



Sri Lakshmi Narayana Institute of Medical Sciences

From
Dr K Balagurunathan,
Professor and Head,
General Surgery,
Sri Lakshmi Narayana Institute Of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

Date 3/1/2021

To
The Dean,
Sri Lakshmi Narayana Institute Of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

Sub: Permission to conduct value-added course: BASIC SURGICAL SKILLS

Dear Sir,

With reference to the subject mentioned above, the department proposes to conduct a value-added course titled: **BASIC SURGICAL SKILLS , 30 Hours course on FEB 2021- JUNE 2021**. We solicit your kind permission for the same.

Kind Regards

PROFESSOR & HOD
DEPARTMENT OF GENERAL SURGERY
Sri Lakshmi Narayana Institute of Medical Sciences
PONDICHERRY - 605 002

DR K BALAGURUNATHAN

HOD, GENERAL SURGERY

FOR THE USE OF DEANS OFFICE

Names of Committee members for evaluating the course:

The Dean: DR JAYAKUMAR

The HOD: DR K BALAGURUNATHAN

The Expert: DR ASAYAS BOSCO CHANDRA KUMAR

The committee has discussed about the course and is approved.



Professor General Surgery
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Kudapakkam, Puducherry-605 502

Subject Expert

(Sign & Seal)



PROFESSOR & HOD
DEPARTMENT OF GENERAL SURGERY
Sri Lakshmi Narayana Institute of Medical Sciences
PONDICHERRY - 605 502

(Sign & Seal)



DEAN

SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
OSUDU, AGARAM VILLAGE,
KODAPAKKAM POST,
PUDUCHERRY - 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]
[Affiliated to Bharath University, Chennai - TN]

Circular

07.01.2021

Sub: Organising Value-added Course: BASIC SURGICAL SKILLS

With reference to the above mentioned subject, it is to bring to your notice that Sri Lakshmi Narayana Institute of Medical Sciences, **Bharath Institute of Higher Education and Research** is organizing value added course “**BASIC SURGICAL SKILLS**”.

The application must reach the institution along with all the necessary documents as mentioned. The hard copy of the application should be sent to the institution by registered/ speed post only so as to reach on or before **1ST FEBRUARY 2021**. Applications received after the mentioned date shall not be entertained under any circumstances.


Dean

DEAN
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
OSUDU, AGARAM VILLAGE,
KUDAPAKKAM POST,
PUDUCHERRY - 605 502

Course Proposal

Course Title: BASIC SURGICAL SKILLS

Course Objective:

1. Ideal suture materials
2. Classification of suture materials
3. Absorbable suture materials
4. Non absorbable suture materials
5. Numbering of suture materials
6. Surgical needles
7. Suturing techniques
8. Types of suturing
9. Types of knots

Course Outcome:

Course Audience: MBBS UNDERGRADUATES

Course Coordinator: DR ASAYAS BOSCO CHANDRA KUMAR

Course Faculties with Qualification and Designation:

1. Dr Balagurunathan , Prof and HOD General Surgery
2. Dr Asayas Bosco Chandra Kumar, Prof General Surgery

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

SINo	Date	Topic	Time	Hours	Faculty
1.	4/2/2021	1. Ideal suture materials	4-6PM	2	Dr Balagurunathan
2.	5/2/2021	2. Ideal suture materials	4-6PM	2	DR ASAYAS BOSCO
3.	6/2/2021	3. Classification of suture materials	4-7PM	2	Dr Balagurunathan
4.	7/2/2021	4. Classification of suture materials	4-7PM	2	DR ASAYAS BOSCO
5.	9/2/2021	5. Absorbable suture materials	4-6PM	2	Dr Balagurunathan
6.	11/2/2021	6. Absorbable suture materials	4-6PM	2	DR ASAYAS BOSCO
7.	13/2/2021	7. Non absorbable suture	4-	1	Dr

		materials	6PM		Balagurunathan
8.	15/2/2021	8. Non absorbable suture materials	4-6PM	1	DR ASAYAS BOSCO
9.	18/2/2021	9. Numbering of suture materials	4-6PM	2	Dr Balagurunathan
10.	22/2/2021	10. Numbering of suture materials	4-6PM	2	DR ASAYAS BOSCO
11.	24/2/2021	11. Surgical needles	4-6PM	2	Dr Balagurunathan
12.	2/3/2021	12. Surgical needles	4-6PM	2	DR ASAYAS BOSCO
13.	4/3/2021	13. Sutring techniques	4-7PM	3	Dr Balagurunathan
14.	6/3/2021	14. Sutring techniques	4-7PM	3	DR ASAYAS BOSCO
15	8/3/2021	15. Types of suturing	4-6PM	2	DR ASAYAS BOSCO

