



YENEPOYA

(DEEMED TO BE UNIVERSITY)

Recognized under Sec 3(A) of the UGC Act 1956

Accredited by NAAC with 'A' Grade

1.1.3 Courses with focus on competency/ employability/ entrepreneurship/ skill-development offered either by the University or in collaboration with partner Institutions/ Industries during the last five years (2016-2021).

Any other documents

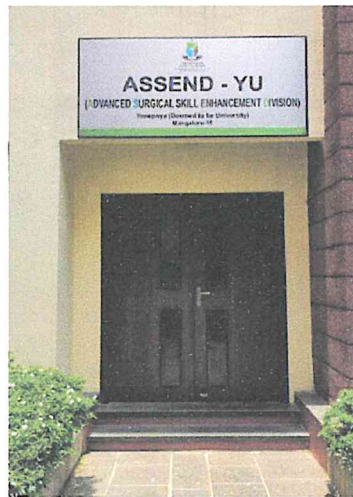
Advanced Surgical Skill Enhancement Division (ASSEND)

ATTESTED

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ASSEND

Advanced surgical skill enhancement division (ASSEND) at Yenepoya (Deemed to be University) was established in the year 2019. It is one among the few surgical training facilities on animal model available in private health-care sector across the country. It is well furnished with advanced equipments for surgical training like basic endo-trainers, Minimally Invasive Laparoscopic instruments, Robotic setups, Surgical microscope unit and variety of open surgical instruments, alongside of well-competent team of trainers, veterinary surgeons, technicians and additional staffs for facilitation of programs.



Entrance of ASSEND

ASSEND attributes the gain of knowledge, advancement of medical training facilities in surgeries of all kind by following ethical and professional conduct. For achieving the objectives of the division, the group of well experienced team and faculties are being designated for each work by following the principles of standard-operative-protocol.



Waiting room



Board room

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Workshop for the final year MS PG's

Animal model based training

Live animal offers an actual exposure to surgical interventions and emergencies as similar to the human specimen. Biomedical experimentation offers an ideal learning and application platform for surgeons/professionals to get familiarization in live tissue manipulation, bleeding management and challenging interferences during procedures. Endotraining laparoscopic models offer the variety of hand-eye co-ordination skill for the beginners before going to live animal model. ASSEND enables learning-by-doing under the umbrella of ethical guidelines for advancement in science and mankind.

Advantages of live animal model

- Actual tissue handling and monitoring of the critical parameters
- Accountable learning compared to simulation based
- More innovative mode of learning
- Will decide the actual competence of the surgeon
- Helps for learning comprehensive anatomy
- Helps for extending non-clinical tasks like humane method of learning by animal-human intervention

Animal based learning in ASSEND provides keen attention to individual for learning-by-doing under supervision of experienced faculties. Here all kind of medical professionals/practitioners/PG students/specialty students can get opportunity for enhancing

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and developing actual surgical skills under stress-free environment in realistic manner. This helps for boosting of learners self confidence for exercising, and exploring the advanced medical technology.

Application

The center can be utilized by faculties for purpose of training or for evaluation of skill. This also has applications in training newly budding post-graduate students and specialities for improving their performance in advanced techniques, standard protocols and ancillary medical stuffs. Facility is open for external sourcing through proper channel. Currently our division is being utilized by Verwandeln Institute, Cochin and Intuitive Surgicals Private limited, India

In our laboratory, pig (porcine) is utilized as a model for providing surgical training for medical students, graduate students, and residents. Because of the wound-healing characteristics, physiology and gross surgical anatomy of most of the organs mimicking human model, porcine has been preferred by some instructors who formerly used other models in these training exercises. It is also found that pig is also used for speciality training in staple surgery, laser surgery, and microsurgery.

YEN-ASSEND FACILITIES

All together at our Division we have one dedicated robotic OT set up, four laparoscopic work stations and five adjustable patient table, three endo-trainers, one operating microscope, two cadaver units of thirty two cadaver storage capacity each of -20°C temperature. These surgical trainings are open for both internal and externally organized trainings through proper channel. Including the above infrastructures we have a sterilization unit dedicated for the instrumentations and equipments of ASSEND.



Ultrasonic cleaner

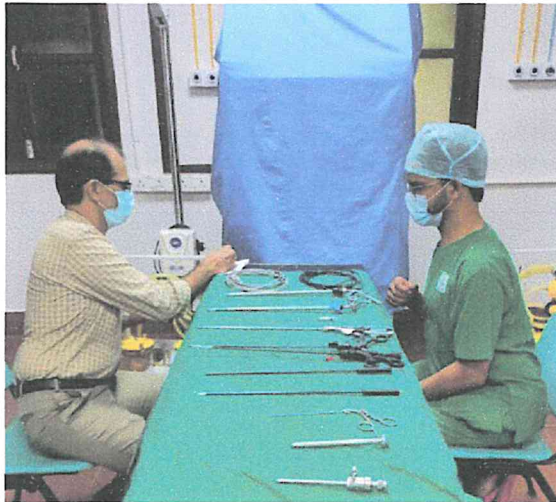


Autoclave unit

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Endo-trainer setups: For the beginners in order to make them familiar with their hand-eye co-ordination certain basic drills will be done using endo-trainers. Once they are competent enough the inanimate objects will be replaced by the tissues (chicken meat) in order to gain the feel of the tissue. After getting satisfactory opinion from the trainer then only they will be allowed to the live workshops to conduct procedures.



