



Sri Lakshmi Narayana Institute of Medical Sciences

Osudu, Agaram Village, Kudupalkoni post, Pudukcherry – 605 502

Department of Anatomy

Dud:01/12/2017

From

Dr.Somashekar J. Lydinur
Professor and Head,
Department of Anatomy,
Sri Lakshmi Narayana Institute of Medical Sciences
B.H.H.R
Pudukcherry

To

The Dean,
Sri Lakshmi Narayana Institute of Medical Sciences
B.H.H.R
Pudukcherry

Subj: Permission to conduct value-added course: Embalming techniques

Dear sir,

With reference to the subject mentioned above, the department proposes to conduct a value-added course titled **Embalming techniques for 1st year MBBS students** in February 2018. We solicit your kind permission for the same.

Kind Regards

Dr.Somashekar J. Lydinur

PROF. & HEAD OF ANATOMY
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
OSUDU, AGARAM VILLAGE, KUDUPALKONI POST,
PUDUCHERRY - 605 502

FOR THE USE OF DEANS OFFICE

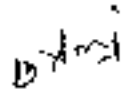
Names of Committee members for evaluating the course:

The Dean: **Dr. Jayalakshmi. G**

The HOD: **Dr. Sureshkar. I. Tolamur**

The Expert: **Dr. Anitha. B**

The committee has discussed about the course and is approved.



Dean

Sureesh Expert

HOD

PROF & MOD OF A HISTORY
SRI LAKSHMI SURESHKAR I. TOLAMUR
RECEIVED
K. SURESH KARANJANATHAN 05/01/20



OFFICE OF THE DEAN

Sri Lakshmi Narayana Institute of Medical Sciences

OSUDU, AGARAM VILLAGE, VILLIANUR COMYUNG, KUDAPAKKAM POST,

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[Recognized by Medical Council of India, Ministry of Health, Letter No. U/12012/249/2005-ME (P-4) dt. 15/07/2011]

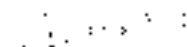
[Affiliated to Sakshi University, Chennai - 14]

Circular

08.01.2018

Sub: Organising Value-added Course on Embalming techniques . reg

With reference to the above mentioned subject, it is to bring to your notice that Sri Lakshmi Narayana Institute of Medical Sciences, Puducherry, affiliated by Bharati Institute of Higher Education and Research is organizing a value added course on "Embalming techniques" during February 2018 for 1st year MBBS students (2017-2018). The course content for the same is enclosed below."



Dean

(Dr. A.Sugumarani)

Incl. Copy of Course content.

COURSE CONTENT

Particulars	Description
Course Title	Embalming techniques
Course Code	ANA07
Topics and content of the course in the Hand book	<ol style="list-style-type: none"> 1. Origin and history of Embalming 2. Anatomy act for claiming the body 3. Embalming requirements 4. Embalming fluids 5. Methods of embalming 6. Types of embalming 7. Precautions taken during embalming
Advantages of learning and evaluation	<p>Knowledge of embalming Acquire skill in embalming</p>
Further learning Opportunities	Advanced techniques in Embalming
Key Competencies	On successful completion of the course the students will have the knowledge to do embalming
Target Student	1 st MBBS
Duration	30 hours February - March 2018
Theory Session	20hrs
Practical Session	10hrs
Assessment Procedure	Short answer questions

COURSE PROPOSAL

Course Title:

Embalming techniques

Course Objective:

1. Definition of embalming
2. Various methods of embalming
3. Ethical considerations during embalming

Course Outcome:

Knowledge in the field of embalming

Course Audience: 1st year MBBS

Course Coordinator: Dr.Semashekar.L.Lelamr

Course Faculties with Qualification and Designation:

- 1.Dr. Anitha. B. MD Anatomy, Assistant professor
- 2.Dr. B. Rajesh, Msc.phd, Professor Anatomy,
- 3.Dr. Santhini.S, MD Anatomy, Assistant professor,

Course Curriculum/Topics with schedule (Min of 30 hours)