REFERENCE BOOKS: (Minimum 2)

1. Schwartz's Principles of Surgery, 11th Edition
2. Bailey And Love's Short Practice of Surgery 27th Ed

VALUE ADDED COURSE

1. Name of the programme & Code

Basic Surgical Skills and GS03

2. Duration & Period

30 hrs & FEB 2021 – JUNE 2021

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:

Multiple choice questions- *Enclosed as Annexure- III*

6. Certificate model

Enclosed as Annexure- IV

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

1 TIME , FEB 2021 – JUNE 2021

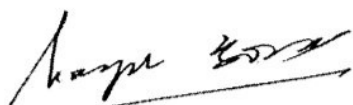
8. Year of discontinuation: 2021

9. Summary report of each program year-wise

Value Added Course- FEB 2021 – JUNE 2021					
Sl. No	Course Code	Course Name	Resource Persons	Target Students	Strength & Year
1	GS03	BASIC SURGICAL SKILLS	Dr. ASAYAS BOSCO CHANDRA KUMAR	MBBS	20 (FEB 2021 – JUNE 2021)

10. Course Feed Back

Enclosed as Annexure- V



Professor General Surgery
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Kudapakkam, Puducherry-605 502.

RESOURCE PERSON

DR ASAYAS BOSCO CHANDRAKUMAR

(PROF GENERAL SURGERY)



PROFESSOR & HOD
DEPARTMENT OF GENERAL SURGERY
Sri Lakshmi Narayana Institute of Medical Sciences
PONDICHERRY - 605 502

CO-ORDINATOR

DR K BALAGURUNATHAN

(HOD GENERAL SURGERY)

BASIC SURGICAL SKILLS

PARTICIPANTS HAND BOOK

COURSE DETAILS

Particulars	Description
Course Title	Basic Surgical skills
Course Code	GS03
Objective	<ol style="list-style-type: none">1. Ideal suture materials2. Classification of suture materials3. Absorbable suture materials4. Non absorbable suture materials5. Numbering of suture materials6. Surgical needles7. Sutring techniques8. Types of suturing9. Types of knots
Further learning opportunities	Staples in surgery
Key Competencies	On successful completion of the course the students will have skill in handling surgical instrments an carry out basic surgical knotting and suturing
Target Student	4th MBBS Students
Duration	30hrs FEB 2021 – JUNE 2021
Theory Session	10hrs
Practical Session	20hrs
Assessment Procedure	Multiple choice questions, practical assesment of performanace

Features of ideal suture material

- Adequate tensile strength
- Good knot holding property
- Should be least reactive
- Easy handling property
- Should have less memory
- Should be easily available and cost effective

Absorbable Suture Materials

Plain catgut

derived from submucosa of jejunum of sheep.

yellowish white in colour.

absorbed by infl ammatory reaction and phagocytosis

absorption time is 7 days.

used for subcutaneous tissue, muscle, circumcision in children.

Chromic catgut

-catgut with chromic acid salt.

-brown in colour.

-absorption time is 21 days.

-used for suturing muscle, fascia, external oblique aponeurosis, ligating pedicles, etc.

Vicryl (Polyglactic acid):

-synthetic absorbable suture material.

-gets absorbed in 90 days.

-Absorption is by hydrolysis.

-violet in colour (braided).

-multifilament and braided.

-very good suture material for bowel anastomosis, suturing muscles, closure of peritoneum

Dexon (Polyglycolic acid) --synthetic absorbable suture material like vicryl. It is creamy yellow in colour (braided).

Maxon (Polyglyconate) monofilament.

PDS (Poly Dioxanone Suture material)

-absorbable suture material.

-creamy in colour with properties like vicryl.

-costly but better suture material than vicryl

Monocryl (Polyglactone) monofilament.

Biosyn (Glycomer) monofilament.