Lap. instruments identification



Demonstration of knots by PG's



Virtual exercises for hand-eye co-ordination

Minimally Invasive Laparoscopic Setups: It enables learning and improving of minimal invasive technique of suturing, handling and organ mobilization skill development from basic to advance methodology. Laparoscopic setups are mainly used for gastrointestinal, renal and hepatic

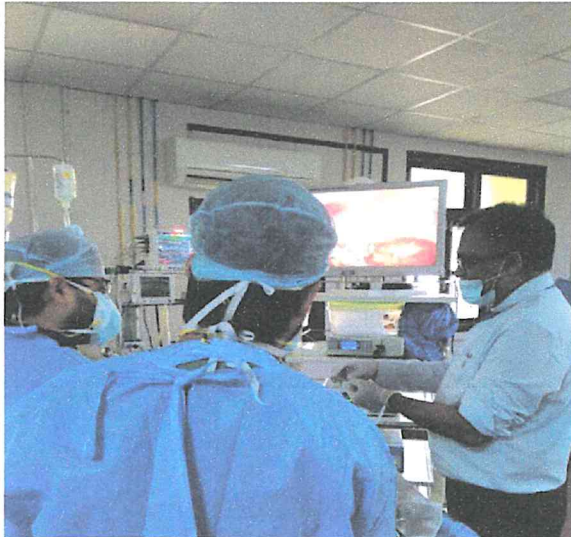
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surgeries like, hernia repair, cholecystectomy, thyroidectomy, laparoscopic guided internal organ biopsy, renal transplantation, omentectomy and other kind of surgical skill development.



Laparoscopic OT complex



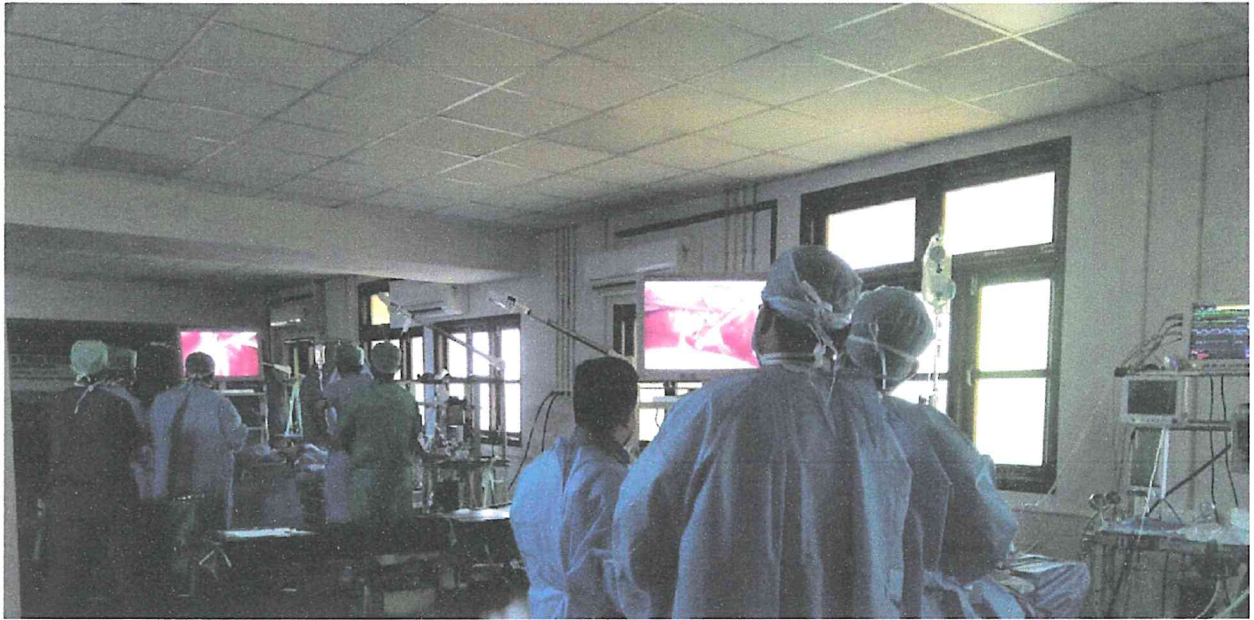
Guidance by our Vice Chancellor during speciality workshops



Speciality training for MCh student from Dept. of Surgical Oncology

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Workshop for the final year MS General Surgery



External and Internal MCh students from Urology Dept.

