SUR 113
Advanced Surgical Practicum
SU 2014

Course Description
SUR 113 Advanced Surgical Practicum
Lec. 4 Lab. 6 Cr. 6
This course includes a supervised progression of surgical team responsibilities and duties of the preoperative role in various clinical affiliations.
Prerequisites: CPT 101 or CPT 170, ENG 101, PSY 201, SUR 103, SUR 104, SUR 106, SUR 112, and AHS 121.

Course Focus
SUR 113 is a synthesis course incorporating didactic and clinical components of the Surgical Technology Program. In addition to the clinical component, this course will cover a system to system approach to surgical procedures and related anatomy, pathology, specialty equipment, team responsibility, patient safety, specific pharmacology used and neurosurgery, and neurosurgical procedures. In addition, a professional management component will be implemented for student preparation into the workforce and a web-based review for preparation for the national certification exam.

Text and References

Revised 5/2/2014 JBuss; approved M. Sapp 05-05-2014
Course Outcomes
Upon successful completion of this course, the student will be able to: Discuss the relevant anatomy, indications for surgery, patient preparation, special equipment and supplies, purpose and expected outcomes, and possible complications for the procedures in the neurosurgery. Students will also be able to write a cover letter and resume in addition to preparing a portfolio. Students will also be able to response to interview situations and completing job applications. After successfully completing the web-based review quizzes the student will have reviewed information in the following areas: 1) Surgical Pharmacology, 2) Pre-operative procedures, 3) Intra-operative procedures, and 4) Post-operative procedures in preparation for the national certification exam (see attached content outline for detailed list of review topics to be addressed.)

Course Goals
The following list of course goals will be addressed in the course. These goals are directly related to the performance objectives. (*designates a CRUCIAL goal)

1. utilize safe patient care robotics principles
2. use postoperative case precautions
3. practice sterile techniques
4. calculate medication conversions and dosage
5. prepare medications and solutions
6. manage medications and solutions
7. analyze anesthesia administration principles
8. explain anesthesia complications and interventions
9. describe specimen care
10. apply safe patient care physics principles
11. analyze surgical procedural steps
12. consider physical and biological life sustaining needs
13. articulate surgical patient potential psychological needs
14. demonstrate surgical patient identification process
15. exhibit safe transportation methods and principles
16. analyze patient laboratory reports
17. review patient chart
18. transfer surgical patient
19. define thoracic surgical terminology
20. perform patient positioning
21. practice safe patient care
22. comprehend immediate postoperative care
23. identify thoracic anatomy and pathophysiology
24. utilize diagnostic techniques
25. discuss preoperative preparation procedures
26. utilize thoracic specialty instruments equipment supplies and drugs
27. name thoracic specialty equipment supplies and drugs
28. discuss intraoperative patient preparation
29. sequence surgical procedures
30. weigh postoperative patient considerations
31. consider surgical purpose
32. monitor urine output
33. weigh possible surgical complications
34. define neurosurgery terminology
35. illustrate neurosurgery anatomy and pathophysiology
36. identify neurosurgical specialty instruments supplies equipment and drugs
37. summarize recent neurosurgery advances
38. plan patient intraoperative course
*39. assemble procedure supplies equipment and instrumentation
*40. choose appropriate patient position
*41. employ six patient rights
42. identify incision procedure
43. weigh expected surgical outcomes
44. debate quality of life issues
45. explain patient anesthesia preparation components
46. prepare intraoperative catheters and drains
47. assess wound closure factors
48. exhibit suture selection preparation handling and cutting techniques
49. use surgical dressings techniques
50. contrast chronic wounds
51. demonstrate wound care
52. illustrate tissue layers
53. process death coping mechanisms
*54. follow routine case management
55. follow o r patient death procedures
56. discuss patient recovery process
57. list five physical health components
58. contrast alternative healing methodologies
59. list postanesthesia care unit equipment
60. describe postoperative patient discomfort and complications
61. decontaminate o r environment and equipment
*62. apply sterile storage principles
63. perform postoperative case management duties
64. evaluate death and dying attitudes beliefs and classification issues
65. drape operating room furniture and equipment
66. communicate surgical skin preparation rationale and steps
67. recognize surgical attire
68. employ surgical attire donning principles
69. collect case supplies instruments and equipment
70. describe surgical equipment application
71. classify surgical instrumentation
72. arrange operating room furniture
73. characterize exposure principles
74. assist gloving team members
75. demonstrate urinary catheterization
*76. employ asepsis principles
*77. count surgical case field items
78. drape surgical patient
*79. secure sterile field
80. monitor patient homeostatic parameters
81. distinguish surgical procedure variety
82. classify surgical wounds
83. assess surgical team needs
84. document surgical case
85. follow specimen labeling and transfer procedures
*86. apply sterile technique

Student Contributions
Classes are designed to employ a variety of teaching techniques. In order to maximize learning, required readings and Web enhanced sections should be done prior to class. If a student is falling behind in clinical performance and/or academic achievement, it is imperative to seek immediate assistance from the instructor.