Absorbable suture materials should not be used for suturing tendon, nerves, vessels (vascular anastomosis)

Uses of absorbable suture materials

-In bowel anastomosis like gastrojejunostomy, resection and anastomosis Vicryl is used

-In cholecystojejunostomy (CCJ), choledocho-jejunostomy (CDJ), pancreaticojejunostomy. Vicryl is used

-In suturing muscle, fascia, peritoneum, subcutaneous tissue, mucosa

-In ligating pedicles. 1-zero chromic catgut or vicryl are used, e.g. ligation of pedicles during hysterectomy

-In circumcision, usually 3-zero plain or chromic catgut are used



Nonabsorbable Suture Materials

Silk is natural, multifilament, braided, non-absorbable suture material derived from cocoon of silkworm larva. It is black in colour. It is coated suture material to reduce capillary action.

Polypropylene (Prolene) is synthetic, monofilament suture material. It is blue in colour. It has got high memory. (Memory of suture material is recoiling tendency after removal from the packet. Ideally suture material should have low memory.) (Prolene mesh used for hernioplasty is white in colour).

Polyethylene (Ethylene) is synthetic monofilament nonabsorbable suture material. It is black in colour.

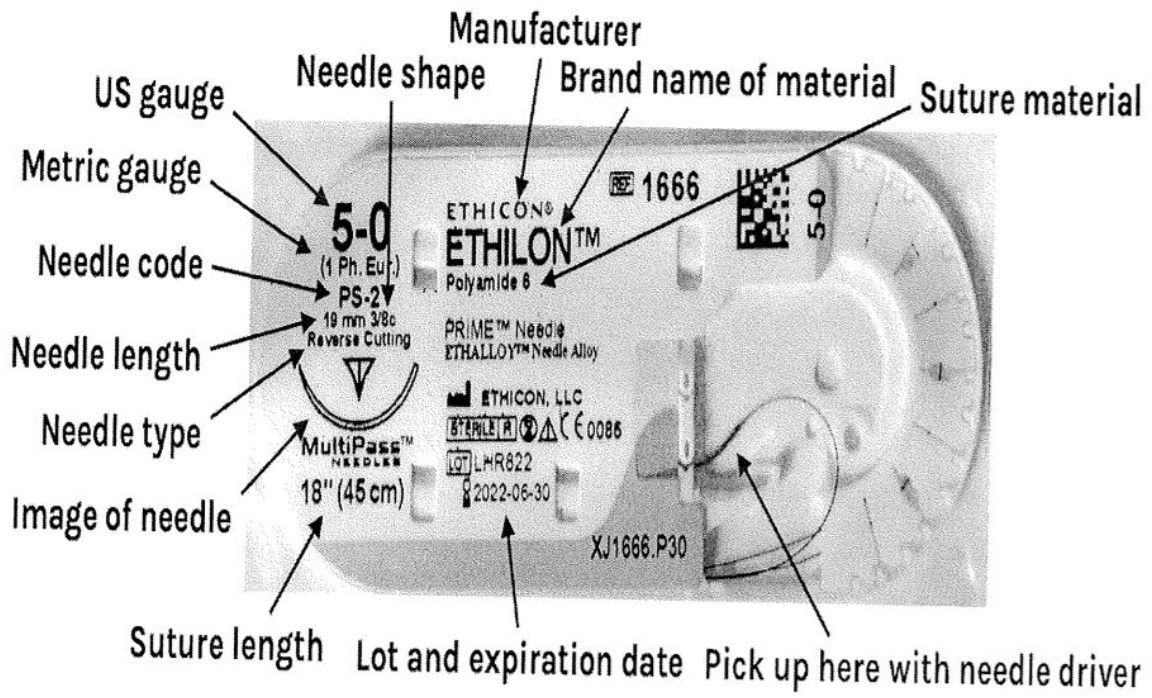
Cotton is twisted multifilament natural nonabsorbable suture material. It is white in colour.

Linen is derived from bark of cotton tree.

Steel, polyester, polyamide, nylon are other non absorbable suture materials.

Uses of nonabsorbable suture materials

- In herniorrhaphy for repair
- For closure of abdomen after laparotomy
- For vascular anastomosis (6-zero), nerve suturing, tendon suturing
- For tension suturing in the abdomen
- For suturing the skin



Classification 2

Natural

Catgut

Silk.

Cotton

Linen.

Synthetic

Vicryl

Dexon

PDS

maxon.

Polypropylene

polyethylene, polyester, poly amide.

CLASSIFICATION III

Braided: Polyester, polyamide, vicryl, dextron, silk.

Twisted: Cotton, linen.

CLASSIFICATION IV

Monofilament: Polypropylene, polyethylene, PDS, catgut, steel.

Multifilament: Polyester, polyamide, vicryl, dextron, silk, cotton.

