Extra corporeal life support Courses Brochure & Application Form



# **June 2025**

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# Introduction

ECMO society of India (ESOI) established in September 2010. The head office of the society is in Mumbai. Society conducts Biannual training course & conferences in various parts of India since the time of Inception.

### Aims and Objectives of the Society -

- Spread of science of ECMO in India
- Spreading the knowledge amongst intensivists, pediatricians, Cardiac surgeon, Cardiologist & Physician about the indication & utility of this science
- Training Medical & paramedical staff for operating ECMO & make ECMO specialist & team
- Make common platform for interaction for those who are doing ECMO or planning to start the program
- To make standard protocols & Guidelines for ECMO in India
- Helping upcoming centre for establishing ECMO program
- To have common data registry of ECMO cases in India
- Publish Indian data 6 monthly & learning from the mistakes.
- Publish Indian data in International societies
- To get ECMO specialist as a recognized course
- To decrease the cost of disposables of ECMO from government
- To organise continuing medical education and training programmes, meetings and conferences in ECMO.
- To seek affiliation with national and international associations and societies or similar bodies to achieve the objectives of the Society.

# **Objective of Course**

- To produce competent super specialist ECMO Physician and to cater the need of the community.
- To be aware of contemporary advances and development in the discipline concerned.
- To make ECMO care & practice in standardized form
- To provide the expertise with special skills and intensive monitoring in perioperative period for the needy patients in super specialty departments.
- To provide structured training programme including academic activities in the form of the catered training, lectures, case discussions, journal review and mortality – morbidity meeting and to improve the knowledge and skill in the specialty.

# Organization

The course is conducted by ECMO society of India. The academic wing of the society will look after the course. Executive committee looking after various courses conducted by the society is for 5 years.

#### Advisor -

- Dr Richard Firmin, UK
- Dr G S Wandar, Ludhiana, India
- Dr K M Cherian, Chennai, India
- Dr Bhasker Rao, Delhi, India
- Dr Kunal Sarkar, Kolkata, India

#### **Program Director -**

• Dr Suneel Pooboni

#### Program Co-director -

• Dr Venkat Goyal

#### Program Co ordinator -

- Dr Pranay Oza
- Dr Vivek Gupta

#### Program Assessment Authority -

- Dr Vinod Singh
- Dr Arpan Chakraborty

#### **Teachers** –

Sr. No.	Name of Teacher	Institute Attached
1	Dr Anand Gupta	AIG Hospital, Gachibowli
2	Dr Siva Reddy	AIG Hospital, Gachibowli
3	Dr Adarsh SINGAMSETTY	AIG Hospital, Gachibowli
4	Dr Srikant Behera	AIIMS, Bhubaneswar
5	Dr Krishna Mohan Gulla	AIIMS, Bhubaneswar
6	Dr Niranjan Panigrahi	Apollo Hospital, Hyderabad
7	Dr Aleem M A	Apollo Hospital, Hyderabad
8	Dr Subba Reddy K	Apollo Hospital, Hyderabad
9	Dr Senthil	Apollo Hospital, Chennai
10	Dr Indira Jayakumar	Apollo Hospital, Chennai
11	Dr Paul Ramesh	Apollo Hospital, Chennai