Minimally Invasive Robotic Setups: Robotics surgical skill development in collaboration with Intuitive Surgical USA, using da-Vinci model for Robotic assisted minimally invasive surgeries, started since October 2019. This unit is being provided with advanced components like patient cart, surgeon console, vision cart from da-Vinci, anesthesia machine and all accessory setups are made available.

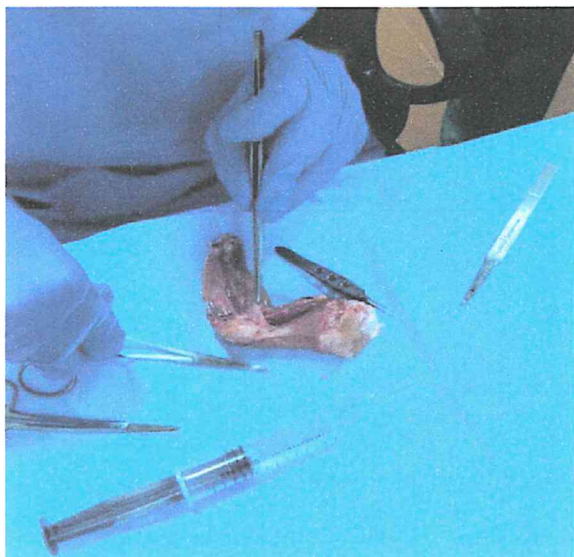
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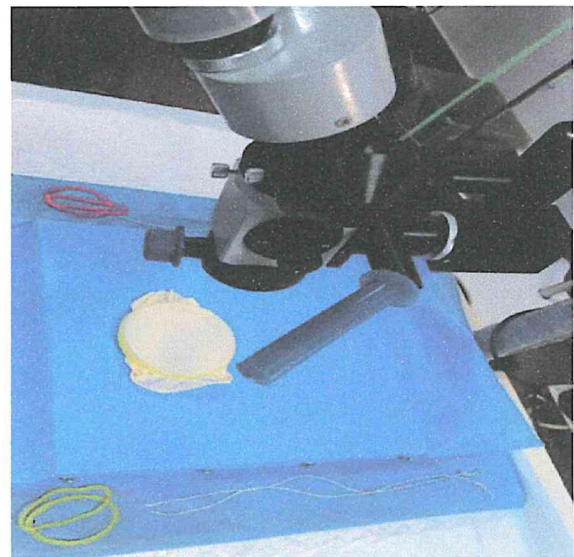


Robotic surgery training unit

Micro-vascular Surgical Units: Vascular anastomosis and other procedures where in the lens are mandatory for the surgical procedures will be dealt using the most appropriate inanimate and the tissue components which makes surgeons/trainees competent enough to conduct vascular anastomosis during various procedures live transplantations etc.



Vascular anastomosis using fresh meat by Dept. of Plastic Surgery



Surgical microscope unit

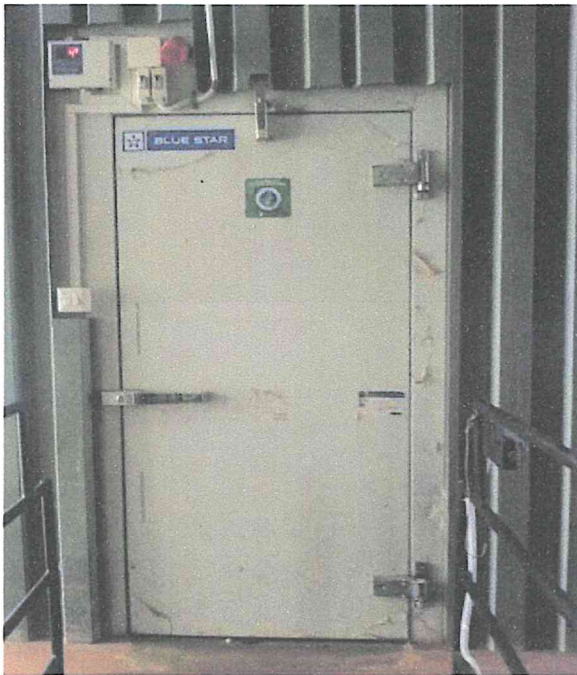
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Operating the fresh tissue through operating microscope, Dept. of Plastic Surgery

Cadaver Section: We have dedicated cadaver facilities of accommodating thirty two cadavers in both the sections. Of which, one has been utilized for the storage of cadavers which are being utilized for the surgical training. And the other section is being utilized for the community service. We have a lift operated channel to connect with cadaver section.



Cadaver unit for training purpose



Cadaver unit for community service

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Cadaver storage facility



Operational lift for interconnecting

Veterinary Section: Co-ordination, proper documentation and other necessary records related to animal ethical clearance and the programs conducted at ASEEND will be maintained by the team. We have a dedicated Veterinary team with two Veterinary Surgeons and an animal handler for the care and management of the animals. Anesthesia care and management will be looked after with keen attention for the judicious and ethical use of the animal.



Veterinary Section for care and management

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