CLASSIFICATION V : Coated. Uncoated.

Numbering of Suture Material

2-0. For pedicle ligation.

1-0

0-0.

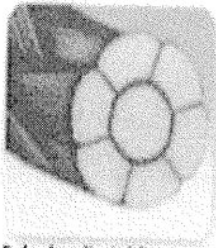
1-0.

2-0. For bowel suturing.

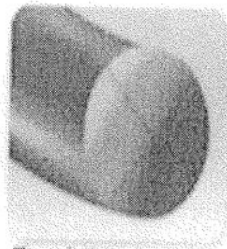
3-0. 4-0. 5-0. For vascular anastomosis.

6-0. 7-0. 8-0. 9-0. For ophthalmic surgery. Requires operating microscope.

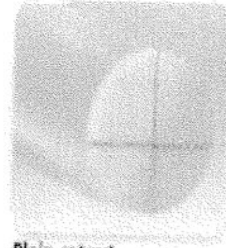
THREAD



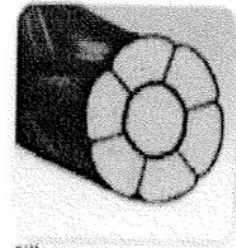
Polyglycolic Acid
Ácido Poliglicólico
Ácido Poliglicólico



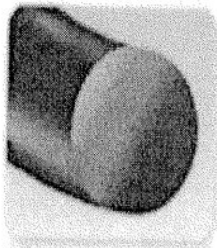
Chromic Catgut
Fio de Cromo
Fio de Cromo



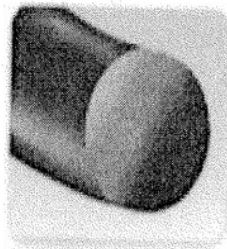
Plain catgut
Fio Plano
Fio Plano



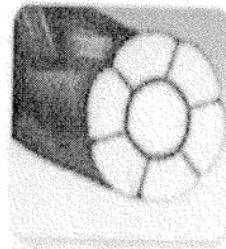
Silk (Braid)
Seda trançada
Seda trançada



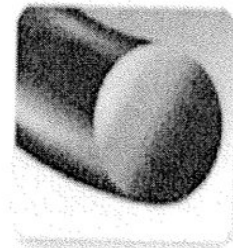
Nylon (monofilament Polyamide)
Nylon (Monofilamento poliamídico)
Nylon (Monofilamento poliamídico)