12	Dr Madhan Kuppuswamy	Apollo Hospital, Chennai
13	Dr Vasanth	Apollo Hospital, Chennai
14	Dr Suchitra Ranjit	Apollo Hospital, Chennai
15	Dr Selvi C	Apollo Hospital, Chennai
16	Dr Sudeep Sirga	Apollo Hospital, Hyderabad
17	Dr Arpan Chakraborty	Apollo Multispeciality Hospital, Kolkata
18	Dr Nilanchal Chakraborty	Apollo Multispeciality Hospital, Kolkata
19	Dr Koushik Moulik	Apollo Multispeciality Hospital, Kolkata
20	Dr Anoop Kumar A S	Aster MIMS, Calicut
20	Dr Sarath K	Aster MIMS, Calicut
22	Dr Gangaprasd G	Aster MIMS, Calicut
23	Dr Nilesh Mahale	Deenanath Mangeshkar Hospital, Pune
24	Dr Samir Jog	Deenanath Mangeshkar Hospital, Pune
25	Dr Pramod Sarwa	Eternal Hospital, Jaipur
26	Dr Anil sharma	Eternal Hospital, Jaipur
27	Dr Vivek Gupta	HERO DMC HEART INSTITUTE, Ludhiana
28	Dr Vikrampal Singh	HERO DMC HEART INSTITUTE, Ludhiana
29	Dr Sambit Sahu	KIMS, Secunderabad
30	Dr Prabhat Dutta	KIMS, Secunderabad
31	Dr V S Pavan Kumar	KIMS, Secunderabad
32	Dr M. Ravi krishna	KIMS ICON Hospital, Visakhapatnam
33	Dr Sai Manikandan	KIMS ICON Hospital, Visakhapatnam
34	Dr Ramesh Varadharajan	Kovai Medical centre, Coimbatore
35	Dr Prashant vaijyanath	Kovai Medical centre, Coimbatore
36	Dr Gunaseelan	Kovai Medical centre, Coimbatore
37	Dr Srishti Jain	Mahatma Gandhi Hospital, Jaipur
38	Dr Ashish Jain	Mahatma Gandhi hospital, Jaipur
39	Dr Ajay Meena	Mahatma Gandhi hospital, Jaipur
40	Dr Devanand	Manipal Hospital, Bangalore old airport road
41	Dr Sunil Karanth	Manipal Hospital, Bangalore old airport road
42	Dr Shivakumar shamarao	Manipal Hospital, Bangalore old airport road
43	Dr Rajavardhan R	Manipal Hospital, Sarjapur Road
44	Dr Arun.V	Manipal Hospital, Sarjapur Road
45	Dr Syed Mudassar A	Manipal Hospital, Sarjapur Road
46	Dr Dipanjan Chatterjee	Medica Superspecialty Hospital, Kolkata
47	Dr Hirak Subhra Majumdar	Medica Superspecialty Hospital, Kolkata
48	Dr Writuparna Das	Medica Superspecialty Hospital, Kolkata
49	Dr Md Shereef	Medica Superspecialty Hospital, Kolkata
50	Dr Suresh Rao	MGM, Chennai
51	Dr Murali Krishna	MGM, Chennai
52	Dr Ajay Arvind	MGM, Chennai
53	Dr Riyan Shetty	Narayana Hrudayalaya, Bangalore
54	Dr Sanjay O P	Narayana Hrudayalaya, Bangalore
55	Dr Arjun Alva	Narayana Hrudayalaya, Bangalore
56	Dr Muralidhar Kanchi	Narayana Hrudayalaya, Bangalore
57	Dr Ganesh Sambandamoorthy	Narayana Hrudayalaya, Bangalore
58	Dr Rakesh V	Nasa Hospitals, Hyderabad, lb nagar