S.No	Date	Topic	Name of the faculty	Time	Hours
1.	03.02.2018	Origin and history of embalming	Dr. Anitha.B	2-5 pm	3 hours
2.	04.02.2018	Anatomy act for claiming the body	Dr. Anitha.B	10-1pm	1 hours
3.	10.02.2018	Embalming requirements	Dr. B. Rajesh	2-5 pm	3 hours
4.	11.02.2018	Demonstration	Dr. B. Rajesh	10-1 pm	1 hours
5.	17.02.2018	Embalming fluids	Dr. Santhini.S	2-5 pm	2 hours
6.	18.02.2018	Practicals	Dr. Santhini.S	10-1 pm	3 hours
7.	24.02.2018	Methods of embalming	Dr. Anitha.B	2-3 pm	1 hour
8.	24.02.2018	Demonstration of methods of embalming	Dr. Anitha.B	3-5 pm	2 hours
9.	03.03.2018	Types of embalming	Dr. B. Rajesh	2-3 pm	1 hour
10.	03.03.2018	Practicals	Dr. B. Rajesh	3-5 pm	3 hours
11.	10.03.2018	Places of embalming	Dr. Anitha.B	2-5 pm	1 hour
12.	10.03.2018	Precautions during embalming	Dr. Santhini.S	3-5 pm	2 hour
13.	17.03.2018	Advanced techniques	Dr. Anitha.B	2-5 pm	3 hours
Total					30 hrs

REFERENCE BOOKS:

1. ML. Ajmani, principles and legal aspects of embalming
2. Handbook of histopathological and histochemical techniques

VALUE ADDED COURSE

1. Name of the programme & Code

Embalming techniques

2. Duration & Period

30 hrs & February - March 2018

3. Information Brochure and Course Content of Value Added Courses

Enclosed as Annexure - I

4. List of students enrolled

Enclosed as Annexure - II

5. Assessment procedures:

Short answer question - *Enclosed as Annexure - III*

6. Certificate model

Enclosed as Annexure - IV

7. No. of times offered during the same year:

1 time - February-March 2018

8. Year of discontinuation: Nil




9. Summary report of each program year-wise

Value Added Course- February - March 2018					
Sl. No	Course Code	Course Name	Resource Persons	Target Students	Strength & Year
1	AN-302	Embalming techniques	Dr. Anitha, B Dr. B. Rajesh Dr. Shanthini S	1- MBBS	20 students February- March 2018

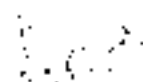
10. Course Feed Back

Enclosed as Annexure - V

RESOURCE PERSON,

1. Dr. Anitha, B 
2. Dr. B. Rajesh 
3. Dr. Shanthini S 

COORDINATOR


Dr. Somaiah, L. Tolam
PRG & HOD of Anatomy
SRI LAKSHMI NARAYANA COLLEGE OF
MEDICAL SCIENCES
Sri. Agastya Village, Ponnur, 515 122

EMBALMING TECHNIQUES



PARTICIPANT HAND BOOK

Annexure- I
COURSE DETAILS

Particulars	Description
Course Title	Embalming techniques
Course Code	ANA07
Topics and content of the course in the Hand book	<ol style="list-style-type: none"> 1. Origin and history of Embalming 2. Anatomy act for claiming the body 3. Embalming requirements 4. Embalming fluids 5. Methods of embalming 6. Types of embalming 7. Precautions taken during embalming
Advantages of learning and evaluation	<p>Gain in depth knowledge in embalming</p> <p>Improve the surgical skill</p>
Further learning Opportunities	Advanced techniques in Embalming
Key Competencies	On successful completion of the course the students will have the knowledge about preservation of human body
Target Student	1 st MBBS Students

Duration	30hrs
Theory Session	20 hrs
Practical Session	10hrs
Assessment Procedure	Short answer questions

Embalming is defined as “The process of chemically treating the dead human body to reduce the presence and growth of microorganisms, to retard organic decomposition and to restore an acceptable physical appearance.”

-American Board of Funeral Service Education

Origin and history of Embalming

Embalming, one of humankind’s longest practiced arts, is a means of artificially preserving the dead human body. Embalming originated in Egypt, it is estimated that it was begun about 3200 BC and continued on until AD 650. According to Egyptian belief preservation of human body was necessary requirement for resurrection. During these 4000 years the embalming techniques had undergone number of variations.

