SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES

Osudu, Agaram Village, Villianur commune, Kuduppakkam Post, Pudhucherry-605 502

Date: 07/01/2019

From

Dr. Somashekar I Tolanur
Professor and Head,
Department of Anatomy,
Sri Lakshmi Narayana Institute of Medical Sciences,
(BIHER University),
Puducherry-2.

To

The Dean,
Sri Lakshmi Narayana Institute of Medical Sciences,
(BIHER University),
Puducherry-2.

Sub: Permission to conduct value-added course: Plastination – reg.

Dear Madam,

With reference to the subject mentioned above, the department proposes to conduct a value-added course titled: Plastination for 1st MBBS students of 2018-2019 batch. We solicit your kind permission for the same.

Kind Regards,

PROF & HOD OF ANATOMY
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
Osudu Agaram Village, Pondicherry-605 502

FOR THE USE OF DEAN'S OFFICE

Names of Committee members for evaluating the course:

The Dean: **Dr. Jayalakshmi. G**
The HOD: **Dr. Somashekar I Tolanur**
The Expert: **Dr. S Shanthini**

The committee has discussed about the course and is approved.

Dean
(Sign & Seal)

Subject Expert
(Sign & Seal)

HOD
(Sign & Seal)

Dr. G. JAYALAKSHMI, M.Sc., M.B.B.S., D.T.C.D., M.D.
DEAN
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Agaram, Kuduppakkam Post
Villianur Commune, Puducherry-605502

PROF & HOD OF ANATOMY
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
Osudu Agaram Village, Pondicherry-605 502

OFFICE OF THE DEAN

Sri Lakshmi Narayana Institute of Medical Sciences

OSUDU, AGARAM VILLAGE, VILLIANUR COMMUNE, KUDAPAKKAM POST,
PUDUCHERRY - 605 502.

[Recognised by Medical Council of India, Ministry of Health letter No. U/12012/249/2005-ME (P -II) dt. 11/07/2011]
[Affliated to Bharath University, Chennai - TN]

Circular

18.01.2019

Sub: Organizing Value-added Course on "Plastination" – 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 to Bharath Institute of Higher Education and Research University is organizing a value added course on "Plastination" during March 2019 for Ist year M.B.B.S students (2018 – 2019 Batch). The course content for the same is enclosed below."

Dean
(Dr.G Jayalakshmi)

Dr. G. JAYALAKSHMI, BSC., MBBS., DTCD., M.D.,
DEAN
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Agaram, Kudapakkam Post,
Villianur Commune, Puducherry - 605502.

Encl: Copy of course content

COURSE CONTENT

Particulars	Description
Course Title	Plastination
Course Code	AN101
Topics	1. Introduction to plastination 2. History of Plastination 3. Plastination exhibitions 4. Whole body/organ plastination 5. Luminal cast plastination 6. Sheet plastination 7. Principles of plastination 8. Plastination technique steps 9. Fixation 10. Dehydration 11. Forced impregnation of polymer in a vacuum 12. Positioning 13. Curing 14. Video demonstration of plastination technique 15. Advantages & applications in medical field
Further learning opportunities	Clinical application of plastination in medical field
Key Competencies	On successful completion of the course the students will have better understanding of complex human anatomical structures which helps in better learning & understanding of anatomy
Target Student	1st MBBS Students
Duration	30hrs, March 2019
Theory Session	28 hrs
Practical Session	2hrs
Assessment Procedure	Short answer questions

Course Proposal

Course Title:

Plastination

Course Objective:

1. Introduce the students to plastinates
2. To learn complex anatomical structures with better understanding & orientation

Course Outcome:

Knowledge on 3d oriented anatomical structures for easy learning & understanding

Course Audience: 1st year MBBS

Course Coordinator: Dr.Somashekar I Tolanur

Course Faculties with Qualification and Designation:

1. Dr. Vijisha Phalgunan, M.B.B.S., M.D, Professor/Anatomy
2. Dr. S Shanthini, M.B.B.S, M.D, Assistant Professor/Anatomy
3. Dr. B Anitha, M.B.B.S, M.D, Assistant Professor/Anatomy

Course Curriculum/subtopics with schedule (30 hours)