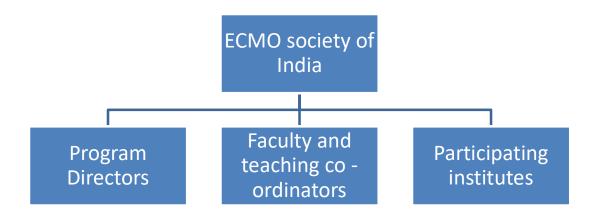
59	Dr Vamshi Krishna J	Nasa Hospitals, Hyderabad, lb nagar	
60	60 Dr Nanda Kishor Kumar Vuppali Rainbow Hospital, Hyderabad		
61	Dr Aditya n shukla	Regency Hospital, Kanpur	
62	Dr Shikha Sachan	Regency Hospital, Kanpur	
63	Dr Tarun chandra	Regency Hospital, Kanpur	
64	Dr Venkat Goyal	RVMH, Mumbai	
65	Dr Pranay Oza	RVMH, Mumbai	
66	Dr Suneel Pooboni	RVMH, Hyderabad	
67	Dr Vinod K Singh	Sir Ganga Ram Hospital, New Delhi	
68	Dr Sanjeev Mittal	Sir Ganga Ram Hospital, New Delhi	
69	Dr Saurabh Taneja	Sir Ganga Ram Hospital, New Delhi	
70	Dr Anil Sachdev	Sir Ganga Ram Hospital, New Delhi	
71	Dr Kishore Jayanthi	STAR Hospitals, Hyderabad	
72 Dr Chandana Reddy		STAR Hospitals, Hyderabad	
73	Dr Saikiran	STAR Hospitals, Hyderabad	
74	Dr Haresh Vastarpara	Unique Hospital, Surat	
75	Dr Nebhu MS	VPS Lakeshore, Kochi	
76	Dr D. S. Sujith	VPS Lakeshore, Kochi	
77	Dr Madhusudan Jaju	Yashoda Hi Tech, Secunderabad	
78	Dr Shashidhar	Yashoda Hi Tech, Secunderabad	
79	Dr Sricharan Goda	Yashoda Hi Tech, Secunderabad	
80	Dr Kapildev Thakkar	ZYDUS Hospital, Ahmedabad	
81	Dr Pratibha Dileep	ZYDUS Hospital, Ahmedabad	
82	Dr Sandeep Agarwala	ZYDUS Hospital, Ahmedabad	

# Affiliated Institute -

Sr. No.	Institute Name	Fellowship Seats Regular*	Fellowship Seats Alternate*	Certificate Seats Regular*	Certificate Seats Alternate*
1	Riddhi Vinayak Critical Care and Cardiac Centre, Mumbai				
2	Riddhi Vinayak Multispeciality Hospital, Mumbai				
3	Sir Ganga Ram Hospital, New Delhi				
4	HERO DMC HEART INSTITUTE, Ludhiyana				
5	Krishna Institute of Medical Sciences, Secunderabad, Hyderabad				
6	Apollo Hospital, Chennai				
7	Medica Superspecialty Hospital, Kolkata				
8	MGM, Chennai				
9	Apollo Hospital, Kolkata				
10	Deenanath Mangeskar Hospital, Pune				
11	KOVAI MEDICAL CENTER AND				

	HOSPITAL, Coimbatore		
12	Kamineni Hospitals , King koti and lb nagar, Hyderabad		
13	Rainbow Children's Hospital, Hyderabad		
14	Star Hospital, Hyderabad		
15	Apollo Hospital, Hyderabad		
16	Manipal Hospital, Banglore		
17	AIG Hospital, Hyderabad		
18	Yashoda Hospital, Secunderabad, Hyderabad		
19	VPS Lakeshore, Kochi, Kerala		
20	SDM College of Medical Sciences and Hospital		
21	JANVI MULTISPECIALITY HOSPITAL, Vadodara		
22	Zydus Hospitals and Healthcare Research Pvt.Ltd, Ahmedabad		
23	AIIMS, Bhubaneswar		
24	Mahatma Gandhi Hospital, Jaipur		
25	Eternal Hospital, Jaipur		
26	Nasa Hospitals, LB Nagar, Telangana		
27	Believers Church, Medical College and Hospital, Kerala		
28	K K PATEL Super Speciality Hospital, Bhuj, Gujarat		
29	ASTER MIMS, Calicut		
30	ASTER MIMS, KANNUR		
31	Regency Hospital, Kanpur		
32	Kim's Icon Hospital, Visakhapatnam, Andhra Pradesh		
33	Dr DY Patil Medical College, Hospital and Research Centre, Pimpri, Pune		
34	Rainbow Children's Hospital, Banjara Hills, Hyderabad.		
35	Yashoda - DR.K.C.MISRA		
36	Amirta Institute of Medical Sciences, Kochi, Kerala		
37	Universal Superspeciality Hospital Ltd., Surat		
38	Manipal Hospital, Bengaluru		
39	Narayana Institute of Cardiac Sciences(Narayana Health), Bangaluru		
40	Manipal Hospital, Bangaluru		