The Egyptian restorative art is extraordinarily done. They restore facial features and also the entire bodily contours. They internally packed the mouth with saw dust to pad out the cheeks. The eyelids were stuffed with linen pads. Then in the abdomen they made the incisions by burrowing under the skin and the packing materials was forced into these channels. For back and limbs separate incisions were made and packed. The packing material most commonly used were resin, linen bandages, mud, sand, saw dust and butter mixed with soda. After the complete covering of the body with a paste of resin and fat the bandages were applied. The bandages varied from 3- 9 inches width and upto 1200 yards in

length. The wrapped mummies were encased and placed in boxes or coffins. Coffins shaped like the human form termed as anthropoid or mummiform. This method was followed for 100 of years till the period of anatomy

A clear trend is emerging from the history of anatomy, whereby use of the bodies of criminals morphed into illegal grave robbing, and this in turn morphed into legal use of unclaimed bodies

Anatomy act for claiming the bodies

Body donation which is requested by a person (himself before death or near relative), carried out by embalmer and bound by a law known as Anatomy Act.

An Act to provide for the supply of unclaimed bodies of deceased and for Donation before death by a person of his body or any part thereof after his death to hospital and medical and teaching institution for therapeutic purpose or for the purpose of medical education or research including anatomical examinations and dissection.

unclaimed body may come to the institution from various source like government hospital, prison, other than government hospital and public place. This will come to the notification of officer incharge , authorized officer and incharge of the institution . When it reached the institution the medical record department intimate to police station. The medical superintendent prepare an advertisement and a passport size photo is taken. Then an advertisement will be given in a newspaper by an authorized officer. They will wait for 7 days. If a relative come to claim the body with proof after thorough investigation the body will be handover to the claimant. If there is no response the body handed over to incharge of the institution. And body will be handover to Anatomy department. If there is doubt regarding cause of death authorized officer takes possession of unclaimed body and request for inquest to the police officer. If any doubt

regarding the person claiming the body as near relative authorized officer should take care of preserving the body, case referred top executive magistrate and the final decision should be made within 2 days.



The image shows a 'Certificate of Embalming' form. The title is 'Certificate of Embalming' with a 'Dated' field. The text on the form reads: 'This is to certify that the dead body of late _____ S. D. / W. of Mr _____ an's _____ national, brought to this Department from _____ where he/she had died, having been duly embalmed by me and in present condition, it is not a hazard to public health. The body after embalming has been handed over to the claimant, who brought it to this department.' Below this, there are fields for 'Received back the embalmed body of late _____', 'And 3/5* copies of this certificate', 'Signature of the claimant', and 'With his/her full address'. On the right side, there is a field for 'Signature of the Faculty Member Official seal'. At the bottom left, it says '*3 for local transportation / 5 for international transit'.

Embalming requirements

For a proper embalming following requirements are needed

Two embalming rooms, a preparation room, a changing room, post embalming room, a waiting room.

Embalming room

Two in number

Ground floor

At rear of premises

180*320 square feet

Adequate space

Running water

Well ventilated

Good light

Electrical outlet

Multiple drains



Equipments and furniture for embalming room

Embalming table

2 collecting buckets

Waste container

First aid kit

Surgical instruments

Instrument trolley

Syringes

Forceps- hemostat, dressing

Scissors- curved, straight

Suture needle

Embalming machine

Embalming fluids

Embalming chemicals and fluids should have the following fundamental properties

- 1) Ensure that there is no risk or fear of infection on contact with dead body
- 2) Produce without mutilation, a natural colour and effect on the body, so that a life- like appearance is produced.
- 3) Ensure preservation of the body and the prevention of putrefaction changes
- 4) Prevent contamination with insects and maggots

The embalming fluid consists of following chemicals

- 1) Preservatives
- 2) Germicides
- 3) Buffers
- 4) Wetting agents
- 5) Anticoagulants
- 6) Dyes
- 7) Vehicle
- 8) Perfuming agents

These groups of chemicals are combined in various proportion to produce the arterial, cavity and preinjection fluids.

