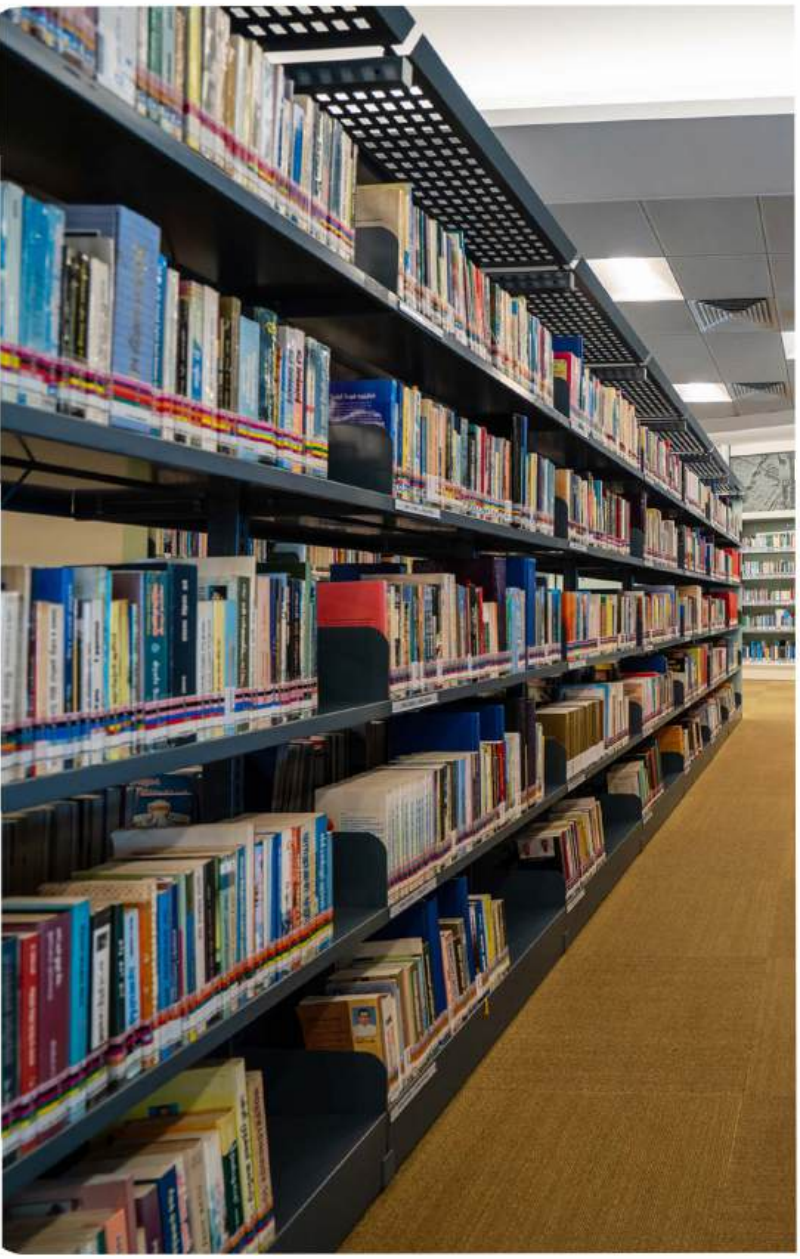
Dr Chandan

EMBCOL PhD,

Accredited by American College of Embryology

ARC Chain of Fertility Hospitals

MSc Clinical Embryology course aims to provide graduate students, scientists and clinicians with highly advanced theoretical and practical understanding of human reproductive biology, embryology, infertility and assisted reproductive technology (ART) along with intensive 'hands-on' practical training in essential laboratory skills, including the sophisticated micromanipulation techniques associated with ART.The course is administered by **ARC International Fertility and Research Centre** in the new, purpose-built, Institute of Reproductive Sciences.