\* Seat matrix will be declared later



# **Course Details**

#### Duration of the fellowship Course -

The Total duration of the course is 1 Year. Academic year will be from 1<sup>st</sup> June 2025 to 31<sup>st</sup> May 2026

# **Eligibility for fellowship**

#### **Regular course –**

- 1) A candidate must possess the Post Graduate degree either
  - MD/DNB (or its equivalent recognised degree) in Anaesthesiology or General Medicine or Respiratory Medicine or Paediatrics or Emergency Medicine
  - MS, MCH (cardiac Surgery)
  - MD; DM (cardiology)
- MBBS with additional qualification (with 2 years in critical care experience after PG diploma)
  - Diploma in Anaesthesia/ DCH/or any equivalent diploma in relevant speciality
  - CPS
  - IDCC or IFCC

#### Alternative Course -

- 1) 4 years post MBBS, with PG Degree/Diploma as mentioned above
- 2) Membership of ECMO Society of India

#### Duration of the certificate Course -

The Total duration of the course is 6 month. Academic year will be from 1<sup>st</sup> June 2025 to 31<sup>st</sup> December 2025

#### **Eligibility for certificate course**

#### **Regular course –**

- MBBS
- Paramedical –

- Respiratory therapist
- Perfusionist
- Nursing staff BSC Nurse & GNM

#### Alternative Course or Distant learning or e learning course -

- 2years post MBBS or post basic graduation from respiratory therapist, perfusion & Nursing course (GNM or BSC)
- 4) Membership of ECMO Society of India

### **Selection Criteria for candidates**

Fellows should be selected in a fair and non-discriminatory manner in accordance with the Equal Opportunities. The selection process will be as per standard guidelines set by ESOI.

- A written Elimination Exam of multi choice Question (MCQ) of 100 marks.
- The syllabus for the written examination is basically from the critical care medicine (30%), critical care paediatrics (30%), cardiac critical care (30%) & bit of perfusion science (10%)
- Minimum passing is 60 marks. Those who have passed will be called for Interview.
- Interview can be onsite or through web meeting as per the time specified by the authority
- Ultimately, selection of a candidate for a fellowship will be done by an interview with panel of faculties constituted by the ESOI.
- Merit list & Successful candidates name will appear on the WEB site of ESOI
- The selected students will have to fill up the preference form for the centre for the fellowship
- Centre allocation will be decided by the selection committee nominated by ESOI
- The decision of the society will remain final.

#### **Fellowship fees**

- Fees structure for students
  - 40,000 + GST for processing & educational material
  - For overseas students \$ 750
- Stipend to students as per the institutional terms

#### **Certificate course fees**

- Fees structure for students
  - 10,000 + GST for processing & educational material
  - For overseas students \$ 500
- Stipend to students as per the institutional terms

#### **Important dates**

- Last date for filling form 20 May 2025
- Examination date 25 May 2025
- Result declaration & List eligible students 27 May 2025
- Preference filling form 27 to 28 May 2025
- Display of Allotment 29 May 2025
- Fees payment & Document submission 29 to 31 May 2025
- Course joining 1<sup>st</sup> June 2025

#### Curriculum

The syllabus, program delivery & training for fellowship of ECMO is designed to have a balanced exposure of the candidates in various fields of medicine. Fellows should get the proper exposure

of respiratory & cardiac ECMO, adult & paediatric ECMO, surgical & non-surgical ECMO. They should have a thorough exposure of cannulation technique, critical care medicine, post cardiac surgical management & perfusion science.

Syllabus -

Refer annexure 1

# **Program delivery & Training**

#### **Regular course -**

A candidate during his tenure will be rotated through various institutes/ faculties/ Departments for total exposure to various aspects of ECMO. Rotations to other faculties within the course are important part of the skill development. Rotations are agreed upon by the faculty and optional rotations are available upon request of the fellow and approval by the faculty program director. Upcoming interesting cases by faculty should be broadcast to all fellows through the monthly didactic meetings so freely available fellows can travel to the sites to participate or see these unusual cases.