Polypropylene
Polipropileno
Polipropileno



Polyester (Braid)
Poliéster trançada
Poliéster de trança



Stainless Steel
Aço inoxidável
Aço inoxidável

Types of suturing

Continuous suturing

Interrupted simple suturing

Interrupted mattress suturing

Subcuticular suturing

Horizontal tension suturing

Vertical tension suturing

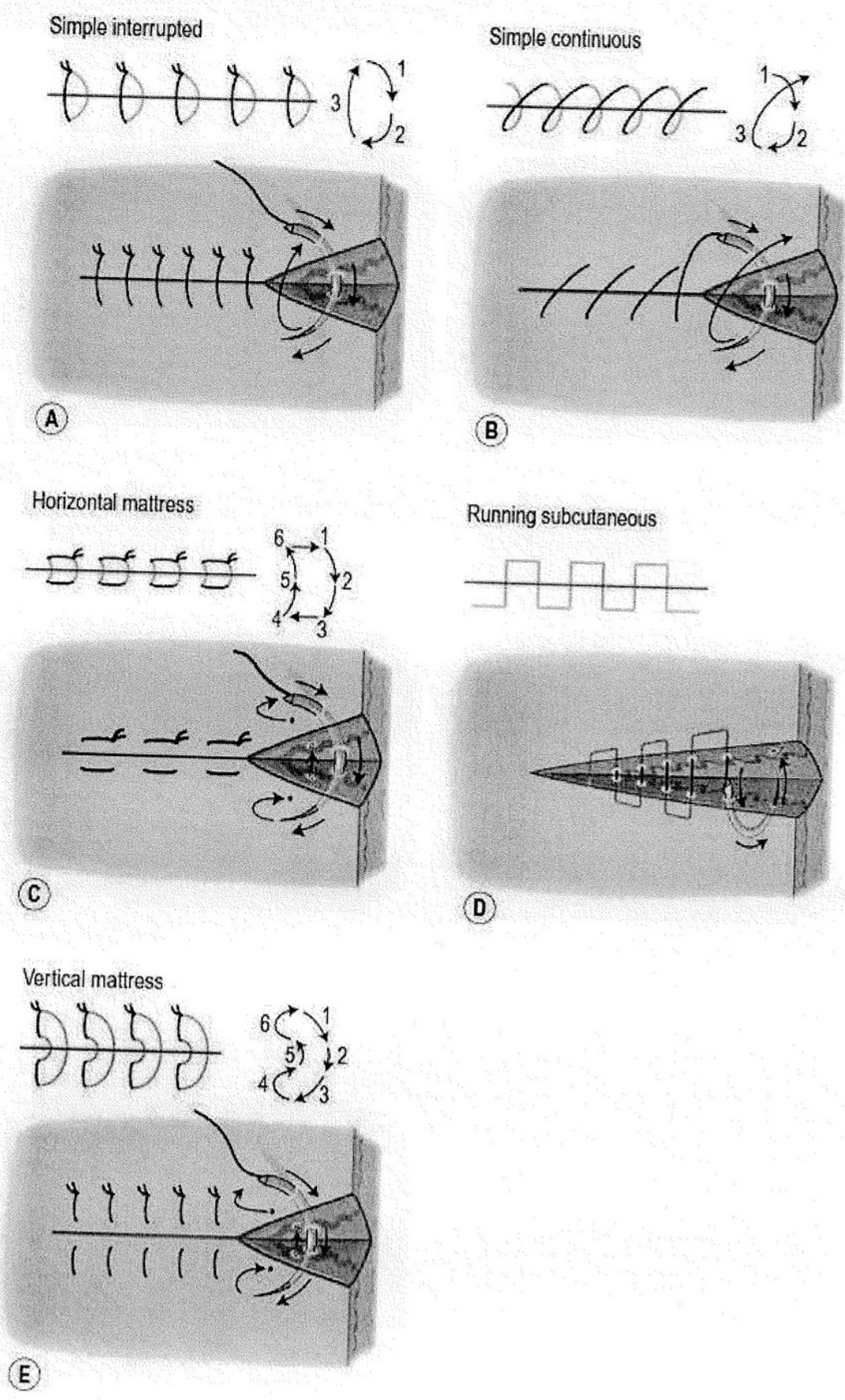
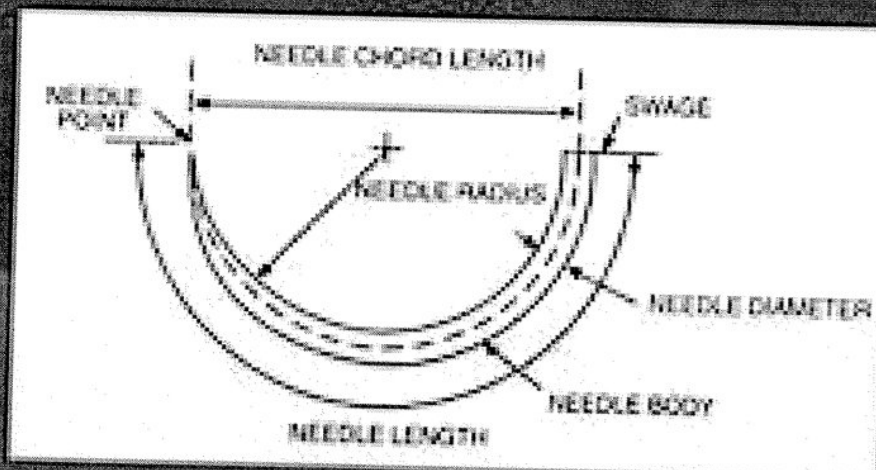
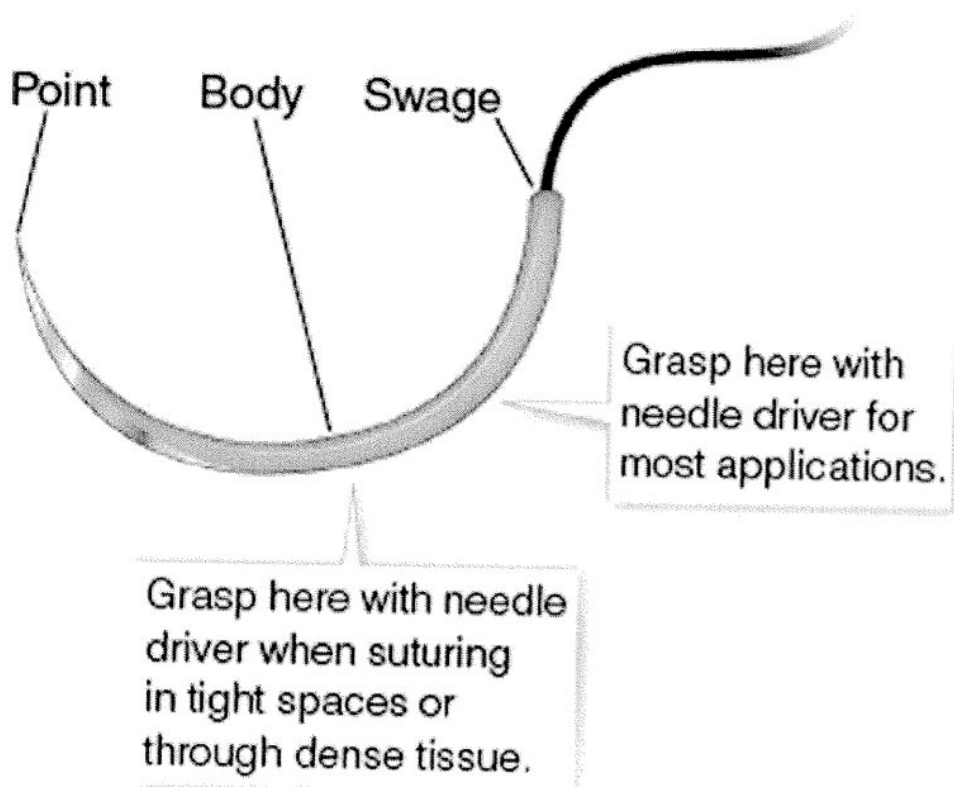