Sl.No	Date	Topic	Time	Hours	Faculty Name
1.	4.03.2019	Introduction to plastination	4-6p.m	2	Dr S Shanthini
2.	5.03.2019	History of Plastination	4-6p.m	2	Dr. Vijisha
3.	7.03.2019	Plastination exhibitions	4-6p.m	2	Dr. B Anitha
4.	9.03.2019	Whole body/organ plastination	2-4p.m	2	Dr.S Shanthini
5.	12.03.2019	Luminal cast plastination	4-6p.m	2	Dr. Vijisha
6.	14.03.2019	Sheet plastination	4-6p.m	2	Dr. B Anitha
7.	16.03.2019	Principles of plastination	2-4p.m	2	Dr. S Shanthini
8.	18.03.2019	Plastination technique steps	4-6p.m	2	Dr. Vijisha
9.	20.03.2019	Fixation	4-6p.m	2	Dr. B Anitha
10.	22.03.2019	Dehydration	4-6p.m	2	Dr. Vijisha
11.	23.03.2019	Forced impregnation of polymer in a vacuum	2-4p.m	2	Dr. B Anitha
12.	25.03.2019	Positioning	4-6p.m	2	Dr. S Shanthini

13.	27.03.2019	Curing	4-6p.m	2	Dr. B Anitha
14.	29.03.2019	Video demonstration of plastination technique	4-6p.m	2	Dr. B Vijisha
15.	30.03.2019	Advantages & applications in medical field	2-4p.m	2	Dr. S Shanthini
			Total Hours	30	

REFERENCE BOOKS/ARTICLES:

1. Ye, Z., Dun, A., Jiang, H. *et al.* The role of 3D printed models in the teaching of human anatomy: a systematic review and meta-analysis. *BMC Med Educ* 20, 335 (2020). https://doi.org/10.1186/s12909-020-02242-x.
2. Sharma SGS. 3D printing and its future in medical world. J Med Res Innov. 2019;3(1):e000141.
3. Garas M, M V, G N, K M-D, J H. 3D-Printed specimens as a valuable tool in anatomy education: A pilot study. Ann Anat. 2018;219:57–64.
4. Mogali SR, WY Y, HKJ T, GJS T, PH A, N Z, N L-B, MA F. Evaluation by medical students of the educational value of multi-material and multicolored three-dimensional printed models of the upper limb for anatomical education. Anat Sci Educ. 2018;11(1):54–64.
5. M V, V P. 3D printing: a valuable resource in human anatomy education. Anat Sci Int. 2015;90(1):64–5.
6. AbouHashem Y, Dayal M, Savanah S, Strkalj G. The application of 3D printing in anatomy education. Med Educ Online. 2015;20.
7. McMenamin PG, MR Q, CR M, JW A. The production of anatomical teaching resources using three-dimensional (3D) printing technology. Anat Sci Educ. 2014;7(6):479–86.

VALUE ADDED COURSE

1. Name of the programme & Code

Plastination (code - AN101)

2. Duration & Period

30 hrs & March 2019

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 Questions - *Enclosed as Annexure- III*

6. Certificate model

Enclosed as Annexure- IV

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

1 time (March 2019)

8. Year of Discontinuation: 2020

9. Summary report of each program year-wise

Value Added Courses – March 2019					
Sl. No	**Course Code**	**Course Name**	**Resource Persons**	**Target Students**	**Strength & Year**
1.	AN101	Plastination	Dr. S Shanthini Dr.Vijisha Phalgunan Dr. B Anitha	1st MBBS (2018 – 2019 Batch)	20 / March 2019

9. Course Feed Back

Enclosed as Annexure- V

RESOURCE PERSON

1. (Dr.S Shanthini)

2. (Dr.Vijisha Phalgunan)

3. (Dr. B Anitha)