#### Alternative course or distant learning course or e learning course -

- Attendance and follow-up of minimum 5 cases
- Total 15 days attendance at designated ECMO centre attending on the cases (in a year): This duration could be split into intervals of 5 x 3 or 7 and 8 days or in multiples.
- Attendance at 2 ECMO conferences for fellowship course & 1 for certificate course and 1 ECMO training program both for fellowship & certificate course students

The training module for the fellowship will be -

#### Theoretical -

- Didactic lecture -
- On line course lectures video
- Monthly Webinar for 2 4 hrs
- Round table meets and seminars will routinely update the academic content of the programme.

#### Practical -

- Grand Rounds & Clinical meetings
- Live clinical cases The fellow will attend and work under the faculty in the recognised institutes on the assigned modules. He/ She will participate in the pre-ECMO assessment and planning as well as the post-ECMO follow-up of their assigned patients under the faculty guidance. Operative experience in the form of assisting and being proctored over Cannulation. Each Fellow should minimum have 1000 hrs bedside training in entire 1 yrs course. Each certificate course student should minimum have 500 hrs bedside training in entire 6 month course.
- Simulation Soft Skill Development and working at skill station and Virtual reality module for co-ordination, team work, basic skills, basic laboratory work and proper perspective
- Water drills & Hands on for priming & handling mechanical complications

#### Academic work -

- Review current literature at Journal Clubs.
- Active participation in local, regional and National seminars and conferences.
- Log Book Maintaining accurate case logs is critical to each fellow. These numbers are
  vital for hospital privileging. It is mandatory that case logs are entered by each fellow into
  the Specified format of data Entry. Case logs need to be printed and brought to the
  monthly didactic meetings for review. Failure to do so results in the curtailing of operative

privileges. Log book, presentation & project work will be signed & evaluated on a time to time basis by respective faculties.

- Presentations & Publications
- Research Training: All candidates are expected to be intimately involved with the program's research activities, preferably publish at least 1 case reports per year and present their work at local, regional and National meetings and conferences. Most of the research will focus on the current techniques and outcomes evaluations of Procedures.

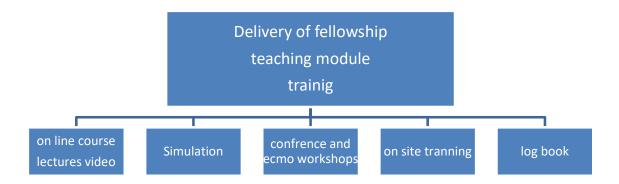
#### Fellows & certificate course student Duty -

- Demonstrate manual dexterity appropriate for their training level.
- Critically evaluate and demonstrate knowledge of pertinent scientific information.
- Practice-based learning and improvement that involve investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care
- Maintain high standards of ethical behaviour.
- Demonstrate sensitivity to age, race, gender, and culture of patients and other health care professionals
- Practice high-quality, cost-effective patient care.
- Demonstrate knowledge of risk-benefit analysis.
- All Fellows will maintain a Fellowship PORTFOLIO.

#### **Rotation Period -**

The fellows may be rotated with different expert faculties / Institutes/ department of a specific module so as to learn maximum from the respective experts in their actual operative module

- Interventional procedures including Cath Lab 2 weeks for fellowship & 1 week for certificate course student
- Cardiac OT & anaesthesia 2 weeks for fellowship & 1 week for certificate course student
- Perfusion technology training 2 weeks for fellowship & 1 week for certificate course student
- Specialty ICU training neonatal, paediatric & adult 2 weeks each for fellowship & 1 week for certificate course student
- Cardiac ECMO & Cardiac ICU for 4 months for fellowship & 2 months for certificate course student
- Respiratory ECMO & Medical ICU for 4 months for fellowship & 2 months for certificate course student
- Transplant ICU or Casualty or Trauma ICU for 1 month for fellowship & 2 weeks for certificate course student



## Evaluation methodology -

These academic activities will be constantly be reviewed by a Senior Faculty. Evaluations of the fellows by the faculty will be performed of all teaching sites every quarter during the year and upon the completion of each away rotation via internet /in person. This will include Project work Number of hours spent on hands on practice. Minimum of 1000 hrs is mandatory for fellowship & 500 hrs for certificate course student.