Weekly Evaluation Tools
Evaluation tools (evaluations and case cards) are evaluated by your clinical instructor on a weekly basis. You are to sign and date each as presented to you for verification purposes only. Comments can also be made on the tools. Case preparation workbook are to be completed in its entirety. Incomplete case logs and case preparation workbooks submitted or evaluated will be returned to student for corrections. Case logs are to be completed as individual case specific criteria has been met (solo scrub or first scrub) and the case is to be entered into DataArc by Monday of the following week. Each student will attempt to meet the 120 cases established in the 6th Core Curriculum by the completion of the last clinical rotation. Each student will receive a clinical evaluation for each clinical rotation. Three incomplete submissions on clinical documentation will result in an “unsatisfactory” clinical grade.

The clinical paperwork component of the course is evaluated as satisfactory or unsatisfactory. An unsatisfactory will result in a verbal warning by the program director and/or clinical adjunct. A second unsatisfactory will result in a written Learning Contract. A third unsatisfactory will result in the implementation of disciplinary action. Clinical paperwork encompasses:

1. Review Card (yellow/green book)
2. Weekly Case Log Form
3. Procedure Case Card

Revised 5/2/2014 JBuss; approved M. Sapp 05-05-2014
All clinical paperwork is to be turned in by the student each Monday during the clinical rotation period by 10:00am. All paperwork due on Monday is to be placed in the box of the clinical adjunct, located in Room 115 of the Health Sciences building. Any late, incomplete, illegible, or misspelled Review Card (Book) or Weekly Case Log will be considered unsatisfactory, and appropriate measures will apply. In consideration of the technical components of the Procedure Case Card, students will be allowed one revision for new surgical procedures. Revisions will not be accepted for repeat surgical procedures. Any late, illegible, or misspelled Procedure Case Cards will be considered unsatisfactory, and appropriate measures will apply. All revised Procedure Case Cards are due on Thursday of the week of initial submission, in the box of the clinical adjunct in Room 115 of the Health Sciences building, by 10:00am.

Final Clinical Evaluation
Final clinical evaluations are performed by your clinical instructor, based on your overall performance for the semester. Along with the standardized form, your clinical instructor will meet with the student for a one-on-one conference regarding the clinical evaluation. The student will sign and date the clinical evaluation and retain the evaluation in their clinical notebook. Comments can be made on the final clinical evaluation.

Course Evaluation
<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>2 Unit Test</td>
<td>40%</td>
</tr>
<tr>
<td>2 Quizzes</td>
<td>30%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
</tr>
</tbody>
</table>

Course Schedule
Lecture: Class - Monday 9:00am - 12:00pm and 1:00pm - 4:00pm
       Friday 8:00am – 12:00pm
Clinical: Tuesdays, Wednesdays, and Thursdays - 6:45am - 2:45pm

Course Structure
Classes are designed to employ a variety of teaching/learning strategies. In order to maximize learning, required readings should be done prior to a unit. If a student is falling behind in clinical performance or academic achievement, it is imperative to seek immediate assistance from the instructors.

Clinical Experience
During this course students will do a three-day a week, seven week rotation at a designated facility. The summer clinical assignment will take place at one facility and will be included in SUR 112 and SUR 113. They are responsible for their own transportation to and from clinical. Each clinical day is 8 hours. Students are required to sign in and sign out in the attendance log provided at each site.

In order to perform at a satisfactory level in the clinical area, students must be prepared, on a daily basis, to do the following:
- Complete surgical cases with the assigned preceptor;
- Complete case preparation notebook

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• Arrive on time and in proper attire;
• Accurately perform surgical technology skills;
• Correctly apply all previously mastered knowledge, skills, and abilities.