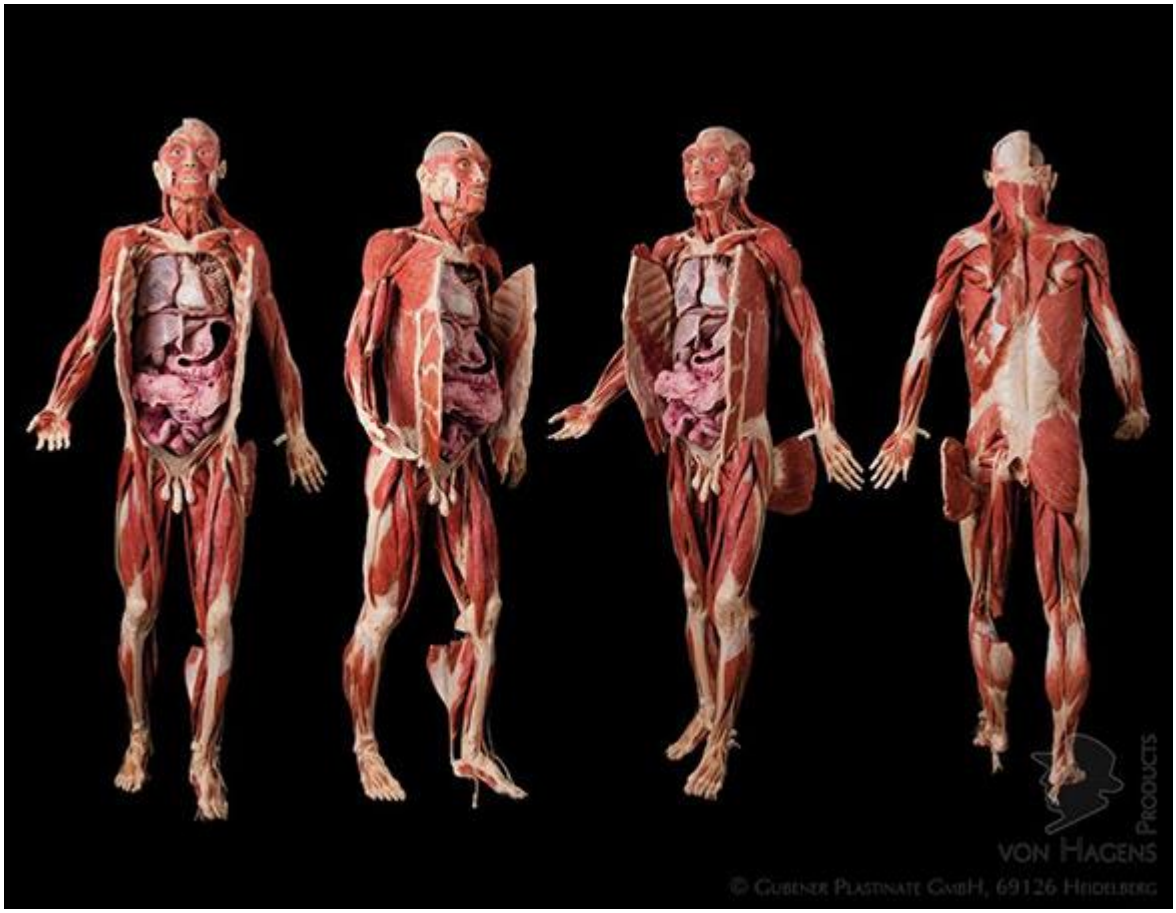
COORDINATOR

(Dr.Somashekar I Tolanur)

PROF & HOD OF ANATOMY
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
Osudu Agaram Village,Pondicherry-605 502

Annexure 1

PLASTINATION



PARTICIPANT HAND BOOK

BIHER SLIMS

COURSE DETAILS

Particulars	Description
Course Title	Plastination
Course Code	AN101
Objective	1. Introduction to plastination 2. History of Plastination 3. Plastination exhibitions 4. Whole body/organ plastination 5. Luminal cast plastination 6. Sheet plastination 7. Principles of plastination 8. Plastination technique steps 9. Fixation 10. Dehydration 11. Forced impregnation of polymer in a vacuum 12. Positioning 13. Curing 14. Video demonstration of plastination technique 15. Advantages & applications in medical field
Key Competencies	On successful completion of the course the students will have better understanding of complex human anatomical structures which helps in better learning & understanding of anatomy
Target Student	1st MBBS Students
Duration	30hrs March 2019 & April 2019
Theory Session	28 hrs
Practical Session	2hrs
Assessment Procedure	Short answer questions

Introduction:

Plastination is a technique or process used in anatomy to preserve bodies or body parts, first developed by Gunther_von_Hagens in 1977. The water and fat are replaced by certain plastics, yielding specimens that can be touched, do not smell or decay, and even retain most properties of the original sample