Course evaluation will be done by Credits Based System. Total Credit points are 400. The fellow should acquire minimum of 300 points for appearing in Final Exam. The candidates may finish their modules and earn credits in Operative sessions within a certain stipulated time (maximum 2 years and minimum 1 year for fellowship & maximum 1 year & minimum 6 months for certificate course student)

Breakup of credits is based on following Modules

- Didactic lecture 25
- On line course lectures video 25
- Meetings seminars & conferences 25
- Live clinical cases 150 points. Fellow is expected to actively involved in the management of at least 10 active ECMO patient. Weightage will be given more for the ECMO run of different field like pulmonary, cardiac, adult & paediatrics
- Simulation 50
- Water drill 50
- Log book 25. Certified log book has to be maintained. It should contain details of all the cases attended
- Paper presentation & publications 25
- Research work 25

#### **Examination** –

Minimum Number of Credits for successful completion of programme is 300 credits (75%). Those who cross 75% of credit points are eligible for their final theory & practical Exams. The passing marks will be 60%. The exam will be either on site or online.

- Fellowship Theory Examination (100 Credit points) The examination for a particular course will be conducted of MCQ type for judging overall proficiency of a Fellow.
- Fellowship practical Examination it will be by Viva & through Simulation.

#### Alternative course -

Almost same as regular course except few changes as follows -

- Eligibility for Exam
  - Attending 5 cases over 15 days at designated centres
- Credit points 300/400
- Attendance at 2 ECMO conferences for fellowship course & 1 for certificate course and 1 ECMO training program both for fellowship & certificate course students
- Membership of ECMO Society of India

### Certification

On successful completion of all modules of the Programme the Fellow will be awarded with the certificate of the Fellowship of ECMO (FECMO) by ESOI.

# Annexure I Curriculum

#### **GOALS**

- To understand cardiopulmonary physiology.
- Develop knowledge of Perfusion science.
- Develop technical and monitoring skills in critical care
- Thorough preoperative & Postoperative assessment & management of the patient undergoing cardiovascular or Lung surgery
- Work as a team member with multispecialty colleague
- Learn to maintain good clinical judgment under stress and act quickly and accurately in diagnosis, interpretation, and treatment of critically ill patient
- To acquire the knowledge of recent developments in field of critical care

SYLLABUS FOR FELLOWSHIP STUDENTS

# ECMO:

Section – I Basics of ECMO

- 1. Introduction
- 2. History & Statistics
- 3. Indication And Selection Criteria

Section – II Types of ECMO

- 4. VA ECMO
- 5. VV ECMO
- 6. Hybrid & Variants of ECMO
- 7. AVCO2R & ECCO2R

Section – III Vascular access

- 8. Cannulation site, Technic, complications
- 9. Decannulation

Section – IV Complications

- 10. Mechanical complications
- 11. Patient complications

Section – V Management

- 12. Initiation of ECMO
- 13. Monitoring on ECMO
- 14. Recent advances in Neuro monitoring like BIS cerebral oximetry, NIRS, evoked potential monitoring,
- 15. Management of patient on ECMO

- 16. Analgesia and sedation Muscle relaxants on ECMO
- 17. Pharmacokinetics & pharmacodynamics of drugs during CPB
- 18. Weaning & trial off

Section – VI Specific issues

- 19. Transport of patient critically ill patient & patient on ECMO
- 20. Out of Hospital ECMO
- 21. Extracorporeal organ support in Hepatic failure
- 22. Immunocompromised patient & ECLS
- 23. Sepsis & ECMO
- 24. Surgical & medical procedures during ECMO
- 25. Hypothermia, techniques & protocols

Section – VII Neonatal ECMO

- 26. ECMO for Neonatal Respiratory Failure
- 27. ECMO for Neonatal Cardiac Failure
- 28. Neonatal ECMO & Brain
- 29. Outcome & follow up of Neonates on ECMO