Fig. 23.8 (A) Simple interrupted sutures (as described). (B) Simple continuous.

Anatomy of a Surgical Needle





Source: Jonathan Kantor: Atlas of Suturing Techniques: Approaches to Surgical Wound, Laceration, and Cosmetic Repair, AccessEmergencyMedicine Copyright © McGraw-Hill Education. All rights reserved.

Types of knots

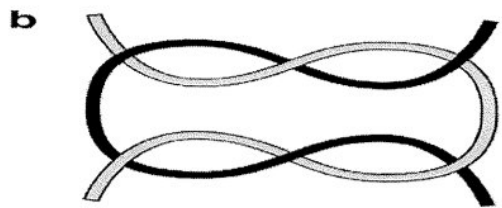
Reef knot

Granny knot

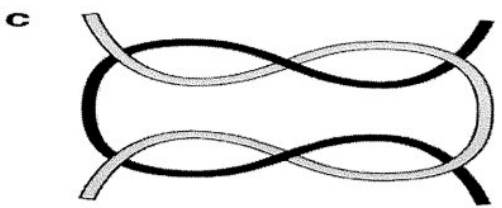
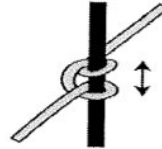
Surgeon's knot



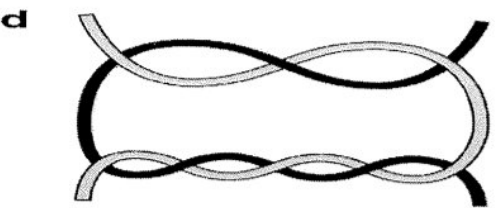
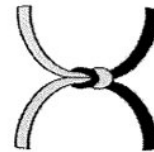
Simple knot