Plastination is a process of tissue preservation by embedding tissues with synthetic materials, (silicone polymers and epoxy resins) to produce dry, durable, handy and natural looking specimens (whole body or its parts). Its an unique tool for teaching of anatomy, pathology, radiology and surgery

History:

In November 1979, Gunther_von_Hagens applied for a German patent, proposing the idea of preserving animal and vegetable tissues permanently by synthetic resin impregnation. Since then, von Hagens has applied for further US patents regarding work on preserving biological tissues with polymers. With the success of his patents, von Hagens went on to form the Institute for Plastination in Heidelberg, Germany in 1993. The Institute for Plastination, along with von Hagens, made their first showing of plastinated bodies in Japan in 1995, which drew more than three million visitors. The institute maintains three international centres of plastination, in Germany, Kyrgyzstan, and China.

Gunther Von Hagens

Other methods have been in place for thousands of years to halt the decomposition of the body. Mummification used by the ancient Egyptians is a widely known method which involves the removal of body fluid and wrapping the body in linens. Prior to mummification, Egyptians would lay the body in a shallow pit in the desert and allow the sun to dehydrate the body. Formalin, an important solution to body preservation, was introduced in 1896 to help with body preservation. Soon to follow formalin, color-preserving embalming solutions were developed to preserve lifelike color and flexibility to aid in the study of the body.

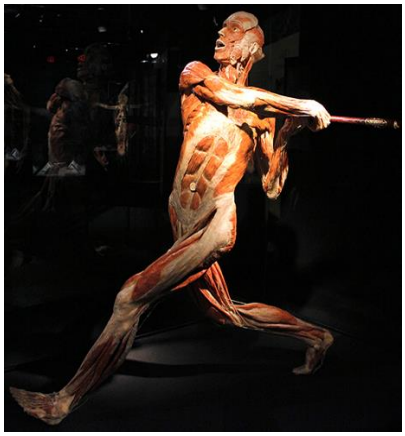
Paraffin impregnation was introduced in 1925, and the embedding of organs in plastic was developed in the 1960s. Body preservation methods current to the 21st century are cryopreservation, which involves the cooling of the body to very low temperatures to preserve the body tissues, plastination, and embalming.

Other methods used in modern times include the Silicone S 10 Standard Procedure, the Cor-Tech Room temperature procedure, the Epoxy E 12 procedure, and the Polyester P 35 (P 40) procedure. The Silicone S 10 is the procedure most often used in plastination and creates opaque, natural-looking specimen. Dow Corning Corporation's Cor-Tech Room Temperature Procedure is designed to allow plastination of specimen at room temperature to various degrees of flexibility using three combinations of polymer, crosslinker, and catalyst. According to the International Society for Plastination, the Epoxy E 12 procedure is used "for thin, transparent, and firm body and organ slices", while the Polyster P 35 (P 40) preserves "semitransparent and firm brain slices". Samples are prepared for fixation through the first method by deep freezing, while the second method works best following 4–6 weeks of preparation in a formaldehyde mixture.

Plastination Exhibitions:

For the first 20 years, plastination was used to preserve small specimens for medical study. In the early 1990s, the equipment was developed to make plastinating whole body specimens possible, each specimen taking up to 1,500-man-hours to prepare. The first exhibition of whole bodies was displayed by von Hagens in Japan in 1995.

Over the next two years, Von Hagens developed the *Körperwelten* (**Body Worlds)** public exhibitions, showing whole bodies plastinated in lifelike poses and dissected to show various structures and systems of human anatomy. The earliest exhibitions were presented in the Far East and in Germany, and Gunther von Hagens' exhibitions have subsequently been hosted by museums and venues in more than 50 cities worldwide, attracting more than 29 million visitors.



Gunther von Hagens' Body Worlds exhibitions are the original, precedent-setting public anatomical exhibitions of real human bodies, and the only anatomical exhibits that use donated bodies, willed by donors to the Institute for Plastination for the express purpose of serving the Body Worlds mission to educate the public about health and anatomy. To date, more than 10,000 people have agreed to donate their bodies to Institute for Plastination.