Section – VIII Paediatric ECMO

- 30. ECMO for Paediatric Respiratory Failure
- 31. ECMO for Paediatric Cardiac Failure
- 32. Neurological outcome in Paediatric ECMO

Section – IX Adult ECMO

- 33. ECMO for Adult Respiratory Failure
- 34. Long term results of ECMO for adult respiratory failure
- 35. ECMO for Adult Cardiac Failure

Section – X Newer applications

- 36. Newer indications of ECMO
- 37. ECPR
- 38. Future of ECLS

Section – XI Administrative issues

- 39. Record keeping & data registry
- 40. Legal & ethical issues during ECLS
- 41. Economics of ECLS
- 42. Safety in ECLS
- 43. Counselling & relatives education
- 44. Administrative & training issue in ECLS
- 45. Guidelines for establishing centre, Training and Continuing Education of ECMO Specialist

### PERFUSION SCIENCE

- 46. Basics of Perfusion science
- 47. ECMO equipment & circuit
- 48. Circuit Preparation And Priming
- 49. Physiology of ECLS & SIRS in ECLS
- 50. Circuit maintenance & Monitoring

51. Trouble shooting - machine related, Change of circuit or component of circuit

#### **CRITICAL CARE TRAINING**

- 52. Basics of Critical Care monitoring
- 53. Basics of critical care management Airway management, Ventilatory management, hemodynamic management, etc
- 54. Arterial Blood Gas Analysis
- 55. Electrolyte and Fluid Management
- 56. Nutrition in critical illness Enteral and Parenteral nutrition, Monitoring of nutrition
- 57. Nosocomial infection, Infection in the immunocompromised host
- 58. Antibiotic stewardship, Antibiogram, antifungal therapy

#### Neonatal ECMO

- 59. Neonatal Respiratory Failure Pathophysiology & management
- 60. Neonatal Cardiac Failure Pathophysiology & management
- 61. Congenital Diaphragmatic Hernia pathophysiology & management options
- 62. Nursing care of critically ill new-borns

#### Paediatric ECMO

- 63. Paediatric Respiratory Failure Pathophysiology & management
- 64. Paediatric Cardiac Failure Pathophysiology & management

#### Adult ECMO

- 65. Adult Respiratory Failure Pathophysiology & management
- 66. Adult Respiratory Failure ARDS
- 67. Adult Respiratory Failure Acute Pulmonary embolism
- 68. Adult Cardiac Failure Pathophysiology & management

#### HEMATOLOGY

- 69. Coagulation mechanism, pathophysiology & disorders of Coagulation
- 70. Anticoagulation & novel anticoagulation
- 71. Monitoring of Coagulation system including Thromboelastography & Sonoclot
- 72. Blood & blood product transfusion threshold's, type & adverse events

#### CARDIAC CRITICAL CARE TRAINING

- 73. Cardiac Critical care basic principles & monitoring
- 74. Cardiopulmonary resuscitation Basic Life Support (BLS), Advance Life Support (ALS) Placement of a central venous catheter, Pulmonary artery (Swan Ganz) catheterization, Arterial catheterization, Invasive pressure monitoring Measurement and interpretation of the hemodynamic variables & Transvenous pacing.
- 75. Non-Invasive Imaging of the Heart like 2D Echo with Colour Doppler & Trans-Oesophageal Echocardiography
- 76. Cath Lab Procedures like Coronary or regional angiography, Angioplasty, arrhythmia ablation, DSA, Coil Embolization
- 77. Management of Ischemic Heart disease

- 78. Management of Valvular heart disease
- 79. Cardiogenic Shock Pathophysiology & Management

#### CARDIO-THORASIC & VASCULAR SURGERY

- 80. Basic principles of Cardiac surgeries off Pump & On Pump surgeries
- 81. Basics of Congenital Heart Diseases Cyanotic & Acyanotic & its management plan
- 82. Surgeries & various procedures in Lung disorder like Lobectomy, ICD insertion, Pulmonary Embolectomy, etc
- 83. Vascular surgery Central cannulation, embolectomy, vascular repairs
- 84. Basics of Cardiac anaesthesia
- 85. Preoperative preparation and post-operative care in various cardiac & Lung surgeries

