



South Portland, Maine 04106

Title: Introductory Cardiology

Catalog Number: EMSP 150

Credit Hours: 3

Total Contact Hours: 45 lecture hours

Lecture and Lab: Tuesdays, 13:30, zoom

Instructor: Leah Mitchell

Office Hours – Location: by appointment

Contact Information: lmitchell@smccme.edu

Course Syllabus

Course Description

This course is designed to provide the healthcare provider with an understanding of the cardiovascular system including the conduction system of the heart, and electrocardiography (ECG) interpretation through monitoring and 12-Lead ECG. Topics include a review of the anatomy and physiology of the heart and circulatory system, electrophysiology, and assessment of the cardiac patient. Prerequisite courses: BIOL 132, ENGL 100, and MATH 112; Co-requisite BIOL 138, EMSP 115, and EMSP 120.

Course Objectives

After successfully completing the course, the student will be able to:

1. Explain and demonstrate integrity, empathy, self-motivation, professional appearance and personal hygiene, self-confidence, communication skills, time management skills, teamwork and diplomacy skills, respect, patient advocacy, and the careful delivery of services as paramount in the helping profession of healthcare.
2. Summarize the anatomy of the heart, including the position in the thoracic cavity, layers of the heart, chambers of the heart, location and function of cardiac valves, coronary arteries and veins, and peripheral circulation
3. Construct the physiology of the heart, including phases of the cardiac cycle and the cardiac conduction system.
4. Incorporate the purpose of ECG monitoring.
5. Correlate the electrophysiological and hemodynamic events occurring throughout the entire cardiac cycle with the various ECG waveforms, segments, and intervals.
6. Evaluate and identify dysrhythmias originating in the sinus node, the AV junction, the atria, and the ventricles.
7. Distinguish the components to the 12-Lead ECG including lead placement.
8. Explain the benefits of using the 12-Lead ECG's.
9. Evaluate and identify if the patient has ECG evidence of ischemia, injury, or infarction.
10. Illustrate the evolutionary patterns or indicative changes of myocardial infarction.
11. Safely perform cardiopulmonary resuscitation and the usage of an AED in accordance with the American Heart Association's most current Emergency Cardiovascular Care guidelines.

Methods of Instruction:

This course uses on-line work, lectures with assessment of student knowledge, small group work, and homework assignments

Schedule:

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Week of	Topic	Reading/Assignments
September 1st	Course Overview & Anatomy	AOI: 1 Videos and Brightspace Assignments
September 8th	Physiology	AOI: 1 Videos and Brightspace Assignments
September 13th	Electrophysiology	AOI: 2, 3, 4, 6, 7 <ul style="list-style-type: none"> • Optional chapter: 5 Videos and Brightspace Assignments
September 22nd	Sinus Rhythms	AIO: 8 <ul style="list-style-type: none"> • Sinus Rhythm • Sinus Arrhythmia • Sinus Bradycardia • Sinus Tachycardia • Sinus Pause • Sinoatrial Block Videos and Brightspace Assignments
September 29th	Atrial Rhythms	AIO: 8 <ul style="list-style-type: none"> • WAP • MAT • Atrial Flutter • Atrial Fibrillation • SVT family • PAC Videos and Brightspace Assignments
October 6th	Ventricular & Arrest Rhythms	AIO: 8 <ul style="list-style-type: none"> • Idioventricular • Ventricular Tachycardia • Torsade de Pointes • Ventricular Fibrillation • PVC • Asystole • PEA Videos and Brightspace Assignments
October 13th	Junctional & Paced Rhythms	AIO: 8 <ul style="list-style-type: none"> • Junctional Rhythm • Accelerated Junctional • PJC Videos and Brightspace Assignments
October 20th	AV Blocks	AIO: 8 <ul style="list-style-type: none"> • First degree • Second degree type I • Second degree type II • Third degree Videos and Brightspace Assignments
October 27th	MIDTERM EXAM (Due 10/30)	
November 3rd	12-Lead ECG Electrophysiology 12- Lead ECG Interpretation	AIO: 3 Videos and Brightspace Assignments

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November 10th	12- Lead ECG R-wave Progression & Axis	AIO: 12 Videos and Brightspace Assignments
November 17th	12- Lead ECG Bundle Branch Blocks	AIO: 13 Videos and Brightspace Assignments
November 24st	No Class – Thanksgiving Break	
December 1st	12- Lead ECG Ischemia & Infarct	AIO: 15 Videos and Brightspace Assignments
December 8th	Advanced ECGs	Videos and Brightspace Assignments
December 15th	FINAL EXAM (Due 12/18)	Review all course materials

Course outline/Schedule is subject to change

At a minimum, students should have all reading and video assignments completed prior to their course meeting for the week.