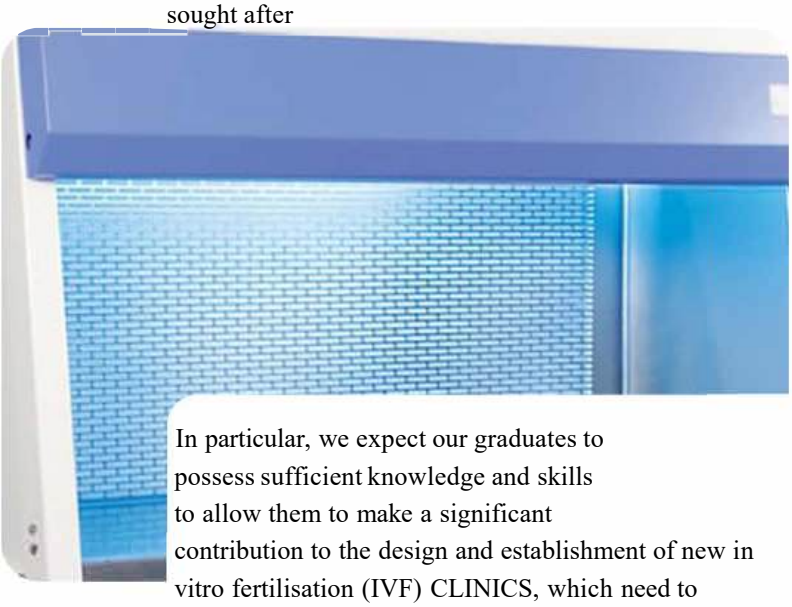


Clinical embryology is a relatively young branch of reproductive science that has undergone enormous expansion over the last twenty years. Louise Brown, the world's first 'test tube' baby, was born in 1978 as a result of pioneering research carried out by a team of British clinicians led by Patrick Steptoe and Robert Edwards.Since then, infertility treatment has undergone phenomenal development and become a highly specialized field involving a multitude of interventions known collectively as Assisted Reproductive Technology (ART). Worldwide, approximately one million ART treatments are now performed each year and over five million ART babies have been born. However, a major concern is that there are too few appropriately trained clinical embryologists, both within India and throughout the rest of the world, to maintain this pattern of growth. In addition, the field of clinical embryology is becoming ever more closely regulated, with greater emphasis on quality assurance.

Meticulous training of new personnel in theoretical knowledge and practical skills is therefore critical to future advancement and ensuring patients consistently receive the best care.

In response to these concerns, **ARC International Fertility and Researc Centre** has developed an intensive, TWO-year, MSc in Clinical Embryology. Our intention is to inspire, motivate and train a network of future leaders in clinical embryology throughout the world. Our MSc course provides students with theoretical and practical understanding of human reproductive biology, embryology, infertility and ART. The course includes the very latest developments in ART including Legislation, Ethics, and Quality Management.

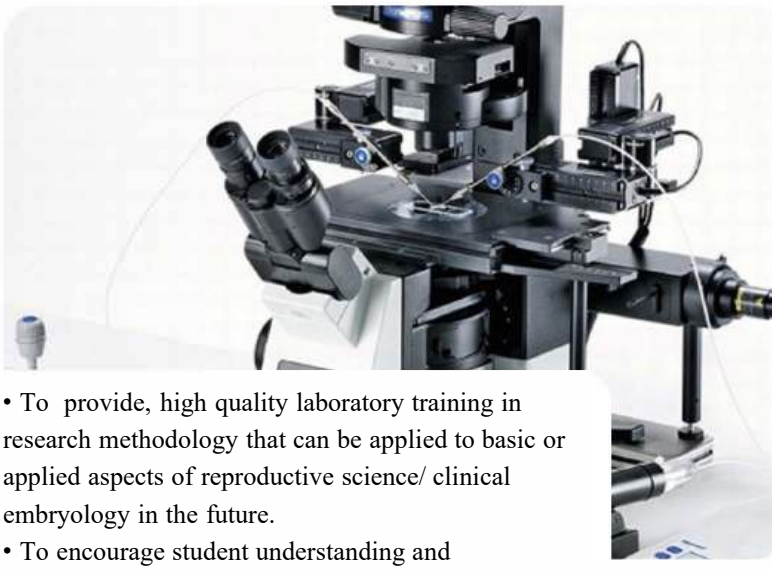
Significant emphasis is placed upon continuing professional development and acquiring valuable transferable skills.
To this end, our MSc course will include a considerable practical component. Students will learn skills and techniques directly relevant to ART, as well as a range of 'traditional' and 'cutting edge' scientific techniques and procedures.
A particular strength of our programme is the fact that each of our students will be individually trained in gamete manipulation/injection and embryo biopsy. Our MSc programme will prepare students for active employment within the clinical embryology/ART sector and/or a research career in reproductive science. As the course was designed in response to identified employment needs, our graduates are likely to be highly sought after