In 2004, Premier Exhibitions began their "Bodies Revealed" exhibition in Blackpool, England, which ran from August through October 2004. In 2005 and 2006, the company opened their "Bodies Revealed" and "Bodies...The Exhibition" in Seoul, Tampa, and New York City. The West Coast exhibition site opened on 22 June 2006 at the Tropicana Resort and Casino Las Vegas. As of June 2009, BODIES... The Exhibition is showing at the Ambassador Theatre (Dublin) in Dublin, Ireland. The exhibition was in Istanbul, Turkey, until the end of March 2011.

Plastination galleries are offered in several college medical schools, including the University of Michigan (said to possess the nation's largest such lab), Vienna University, and the JSS Medical College. Gunther von Hagens maintains a permanent exhibition of plastinates and plastination at the Plastinarium in Guben, Germany.

Types of Plastination:

Three **types of plastination** namely:

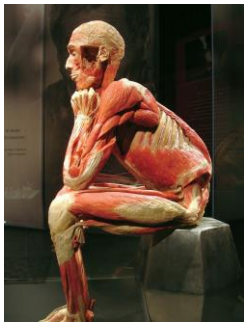
Whole body/organ plastination

Luminal cast **plastination**

Sheet **plastination**.

Whole body plastination:

Silicon (S10) and polypropylene resins are used. Total structure and relationships of an organ/body are preserved



Luminal Cast Plastination:

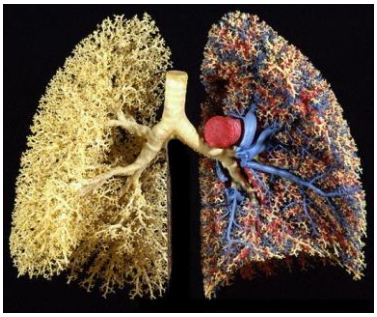
For Hollow organs like

Lungs

stomach & intestine

ventricles of brain

vascular pattern of heart and kidneys



Sheet Plastination:

Thin transparent or thick opaque sections of body or an organ is made.

Display cross sectional anatomy

Comparable to CT or MRI scan sections.

Polymers such as epoxy (E12), polyester (P35) or polypropylene (araldite) resins are used

Principles of Plastination:

Decomposition must be halted

Water & fat must be replaced by polymers

Two stages:

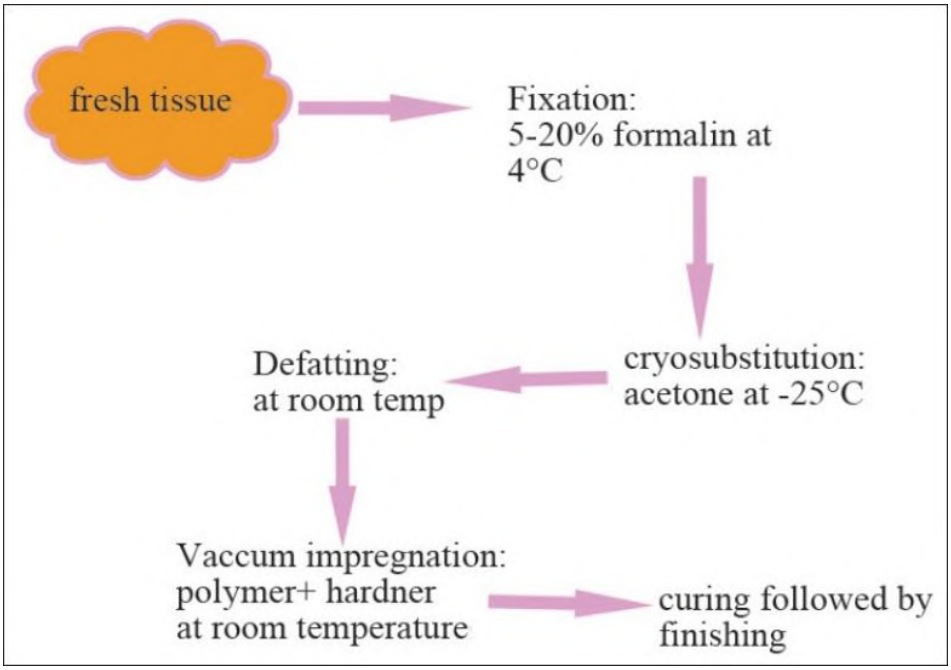
1. Fluid exchange –water & fatty tissue are replaced by acetone
2. Forced vacuum impregnation – Acetone is replaced with a polymer solution

Polymer used should be reactive, low viscosity, with suitable mechanical and optical properties like resist yellowing, suitable for grinding, with suitable refractive index. Compatible with human tissues

Plastination Technique steps:

Four steps are used in the standard process of plastination: fixation, dehydration, forced impregnation in a vacuum, and hardening. Water and lipid tissues are replaced by curable polymers, which include silicone, epoxy, and polyester-copolymer.