The following fluids are normally prepared in the practice of embalming.

- 1) Arterial fluid
- 2) Cavity fluid
- 3) Pre injection fluid

Following are the commonly used vessels for embalming

Common carotid artery and internal jugular vein , femoral artery and vein , axillary artery and vein, brachial artery and vein, radial artery

Incisions

2 types of incision used for embalming .

- 1) Transverse or oblique
- 2) "T" shaped incision or wedge shaped

Novel techniques

Plastination



Plastination is invented in the year 1978 in Heidelberg, Germany. The Inventor of this technique is Prof. Gunther Von Hagens . In 1978 they used silicone, in 1980 epoxy and in 1981 polyster were used.

Thiele's soft fix

It was developed in 1992 by Prof W. Thiel, Institute of Anatomy, Karl Franzens University, Graz, Austria. It is a low-odour embalming technique. In this colour, consistency and transparency of the tissue were very well preserved. Superb flexibility –comparable with fresh tissue.



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SLIMS

VALUE ADDED COURSE
Embalming techniques and ANA07

List of Students Enrolled February - March 2018

1st Year MBBS Student

Sl. No.	Name of the Student	Roll No.	Signature
1	AANKIE SHERLINE RAJAM.L.	U17MB251	
2	AARTHISEKAR.D	U17MB252	
3	AARYA R BASHI	U17MB253	
4	ABHITHYK	U17MB254	
5	ABHISHEKI	U17MB255	
6	ABHISHEK KUMAR VISHWA KARMA	U17MB256	
7	ADITYA RAI	U17MB257	
8	ADWIZA RAI	U17MB258	
9	AIZAN.M	U17MB259	
10	AGARWAL RIDDHAM RAJESHIBHAI	U17MB260	
11	AISWARYAS. NAIR	U17MB261	
12	AKANKSILA C. GOUDASIA	U17MB262	
13	AKASHI KELOTH	U17MB263	
14	ALLUVALA ABHILASHI	U17MB264	
15	AMITHA RAI NDRA SURESHKAND	U17MB265	
16	ANUSHMANI PARYMOJAN	U17MB266	
17	ANIKET SINDHA	U17MB267	
18	ANJALI GORAI	U17MB268	
19	ANJH RAI	U17MB269	
20	ANJH RAMESH K.V.	U17MB270	

RESOURCE PERSON

1. Dr. Anitha.B

2. Dr. B. Rajeev

3. Dr. Shanthini

COORDINATOR

Dr. Somashekar I. Telani

PROF. & HOD OF ANATOMY
GOVERNMENT GOVT. MEDICAL COLLEGE
MEDICAL SCIENCE
B. V. Subrahmanyam, Pondicherry - 605 006



**SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION
AND RESEARCH**

Annexure - III

VALUE ADDED COURSES

EMBALMING TECHNIQUES

Short answer questions

Course code:ANA07

Answer all the questions

(10x2 = 20)

1. Define Embalming
2. Discuss the methods of Embalming
3. Mention the blood vessels used during embalming procedure
4. Anatomy act for claiming the body
5. Types of Embalming
6. Embalming fluids
7. Embalming in HIV infected body
8. History of Embalming
9. Embalming requirements
10. Newer Techniques of Embalming

Value Added course.

Embalming Techniques Course code: 41107Short Answer Questions

1. Embalming.

Embalming is defined as "the process of chemically treating the dead human body to reduce the presence and growth of microorganisms, to retard organic decomposition and to restore an acceptable physical appearance."

2. Methods of embalming.

Arterial embalming → Arterial fluid is injected into selected artery. After injecting into the artery blood is drained from suitable vein. fluid is then distributed from arch of aorta. After this fluid passes through capillaries and enters tissue spaces.

Value Added Course Embalming Techniques

Short Notes

1. Embalming

Embalming is defined as "The process of chemically treating the dead human body to reduce the presence and growth of micro organisms to retard organic decomposition and to restore an acceptable physical appearance."