In particular, we expect our graduates to possess sufficient knowledge and skills to allow them to make a significant contribution to the design and establishment of new in vitro fertilisation (IVF) CLINICS, which need to incorporate the latest techniques and conform strictly to current Regulation Act. This MSc course aims to provide graduate students, scientists and clinicians with highly advanced theoretical and practical understanding of human reproductive biology, embryology,infertility and assisted reproductive technology (ART) along with intensive 'hands-on' practical training in essential laboratory skills, including the sophisticated micromanipulation techniques associated with ART.

Specific Aims of MSc in Clinical Embryology

• To deliver intensive teaching for students in both fundamental and applied aspects of subject areas directly related to clinical embryology such as human reproductive biology, embryology, infertility and ART.
• To provide students with dedicated theoretical and practical training in basic laboratory research skills.
• To ensure students understand and appreciate the ethical and legal issues associated with ART and the treatment of infertility.
• To provide students with intensive 'hands-on' practical training in laboratory skills and ART, particularly gamete micromanipulation, intra-cytoplasmic sperm injection (ICSI) and preimplantation genetic diagnosis (PGD).



• To provide, high quality laboratory training in research methodology that can be applied to basic or applied aspects of reproductive science/ clinical embryology in the future.
• To encourage student understanding and appreciation of how current molecular technologies (such as the human genome sequencing project, embryonic stem cells, cloning, nuclear transfer and reprogramming) might relate to the future treatment of infertility and the ethical/legal issues involved.
• To understand how business management skills and quality management procedures are vital in the ART clinic.
• To provide training in professional development and transferable skills.
• To build a network of potential leaders in clinical embryology for the future.

Practical skills

Professional development Significant emphasis will be placed on professional development and the acquisition of transferable skills. Our MSc students will receive regular professional development seminars and workshops delivered by internal and external staff. placement will be provided.

Areas covered include:

• AI in IVF
• Laboratory safety/health and safety in a clinical environment
• Patents, intellectual property and technology transfer
• Bioethics and medical ethics
• Literature searches/online databases
• Data protection
• Experimental design, interpretation and analysis
• Getting research published
• Clinical embryology - career options and recruitmenUselection procedures
• Quality management and ISO-accreditation FOR IVF CLINICS

Teaching and learning methodology

The course will be taught by senior members of staff from the **ARC International Fertility and Research Centre.**

A variety of teaching methods wilI be employed to enhance and optimize student learning, e.g. class lectures, group tutorials, laboratory practical classes, and in-house demonstrations by visiting companies. Students will also receive regular lectures from many visiting scientists who are world experts in their field. Our oourse places special emphasis on the development of practical laboratory skills, especially those that are applicable to ART and the routine duties of a clinical embryologist. For more detailed information about the Department, including up-to-date research announcements and recent publications, please visit the departmental. **website : www.arcivf.com**

Further information

ARC INTERNATIONAL FERTILITY AND RESEARCH CENTRE
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