Students not prepared to complete his/her assigned case(s) will be given an unsatisfactory for the day. A learning contract will be implemented as a result of the unsatisfactory performance.

Assessment Testing
Assessment tests are given to assist in the evaluation of individual student progress and to support student success. Mandatory assessment testing used in the Surgical Technology program will be; 1) Two National Certification Practice Examinations and, 2) The National Certification Exam. The second practice examination will be taken in July, 2012 (date and time to be announced) and the National Certification examination will be taken on July 31, 2014.

Other Required Materials
TCL student uniforms, name pin, & college picture student ID
Pocket size notebook
Review cards
Eye protection
Dosimeter badge

ADA STATEMENT
The Technical College of the Lowcountry provides access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation, contact the counselor for students with disabilities at (843) 525-8228 during the first ten business days of the academic term.

ATTENDANCE
The College’s statement of policy indicates that students must attend ninety percent of total class hours or they will be in violation of the attendance policy.

1. Students not physically attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.

2. Students taking an online/internet class must sign in and communicate with the instructor within the first ten calendar days from the start of the semester to indicate attendance in the class. Students not attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.

3. Reinstatement requires the signature of the division dean.
   a. In the event it becomes necessary for a student to withdraw from the course OR if a student stops attending class, it is the student’s responsibility to initiate and complete the
necessary paperwork. Withdrawing from class may have consequences associated with financial aid and time to completion.

b. When a student exceeds the allowed absences, the student is in violation of the attendance policy. The instructor MUST withdraw the student with a grade of “W”, “WP”, or “WF” depending on the date the student exceeded the allowed absences and the student’s progress up to the last date of attendance or

c. under extenuating circumstances and at the discretion of the faculty member teaching the class, allow the student to continue in the class and make-up the work. This exception must be documented at the time the allowed absences are exceeded.

d. Absences are counted from the first day of class. There are no "excused" absences. All absences are counted, regardless of the reason for the absence.

4. A student must take the final exam or be excused from the final exam in order to earn a non-withdrawal grade.

5. Students are expected to be in class on time. Arrival to class after the scheduled start time or leaving class prior to dismissal counts as a tardy. Three tardies and/or early departures are considered as one absence unless stated otherwise.

6. It is the student’s responsibility to sign the roll/verify attendance with instructor upon entering the classroom. Failure to sign the roll/verify attendance results in a recorded absence. In the event of tardiness, it is the student’s responsibility to insure that attendance is marked. The student is responsible for all material/ announcements presented, whether present or absent.

7. Continuity of classroom and laboratory (which includes clinical experiences) is essential to the student’s progress in providing safe and competent patient care. Students are expected to use appropriate judgment for participating in clinical activities. To evaluate the student’s knowledge and skills, it is necessary for the student to be present for all clinical experiences. If an absence does occur, the designated clinical site and either the program director or clinical adjunct must be notified by telephone no later than 30 minutes prior to the start of the clinical experience. If the program director or clinical adjunct cannot be notified then the student is to contact the Division of Health Sciences Administrative Assistance. If it is prior to 8:00am the student is to leave a voice message stating that they were unable to reach the program director or clinical adjunct and they were not going to be in attendance at their clinical site for that specific day. The HS telephone number is 843-525-8267. Text messaging or telling another student to relay the message is a violation of the attendance policy and the absence will be considered a “No call, no show.”

8. Absences from the clinical area are strongly discouraged. The attendance policy applies to clinical activities. “No call, no show” for clinical is unprofessional conduct and the student will be withdrawn from the program with a WF.

A copy of TCL’s STATEMENT OF POLICY NUMBER: 3-1-307 CLASS ATTENDANCE (WITHDRAWAL) is on file in the Division Office and in the Learning Resources Center.

HAZARDOUS WEATHER

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In case weather conditions are so severe that operation of the College may clearly pose a hardship on students and staff traveling to the College, notification of closing will be made through the following radio and television stations: WYKZ 98.7, WGCO 98.3, WGZO 103.1, WFXH 106.1, WWVV 106.9, WLOW 107.9, WGZR 104.9, WFXH 1130 AM, WLVH 101.1, WSOK 1230 AM, WAEV 97.3, WTOC TV, WTGS TV, WJWJ TV, and WSAV TV. Students, faculty and staff are highly encouraged to opt in to the Emergency Text Message Alert System. [www.tcl.edu/textalert.asp](http://www.tcl.edu/textalert.asp)

**ACADEMIC MISCONDUCT**

There is no tolerance at TCL for academic dishonesty and misconduct. The College expects all students to conduct themselves with dignity and to maintain high standards of responsible citizenship.