The first step of plastination, fixation, frequently uses a formaldehyde-based solution, and serves two functions. Dissecting the specimen to show specific anatomical elements can be time-consuming. Formaldehyde or other preserving solutions help prevent decomposition of the tissues. They may also confer a degree of rigidity. This can be beneficial in maintaining the shape or arrangement of a specimen. A stomach might be inflated or a leg bent at the knee.



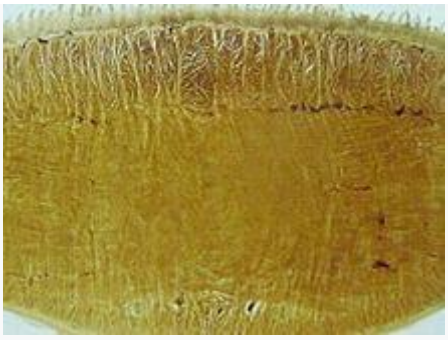
After any necessary dissections have taken place, the specimen is placed in a bath of acetone (freezing point −95 °C [-139 °F]) at −20° to −30 °C (−4 to −22 °F). The volume of the bath should be 10 times that of the specimen. The acetone is renewed two times over the course of six weeks. The acetone draws out all the water and replaces it inside the cells.

In the third step, the specimen is then placed in a bath of liquid polymer, such as silicone rubber, polyester, or epoxy resin. By creating a vacuum, the acetone is made to boil at a low temperature. As the acetone vaporizes and leaves the cells, it draws the liquid polymer in behind it, leaving a cell filled with liquid plastic. The plastic must then be cured with gas, heat, or ultraviolet light, to harden it.

A specimen can vary from a full human body to a small piece of an animal organ, and they are known as 'plastinates'. Once plastinated, the specimens and bodies are further manipulated and positioned prior to curing (hardening) of the polymer chains.

Advantages and applications of Plastination:

Plastination is useful in anatomy, serving as models and teaching tools. It is used at more than 40 medical and dental schools throughout the world as an adjunct to anatomical dissection.



Histological section of bovine tongue, epoxy technique

Students enrolled in introductory animal science courses at many universities learn animal science through collections of multispecies large-animal specimens. Plastination allows students to have hands-on experience in this field, without exposure to chemicals such as formalin. For example, plastinated canine gastrointestinal tracts are used to help in the teaching of endoscopic technique and anatomy. The plastinated specimens retain their dilated conformation by a positive pressure air flow during the curing process, which allows them to be used to teach both endoscopic technique and gastrointestinal anatomy.

With the use of plastination as a teaching method of animal science, fewer animals have to be killed for research, as the plastination process allows specimens to be studied for a long time. TTT sheet plastinates for school teaching and lay instruction provide a thorough impression of the complexity of an animal body in just one specimen.

TTT sheet plastinate of a fish

North Carolina State University's College of Veterinary Medicine in Raleigh, North Carolina, uses both plastic coating (PC) and plastination (PN) to investigate and compare the difference in the two methods. The PC method was simple and inexpensive, but the PN specimens were more flexible, durable, and lifelike than those preserved by the PC method. The use of plastination allowed the use of many body parts such as muscle, nerves, bones, ligaments, and central nervous system to be preserved.

The University of Texas Health Science Center at San Antonio was the first school in the United States to use this technique to prepare gross organ specimens for use in teaching. The New York University College of Dentistry, Philadelphia College of Osteopathic Medicine, University of Warwick, and University of Northumbria use collections of plastinates as teaching aids. The University of Vienna and the University of Sheffield have their own plastination laboratories.