2. Blood vessels used during embalming

Common Carotid artery, femoral

artery, femoral vein, lateral jugular

vein, Axillary artery and vein,

Brachial artery and vein, Radial

artery are the arteries commonly used.

Student Feedback Form

Course Name: Embalming techniques

Subject Code: ANA07

Name of Student: Aarthi Sekar .D Roll No.: V17MB252

We are constantly looking to improve our courses and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance.

Sl. No	Particulars	1	2	3	4	5
1	Objective of the course is clear				✓	
2	Course contents met with your expectations				✓	
3	Lecturer sequence was well planned				✓	
4	Lectures were clear and easy to understand				✓	
5	Teaching aids were effective				✓	
6	Instructors encourage interaction and were helpful				✓	
7	The level of the course				✓	
8	Overall rating of the course	1	2	3	4	5

* Rating: 5 - Outstanding, 4 - Excellent, 3 - Good, 2 - Satisfactory, 1 - Not-Satisfactory

Suggestions, if any:

--	--

Date: 17-03-2018



Signature

Student Feedback Form

Course Name: Embalming techniques

Subject Code: ANA07

Name of Student: Aaryan Babu R Roll No.: U17MA 253

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance.

Sl. NO	Particulars	1	2	3	4	5
1	Objective of the course is clear					✓
2	Course contents met with your expectations					✓
3	Lecturer sequence was well planned					✓
4	Lectures were clear and easy to understand					✓
5	Teaching aids were effective					✓
6	Instructors encourage interaction and were helpful					✓
7	The level of the course					✓
8	Overall rating of the course	1	2	3	4	5

* Rating: 5 - Outstanding; 4 - Excellent; 3 - Good; 2 - Satisfactory; 1 - Not Satisfactory

Suggestions if any:

Date: 17.3.2018

Aaryan
Signature

Date: 30/03/2018

From:

Dr. Somashree Lal Telamuri
Professor and Head,
Department of Anatomy
Sri Lakshmi Narayana Institute of Medical Sciences
BHEER
Padmalatery

To:

The Dean,
Sri Lakshmi Narayana Institute of Medical Sciences
BHEER
Padmalatery

Sub: Completion of value-added course: Embalming techniques

Dear Sir,

With reference to the subject mentioned above, the department has conducted the value-added course titled: Embalming techniques held in February 2018 for 1-year MBBS students. We seek your kind action to send certificates for the participants, whose list is attached with this letter. Also, I am attaching the photographs captured during the conduct of the course.