Granny knot



Square or Reef knot



Surgeon's knot

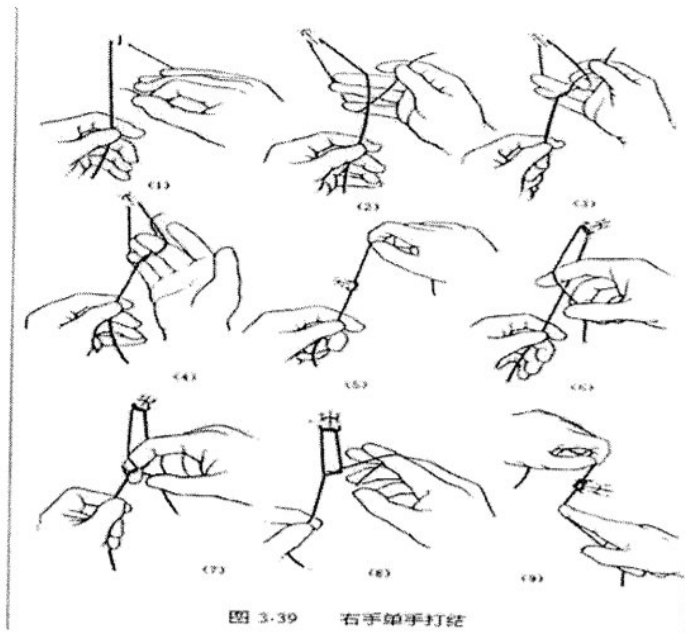


图 3-39 右手单手打结

VALUE ADDED COURSE

BASIC SURGICAL SKILLS and GS03

List of Students Enrolled FEB 2021- JUNE 2021

MBBS Student			
Sl. No	Name of the Student	Roll No	Signature
1	SHANMUGAVEL L N	U13MB261	<i>Shanmugavel</i>
2	SHEELA PRIYA DARSHINI N	U13MB262	<i>Sheela</i>
3	SHEIK MOHAMMED YASAR	U13MB263	<i>Sheik Mohammed</i>
4	SIVASANKARI B	U13MB264	<i>Sivasankari</i>
5	SNEHA T	U13MB265	<i>Sneha</i>
6	SNEHA T	U13MB266	<i>Sneha</i>
7	SOBICA D	U13MB267	<i>Sobica</i>
8	SOWDARAVEL S	U13MB268	<i>Sowdharavel</i>
9	SRI SAKTHI PRIYA N	U13MB269	<i>Sri Sakthi Priya</i>
10	SRILEKHA D J	U13MB270	<i>Srilekha</i>
11	SRIMUKESH A	U13MB271	<i>Srimukesh</i>
12	STEPHEN A	U13MB272	<i>Stephen</i>
13	SUGANYA P	U13MB273	<i>Suganya</i>
14	SUGESH CHANDRAN V	U13MB274	<i>Sugesh Chandran</i>
15	SURIYA KUMAR G	U13MB275	<i>Suriya</i>
16	SUSINDHARAN K	U13MB276	<i>Susindharan</i>
17	SWEDHA P	U13MB277	<i>Swedha</i>
18	THAMIZHARUVI M	U13MB278	<i>Thamizharuvi</i>
19	THAMIZHSELVAN G	U13MB279	<i>Thamizhselvan</i>
20	THARSHINI N	U13MB280	<i>Tharshini</i>



SHANMUGAVEL LN
U13MB261

SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION
AND RESEARCH

Annexure - IV

BASIC SURGICAL SKILLS

MULTIPLE CHOICE QUESTIONS

Course Code: GS03

I. ANSWER ALL THE QUESTIONS

1. all are absorbable suture materials except

a. catgut

b. vicryl

c. silk

d. dexon

✓

2. all are non absorbable suture materials except

a. silk

b. pds

c. prolene

d. polyamide

✓

3. Uses of absorbable suture materials

a. in bowel anastomosis

b. for suturing muscle, fascia, peritoneum

c. Both A & B are Correct

d. None of the above

✓

4. natural suture material among the following is ?

a. dexon

b. vicryl

c. silk

✓

|



SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION
AND RESEARCH

- d. none of the above
4. monofilament suture among the following
- a. catgut
 - b. polypropylene
 - c. steel
 - d. all of the above
5. Numbering of suture material
- a. 9-0 thinner suture
 - b. 2-0 is thicker
 - c. Both A & B are Correct
 - d. None of the above
6. uses of non absorbable suture materials
- a. for tension suturing of abdominal muscles
 - b. in hernioraphy
 - c. both are correct
 - d. None of the above
7. What is the suture used for bowel anastomosis
- a. absorbable
 - b. non absorbable
 - c. prolene
 - d. none of the above are correct
8. suture material used in vascular anastomosis
- a. absorbable
 - b. non absorbable polyfilament



SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION
AND RESEARCH

c. non absorbable monofilament

d. None of the above

(X/X)

ASSESSOR NAME : Dr ASAYAS BOSCO CHANDRA KUMAR

SIGNATURE : *Asayas*

DATE : 19/3/2021



SIVA SANKARJ B
VI3MB264

SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION
AND RESEARCH

Annexure - IV

BASIC SURGICAL SKILLS

MULTIPLE CHOICE QUESTIONS

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4. natural suture material among the following is ?