References:

- von Hagens, Gunther (March 1986). Heidelberg plastination folder: collection of technical leaflets of plastination. Heidelberg: Biodur Products. OCLC 256499636. First published as von Hagens, Gunther (1985). Heidelberger Plastinationshefter Sammlung von Merkblättern zur Plastination (in German). Heidelberg: University of Heidelberg. OCLC 174501422.
- von Hagens, Gunther; Klaus Tiedemann; Wilhelm Kriz (March 1987). "The current potential of plastination". Anatomy and Embryology. **175** (4): 411–21.
- Heildelberg plastination folder

Annexure II

VALUE ADDED COURSE

Plastination (code - AN101)

List of students Enrolled – March 2019

Sl. No.	Registration Number	Name of the Student	Signature
1.	U18MB271	AYUSH JAISWAL	
2.	U18MB272	BANDHAM SANKEERTHANA	
3.	U18MB273	BORIS NAMBAM	
4.	U18MB274	BUCHHAMMAGARI SOURABH REDDY	
5.	U18MB275	CHARAN VARMA C.A	
6.	U18MB276	CHARU SAI	
7.	U18MB277	CHINKA SARAN SAI	
8.	U18MB278	CUTPIECEWALA ALIASGAR MOHAMMED	
9.	U18MB279	DATTATREYA BHATTACHARJEE	
10.	U18MB280	DEBOPRIYA DEY	
11.	U18MB281	DEVARAPALLI SAI TEJASWINI	
12.	U18MB282	DHANUSHA S	
13.	U18MB283	DHARANEESHWARAN .S	
14.	U18MB284	DHISHVANTH DHEEPAK A.N	
15.	U18MB285	DHYAN DAVID S.V	
16.	U18MB286	DISHA SHEORAN	
17.	U18MB287	DODIYA RAJANSINH KAMALSINH	
18.	U18MB288	DONNIE OLIVIA H	
19.	U18MB289	EASWAR B	
20.	U18MB290	ELDHO BABU	

RESOURCE PERSONS

1.
2.
3.

COORDINATOR

PROF & HOD OF ANATOMY
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
Osudu Agaram Village, Pondicherry-605 502

Annexure III

SRI LAKSHMI NARAYANA INSTITUE OF HIGHER EDUCATON AND RESEARCH

VALUE ADDED COURSES

Plastination

Course Code: AN101

I. ANSWER ALL THE QUESTIONS (2 x 5 = 10 marks) **Duration – 30 minutes**

a. What is plastination?

b. Mention the types of plastination with examples

c. Lists the chemicals used to prepare plastinated specimens

d. Mention the technical steps involved in plastination

e. Enumerate the uses of plastinated specimens

1/4/2019 Value added course – plastination Dhiswanth
UI8MB284

8/10
2/4/2019.

1. What is plastination?

Plastination is a process of preserving tissue by embedding them with synthetic materials namely silicone & epoxy resins to produce a dry, durable, natural looking anatomical specimens. It can a whole body or its parts. 2

2. Mention the types of plastination with example?

-plastination is of 3 types:-

a) Whole body/organ – ex limbs.

b) Sheet plastination – ex. cross sections of brain & limbs. 2

c) Luminal cast in → ex vascular pattern of heart, lung, kidney

3. List the chemicals used to prepare plastinated specimens? 1

Acetone & silicone polymers.

4. Mention the technical steps in plastination?

→ They are of 4 steps namely Fixation, Dehydration, Forced impregnation in a vacuum & Hardening. 2

01.04.2019

VALUE ADDED COURSE - PLASTINATION

7½/10

Bandham Sankeerthna

U1EMB272

1. What is plastination?

Plastination is a process of tissue preservation by embedding tissues with synthetic materials, (silicone polymers and epoxy resins) to produce dry, durable, handy and natural looking specimens (whole body or its parts).

2. Mention types of plastination with examples?

Whole body / organ plastination - Upper limb, lower limb, whole body

Luminal cast plastination - Lungs, vascular pattern of heart & kidney

Sheet plastination - cross section of limbs, brain

3. List the chemicals used to prepare plastinated specimens?

Acetone and polymers like silicon.

4. Mention the technical steps involved in plastination?

Fixation - formaldehyde based solution (5-20% formalin at 4°C) are used which helps to prevent decomposition of the tissues. They may also confer a degree of rigidity.

Dehydration - specimen is placed in a bath of acetone (freezing point −95°C) at −20° to −30°C. Acetone draws out all the water and replaces it inside the cells.

Forced impregnation in a vacuum :- Specimen is then placed in a bath of liquid polymer. Such as silicone rubber, polyster or epoxy resin. By creating a vacuum, the acetone is boiled, vaporizes and leaves cell filled with liquid plastic.