It is the student’s responsibility to address any questions regarding what might constitute academic misconduct to the course instructor for further clarification.

The College adheres to the Student Code for the South Carolina Technical College System. Copies of the Student Code and Grievance Procedure are provided in the *TCL Student Handbook*, the Division Office, and the Learning Resources Center.

Health care professionals hold the public trust. Academic misconduct by health science students calls that trust into question and academic integrity is expected.

It is a fundamental requirement that any work presented by students will be their own. Examples of academic misconduct include (but are not limited to):

1. copying the work of another student or allowing another student to copy working papers, printed output, electronic files, quizzes, tests, or assignments.
2. completing the work of another student or allowing another student to complete or contribute to working papers, printed output, electronic files, quizzes, tests, or assignments.
3. viewing another student’s computer screen during a quiz or examination.
4. talking or communicating with another student during a test.
5. violating procedures prescribed by the instructor to protect the integrity of a quiz, test, or assignment.
6. plagiarism in any form, including, but not limited to: copying/pasting from a website, textbook, previously submitted student work, or any instructor-prepared class material; obvious violation of any copyright-protected materials.
7. knowingly aiding a person involved in academic misconduct.
8. providing false information to staff and/or faculty.
9. entering an office unaccompanied by faculty or staff.
10. misuse of electronic devices.

**GRADING POLICY**

<table>
<thead>
<tr>
<th>Grading scale</th>
<th>W</th>
<th>WP</th>
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<tbody>
<tr>
<td>90% - 100% A</td>
<td>withdraw</td>
<td></td>
</tr>
<tr>
<td>82% - 89% B</td>
<td>withdraw with passing grade</td>
<td></td>
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</tbody>
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Grading Methodology. The final grade must be 75.000 or more in order to pass the course and progress in the program. Grades will not be rounded up. Students absent from an examination or presentation will receive a “0” grade for the examination unless other arrangements are made with the individual instructor prior to the examination or presentation day or on the examination or presentation day before the test/presentation is scheduled to be given. It is the responsibility of the student to contact the appropriate instructor to arrange to make up the examination. Arrangements may be completed by telephone. If the instructor is not available, a message should be left on the instructor’s voice mail AND with another member of the faculty or administrative assistant. The make-up exam will be scheduled on the day of the course final; the instructor will decide the method of examination. Messages sent by other students are unacceptable. The student is responsible for notifying the instructor for the reason of the absence. Grades are posted on Blackboard within one week of administration of tests and examinations.

Review Content Outline

A. Surgical Pharmacology
   1. Apply the following principles of surgical pharmacology to operative practice:
      - Anesthesia related agents and medications
      - Blood and fluid replacement
      - Complications from drug interactions
      - Methods of anesthesia administration
      - Types, uses, action, and interactions of drugs and solution
      - Weights, measures, and conversions

B. Pre-operative Preparation
   1. Read surgeon’s preference card
   2. Verify availability of surgery equipment
   3. Prepare and maintain operating room environment according to surgical procedure
   4. Review chart
   5. Obtain and apply additional equipment
   6. Don personal protective equipment
   7. Obtain instruments, supplies, and equipment and verify readiness for surgery
   8. Check package integrity of sterile supplies
   9. Open sterile supplies while maintaining aseptic technique
   10. Perform surgical hand scrub, gowning, and gloving
   11. Assemble, inspect, set up sterile instruments and supplies for surgical procedure
   12. Gown and glove sterile team members

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13. Verify identity of patient and operative site (time out)
14. Drape the patient
15. Obtain, assemble, and test positioning equipment
16. Transfer patient to operating room table
17. Apply patient safety measures
18. Apply patient monitoring devices
19. Position the patient
20. Prepare skin for surgery
21. Consider the needs of special patient populations