# **NEPHROLOGY**

- 86. Acute Renal Failure in ICU causes, Pathophysiology & management
- 87. Basics of Renal replacement therapy types & management
- 88. Plasmapharesis
- 89. Other Extracorporeal therapies like Endotoxin removal, MARS, etc

#### **NEUROLOGY**

- 90. Coma Pathophysiology & Management
- 91. Status epilepticus Pathophysiology & Management
- 92. Post anoxic brain damage & Brain death.

#### TOXICOLOGY

- 93. Toxicology Acute intoxications, cardiotoxic drug overdose, Electrocution, animal bites and stings
- 94. Acute Lung Injury secondary to near-drowning, Radiation injury, Chemical injuries

#### **Transplant Medicine**

- 95. An Overview of Ventricular Assist device -
- 96. Heart transplantation Indications, selection criteria, Pre & Post-operative management
- 97. Lung transplantation Indications, selection criteria, Pre & Post-operative management
- 98. Artificial lung
- 99. ECMO pre & post lung transplantation
- 100. Organ donation & ECMO
- 101. Management of the brain-dead organ donor

#### **TEXT BOOKS, REFERENCE BOOKS & JOURNALS FOR FELLOWSHIP**

- ECMO Red book 6<sup>th</sup> Edition
- ECMO training Manual ELSO 4<sup>th</sup> Edition
- ECMO Volume I practical manual Dr Oza & Dr Goyal
- ECMO volume II Theoretical manual Dr Oza & Dr Goyal
- Intensive care Medicine by Irwin & Rippe 7<sup>th</sup> edition
- Principles of Internal Medicine by Harrison 17<sup>th</sup> Edition
- Braunwald's Heart disease 8<sup>th</sup> Edition
- Kirklin Cardiac Surgery
- Glenn Cardiac Surgery
- Gravlee Perfusion
- Journals

		Annexure II		
	ECMC	SOCIETY	OF INDIA	Ą
		APPLICATION	I FORM	
Name:				
Father's Name:				
Mother's Name:				
Date of Birth:				
Home Address: -				
Tel. No	(R)	(O	)	
Nationality:				
		E-mail2_		
Name of the course:				
ESOI membership N				
Qualification –				
	Qualification	University/ College	MCI/State registration no	Year o
Basic				passing
Post Graduate				
Post Doctorate				
Post Doctorate Diploma/Fellowship Others				

		Year		Institute/Hospital		
Sr. No.	Designation	From	То		Total Experience	
1.						
2.						
3.						
4.						

# Publications if any

Give the details of your all publications in terms of paper presentation, poster presentation, review article or original article, etc

- Indexed Journals National & International.
- Non indexed journals
- Conferences National or Regional Conferences/Workshops

### Undertaking

I, Mr/ Miss,S/o	
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R/O \_\_\_\_

currently working as \_\_\_\_\_\_, agrees for all the criteria set by the Society for the given course. Information provided by me is correct to the best of my knowledge. If the information provided by me is incorrect then I am liable for the prosecution by society as per their rules.

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Date:

Place:

Note:-

- 1. Please send soft copies of
  - Degree & registration certificate
  - Experience certificate
  - If you are employed/ studying some other course, a letter of 'no-objection' from the employer/institution
- 2. Also send soft copy of the application & certificates on ecmosocietyofindia@hotmail.com or drpranay.oza@gmail.com

For any correspondence contact – Dr Pranay Oza – 9821214971 or Ms Vidhya - 92231 86500

Office Address – ECMO Society of India, c/o Riddhi Vinayak Multispecialty Hospital, Plot no 302, Behind Railway Carshed, Shriprastha Colony, Ahead of Fun fiesta Multiplex Theatre on Yashwant Gaurav road, Nallasopara west. Pin code 401203 (Nile more village) Distt. Palghar, Maharashtra India