Annexure IV

Student Feedback Form

Course Name: Plastination

Subject Code: AN101

Name of Student: CHARU SAI **Roll No.:** U18MB276

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:

VERY INFORMATIVE SESSION.

Charu Sai

Signature of Student

Date: 30/3/2019.

Annexure IV

Student Feedback Form

Course Name: Plastination

Subject Code: AN101

Name of Student: Dharaneeshwaran.S **Roll No.:** 18MB283.

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:

Excellent sessions.!

Signature of Student
Date: 30/3/2019.

Date: 03-04-2019

From

Dr. Somashekar I Tolanur
Professor and Head,
Department of Anatomy,
Sri Lakshmi Narayana Institute of Medical Sciences,
(BIHER University),
Puducherry - 2.

To

The Dean,
Sri Lakshmi Narayana Institute of Medical Sciences,
(BIHER University),
Puducherry - 2.

Sub: Completion of value-added course: Plastination – Reg.

Dear Sir,

With reference to the subject mentioned above, the Department of Anatomy has conducted the value-added course on **Plastination** during March 2019 for 1st year MBBS Students (2018-2019 Batch). We solicit 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,

PROF & HOD OF ANATOMY
SRI LAKSHMI NARAYANA INSTITUTE OF
MEDICAL SCIENCES
Jeudu Agaram Village,Pondicherry-605 502

Encl: Participants List

Photograph

LIST OF PARTICIPANTS

Sl. No.	Registration Number	Name of the Student
1	U18MB271	AYUSH JAISWAL
2	U18MB272	BANDHAM SANKEERTHANA
3	U18MB273	BORIS NAMBAM
4	U18MB274	BUCHHAMMAGARI SOURABH REDDY
5	U18MB275	CHARAN VARMA C.A
6	U18MB276	CHARU SAI
7	U18MB277	CHINKA SARAN SAI
8	U18MB278	CUTPIECEWALA ALIASGAR MOHAMMED
9	U18MB279	DATTATREYA BHATTACHARJEE
10	U18MB280	DEBOPRIYA DEY
11	U18MB281	DEVARAPALLI SAI TEJASWINI
12	U18MB282	DHANUSHA S
13	U18MB283	DHARANEESHWARAN .S
14	U18MB284	DHISHVANTH DHEEPAK A.N
15	U18MB285	DHYAN DAVID S.V
16	U18MB286	DISHA SHEORAN
17	U18MB287	DODIYA RAJANSINH KAMALSINH
18	U18MB288	DONNIE OLIVIA H
19	U18MB289	EASWAR B
20	U18MB290	ELDHO BABU

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CERTIFICATE OF MERIT

This is to certify that CHARAN VARMA C.A has actively participated in the Value Added Course on **Plastination** held during March 2019 Organized by Department of Anatomy, Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.

Dr. S Shanthini	Dr. B Anitha	Dr. Vijisha Phalgunan	Dr. Somasekar I Tolanur	Dr. G Jayalakshmi
Resource person	Resource person	Resource person	Co-ordinator	Dean

PROF & HOD OF ANATOMY
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
Osudu Agaram Village, Pondicherry-605 502

Dr. G. JAYALAKSHMI, BSC., MBBS., DTCD., M.D.,
DEAN
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Agaram, Kudapakkam Post,
Villianur Commune, Puducherry - 605502

Sri Lakshmi Narayana Institute of Medical Sciences

Affiliated to Bharath Institute of Higher Education & Research

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CERTIFICATE OF MERIT

This is to certify that **DHANUSHA S** has actively participated in the Value Added Course on **Plastination** held during March 2019 Organized by Department of Anatomy, Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.

Dr. S Shanthini **Resource person**	**Dr. B Anitha** **Resource person**	**Dr. Vijisha Phalgunan** **Resource person**	**Dr. Somasekar I Tolanur** **Co-ordinator**	**Dr. G Jayalakshmi** **Dean**

PROF & HOD OF ANATOMY
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
Osudu Agaram Village, Pondicherry-605 502

Dr. G. JAYALAKSHMI, BSC., MBBS., DTCD., M.D.,
DEAN
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Agaram, Kudapakkam Post,
Villianur Commune, Puducherry - 605502.