C. Intra-operative Procedures
1. Provide intra-operative assistance under the direction of the surgeon
2. Count instrument pre- and intra-operatively with circulator
3. Identify instruments by their function
4. Count sponges and sharps pre- and intra-operatively with circulator
5. Anticipate the steps of surgical procedures
6. Differentiate among the various methods and applications of hemostasis
7. Specify methods of operative exposure
8. Place and secure retractors
9. Verify with surgeon the correct type and/or size of implantable devices
10. Pass instruments and supplies during surgery
11. Irrigate, suction, and sponge operative site
12. Monitor and maintain aseptic technique throughout the procedure
13. Assemble, test, and operate specialty equipment during surgery
14. Utilize the following specialty equipment
   a. Argon beam coagulators
   b. Computer navigation systems
   c. Thermal ablation
   d. Robotic technology
   e. Laser technology
   f. Ultrasound technology (e.g., harmonic scalpel, phacoemulsification)
   g. Endoscopic technology
15. Verify and label medications and solutions at the sterile field
16. Mix medications and solutions at the sterile field
17. Calculate and report the amount of medications and solutions used
18. Monitor and maintain adequate supplies and solutions
19. Prepare drains, catheters, and tubing for insertion
20. Observe patient’s intra-operative status (e.g., monitor color of blood, onset of blood loss, monitor position of patient during procedure)
21. Verify, prepare, and label specimen(s)
22. Apply thermal surgical techniques and safety precautions as directed by the surgeon (e.g., cryo-surgery, laser surgery, ESU)
23. Prepare suture materials
24. Cut suture material as directed
25. Identify appropriate usage of sutures/needles and stapling devices
26. Provide assistance with internal stapling devices
27. Provide assistance with stapling skin tissue
28. Perform appropriate actions during an emergency
29. Initiate preventative and/or corrective actions in potentially hazardous situations
30. Perform video recording and/or still photography of procedures
31. Connect and activate drains to suction apparatus
32. Prepare an apply sterile dressing
33. Assist in the placement of wound drainage systems
34. Apply casts, splints, braces, and similar devices

D. Post-Operative Procedures
1. Evaluate patient immediately post-operative and report findings
2. Transfer patient from operating table to stretcher
3. Remove drapes from patient
4. Perform room clean up after surgery
5. Dispose of contaminated waste and drapes after surgery in compliance with Standard Precautions
6. Dispose of contaminated sharps after surgery in compliance with Standard Precautions
7. Return unused supplies and equipment in designated location
8. Prepare instruments for decontamination and sterilization

JoLane Buss, CST, ATC, MA Ed.
Surgical Technology Program Director and Course Coordinator
Office Hours: Posted outside office, bldg. 4, room 202
Office phone: 843-470-8415
E-mail: jbuss@tcl.edu

Cynthia Gray, CST, MA
Surgical Technology Clinical Adjunct
Office Hours: Posted outside office, bldg. 4, room 125
Office phone: 843-470-5955
E-mail: cgray@tcl.edu

Developed/Revised : May 16, 2011
ADDENDUM TO SUR 113 SYLLABUS

SURGICAL PROCEDURES – DIDACTIC

NEUROSURGERY

Content:

I. Carpal tunnel release

II. Laminectomy
   A. Cervical
      1. Anterior
      2. Posterior

III. Craniotomy
   A. Aneurysm repair
   B. Cranioplasty
   C. Cranisynostosis repair

IV. Rhizotomy

V. Stereotactic procedures

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VI. Transphenoidal hypophysectomy
VII. Ulnar nerve transposition
VIII. Ventriculoperitoneal shunt placement
IX. Ventriculoscopy

EMPLOYABILITY SKILLS

Objectives: The learner will:
1. Assess current trends and employment opportunities for the surgical technologist.
2. Develop a plan of action to secure employment in the health care field.
3. Evaluate personal employability qualities and develop an employment strategy that include positive characteristics.
4. Develop a professional resume.
5. Compare and contrast various types of employment/application correspondence.
6. Analyze various interview strategies.
7. Contrast and compare the various roles in the surgical technology profession.
8. Demonstrate responsible and accountable behavior within the role and competencies of the surgical technologist.

Content:
I. Employment in the healthcare field
   A. Career information
   B. Current employment trends and opportunities
   C. Employment facilities and institutions
   D. Transition from student to employee
II. Employability
   A. Accountability
   B. Adaptability
   C. Commitment to continuing education
   D. Communication skills
   E. Conflict resolution
   F. Dedication

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G. Personal appearance and hygiene
H. Previous work history

III. Resume preparation
   A. Required elements

IV. Correspondence
   A. Acceptance letter
   B. Cover letter
   C. Letter of refusal
   D. Professional reference letter
   E. Thank you letter

V. Employment application form

VI. Interview preparation

VII. Resignation
   A. Notice
   B. Exit interview