Kind Regards,



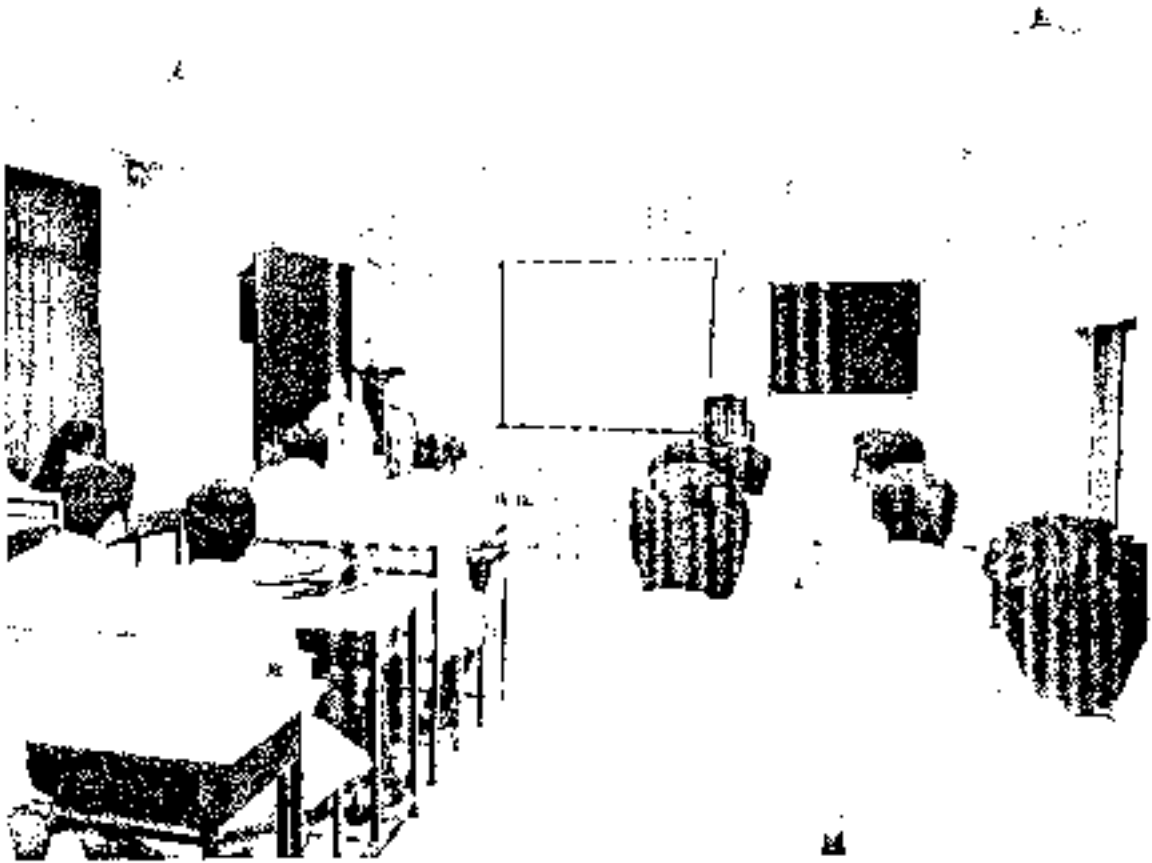
Dr. Somashree Lal Telamuri
PROF & HEAD OF ANATOMY
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
BHEER
Padmalatery

Encl: Participants list

Photographs

VALUE ADDED COURSE
EMBALMING TECHNIQUES
PARTICIPANTS LIST

Sl No	Name of the Student	Roll No
1	AANNE SHERLINE RAJAM L.	U17MB251
2	AARHISHKAR D.	U17MB252
3	AARYAR BABU	U17MB253
4	ABHJITH K	U17MB254
5	ABHISHEK J	U17MB255
6	ABHISHEK KUMAR VISUWAKARMA	U17MB256
7	ADITYA RAI	U17MB257
8	ADWIZA RAI	U17MB258
9	AHZAN M	U17MB259
10	AGARWAL REHAM RAJESHBAL	U17MB260
11	AISWARYA S NAIR	U17MB261
12	AKANKSHA CHOURASIA	U17MB262
13	AKASH K P OJHA	U17MB263
14	ALLUVALA ABHIRASHI	U17MB264
15	AMIRTHA RAJENDRA SUDHAN D	U17MB265
16	ANBIMANI PARYMOLAN	U17MB266
17	ANIKET SINHA	U17MB267
18	ANJALI GUHA	U17MB268
19	ANJU RAI	U17MB269
20	ANURAMI SH K V.	U17MB270





This is to certify that ADITYA RAI has actively participated in the Value Added Course on Embalming Techniques during February - march 2018 Organized by Department of Anatomy, Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry - 605 502, India.

g Anand

(Dr. Anitha. B)

RESOURCE PERSON

B. Rajesh

(Dr. B. Rajesh)

RESOURCE PERSON

Shanthini S

(Dr. Shanthini.S)

RESOURCE PERSON

COORDINATOR

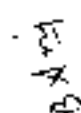


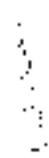
DEAN

PROF & HEAD OF /
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
PONDICHERRY - 605 502



Sri Lakshmi Narayana Institute of Medical Sciences

This is to certify that ABHIJITH.K has actively participated in the Value Added Course on Embalming Techniques during February - march 2018 Organized by Department of Anatomy, Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry - 605 502, India.

			
Dr. Anitha B	Dr. B. Rajesh	Dr. Shabdijini S	Dr. A. Sugumar
RESOURCE PERSON	RESOURCE PERSON	RESOURCE PERSON	DEAN

Sri Lakshmi Narayana Institute of Medical Sciences
Pondicherry - 605 502