a. dexon

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c. silk



SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION AND RESEARCH

d. none of the above

4. monofilament suture among the following

a. catgut

b. polypropylene

c. steel

d. all of the above



5. Numbering of suture material

a. 9-0 thinner suture

b. 2-0 is thicker

c. Both A & B are Correct

d. None of the above



6. uses of non absorbable suture materials

a. for tension suturing of abdominal muscles

b. in hernioraphy

c. both are correct

d. None of the above



7. What is the suture used for bowel anastomosis

a. absorbable

b. non absorbable

c. prolene

d. none of the above are correct



8. suture material used in vascular anastomosis

a. absorbable

b. non absorbable polyfilament



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

c. non absorbable monofilament

d. None of the above



ASSESSOR NAME

SIGNATURE

DATE

M. Senthilvelan 9/3/2021
Dr. M. SENTHILVELAN, MS.,
Reg. No: 53175
Professor General Surgery
Sri Lakshmi Narayana Institute of Medical Science
Osudu, Kudapakkam, Puducherry-605 502.



Sri Lakshmi Narayana Institute of Medical Sciences

Affiliated to Bharath Institute of Higher Education & Research
(Deemed to be University under section 3 of the UGC Act 1956)



CERTIFICATE OF MERIT

This is to certify that SUGANYA P has actively participated in the Value Added Course on **BASIC SURGICAL SKILLS** held during FEB 2021- JUNE 2021 . Organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.

Professor General Surgery
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Kudapakkam, Puducherry-605 502.

**Dr. Asayas Bosco
Chandra Kumar**

RESOURCE PERSON

PROFESSOR & HOD
DEPARTMENT OF GENERAL SURGERY
Sri Lakshmi Narayana Institute of Medical Sciences
PONDICHERRY - 605 502
Dr. K BALAGURUNATHAN

COORDINATOR



Sri Lakshmi Narayana Institute of Medical Sciences

Affiliated to Bharath Institute of Higher Education & Research
(Deemed to be University under section 3 of the UGC Act 1956)



CERTIFICATE OF MERIT

This is to certify that SHEELA PRIYA DHARSHINI has actively participated in the Value Added Course on BASIC SURGICAL SKILLS held during FEB 2021 - JUNE 2021 . Organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry-605 502, India.

Professor General Surgery
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Kudapakkam, Puducherry-605 502.

**Dr. Asayas Bosco
Chandra Kumar**

RESOURCE PERSON

PROFESSOR & HOD
DEPARTMENT OF GENERAL SURGERY
Sri Lakshmi Narayana Institute of Medical Sciences
PONDICHERRY - 605 502
Dr. K BALAGURUNATHAN

COORDINATOR

Student Feedback Form

Course Name: BASIC SURGICAL SKILLS

Subject Code: GS03

Name of Student: Sobha. Roll No.: U13MB 267

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

SI. 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:


Signature

Student Feedback Form

Course Name: BASIC SURGICAL SKILLS

Subject Code: GS03

Name of Student: SHANMUGAVEL Roll No.: U13MB261

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:

Shanmugavel
Signature

Date :13/5//2021

From
Dr K Balagurunathan,
Professor and Head,
General Surgery,
Sri Lakshmi Narayana Institute Of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

Through Proper Channel

To
The Dean,
Sri Lakshmi Narayana Institute Of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

Sub: Completion of value-added course: BASIC SURGICAL SKILLS

Dear Sir,

With reference to the subject mentioned above, the department has conducted the value-added course titled: **BASIC SURGICAL SKILLS** for 20 students in FEB 2021- JUNE 2021. We solicit your kind action to send certificates for the participants, that is attached with this letter. Also, I am attaching the photographs captured during the conduct of the course.

Kind Regards



PROFESSOR & HOD
DEPARTMENT OF GENERAL SURGERY
Sri Lakshmi Narayana Institute of Medical Sciences
PONDICHERRY - 605 002

Dr. BALAGURUNATHAN

HOD General Surgery

Encl: Certificates

Photographs

**BASIC SUTURING
TECHNIQUES-**

PROF. DR. M. SETHIL VELAY
MS F.MAS.F.R.C.S.
GENERAL/LAPAROSCOPIC/
ENDOSCOPIC SURGEON.

SRI LAKSHMI NARAYANA
INSTITUTE OF MEDICAL SCIENCES

REGULATED BY MEDICAL COUNCIL OF INDIA & AFFILIATED TO RAJAGHATTA UNIVERSITY

DEPARTMENT OF GENERAL
HANDS ON SUTURING TRAINING