Course Requirements

All students must be aware that EMSP courses require they achieve a score of 80 points or higher to receive credit for the course towards the Paramedic Degree completion. If the student's final grade for the course is not a B- or higher they will not be permitted to continue to the next semester.

Cognitive Domain Objectives

60 Points

To complete the cognitive domain objectives for the course, all of the following objectives must be completed.

Objective 1: Formative Assessments

20 Points

This course will include a combination of quizzes and assignments that will check the student's knowledge, application and critical thinking of topics from readings, lectures, and on-line assignments. The objective will be awarded a percentage (%) of the student's average of all quizzes and assignments in course. As an example, an average of 80% in this objective will award the student 16 of the 20 points available.

My Lab Brady: The student will be required to complete work in the MyLab Brady system. Please access MyLab Brady directly through the link in Blackboard (Bright Space). You will need an access code for MyLab Brady (*it is packaged with your textbooks*). All dues dates and deadlines for MyLab Brady assignments and quizzes will be posted in MyLab Brady. No partial or make up credit will be provided.

On-Line Blackboard (Bright Space) Quiz and/or assignment: Quizzes and assignments will be posted on-line in the Blackboard (Bright Space) associated with this course. All dues dates and deadlines for the on-line quizzes and assignments will be posted in Blackboard (Bright Space). No partial or make up credit will be provided.

Classroom Quiz: A written quiz will be provided in class. All quizzes will be timed. If no time is specified it will be assumed that one (1) minute per question is available. Therefore, a ten (10) question quiz will have ten (10) minutes for completion. If a student is tardy, leaves early, or is absent from class without notification the student will receive a zero (0) for the quiz. No partial or make up credit will be provided.

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Homework Assignments: The instructor will provide take home assignments that will need to be completed for the specified due date. Failure to return a fully completed assignment by the due date will result in a zero (0) for the assignment. No partial or make up credit will be provided.

Objective 2: Formative Sectional Exams & Projects

20 Points

This course will include a formative exam and/or project that will check the student's knowledge, application and critical thinking of topics from readings, lectures, and on-line assignments. The objective will be awarded a percentage (%) of your average formative exams and/or projects in the course. As an example, an average of 80% in this objective will award the student 16 of the 20 points available.

Mid-Term Exam: The student will complete a Mid-Term exam at the Southern Maine Community College (SMCC) testing center, during the posted hours. Mid-Term exam grades will be posted once the exam is closed and item analysis is completed. Failure to take the exam during the exam period will result in a grade of zero (0) for the exam.

Objective 3: Formative Final Exam

20 points

This course will include a comprehensive formative final exam that will check the student's knowledge, application and critical thinking of topics from readings, lectures, and on-line assignments. The objective will be awarded a percentage (%) of your average formative exams in course. As an example, an average of 80% in this objective will award you 16 of the 20 points available. Please note that in a comprehensive educational program, the exam may require the student to apply knowledge from previous semesters and/or previous emergency medical services education.

Psychomotor Domain Objectives

20 Points

To complete the psychomotor domain objectives for the course, all of the following objectives must be completed.

Objective 1: Psychomotor Portfolio

Pass/Fail

The student will complete and/or maintain all skills identified in the psychomotor portfolio at the competency rates identified for the semester. The psychomotor motor portfolio must be completed by **Friday, December 18th, 2020 at 12 pm EST**. In the event that the student fails to complete the specified skills, assessments, and/or competency rates for the semester, they will forfeit all twenty (20) points for the psychomotor objectives category.

Objective 2: Certification Program

Pass/Fail

The course will include a certification program. The student is required to complete the certification in accordance with the standards established for the program. In the event that the student fails to complete the specified certification program, they will forfeit all twenty (20) points for the psychomotor objectives' category.

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The student will complete American Heart Association (AHA) Basic Life Support (BLS) provider course. No current certifications will be accepted as the student must have their proficiencies verified as a component of the course and Program standards. No fees for the certification will be waived.

Affective Domain Objectives

20 Points

To complete the affective domain objectives for the course, all of the following objectives must be completed.

Objective 1: Community Service

Pass/Fail

The student will be required to attend the NREMT psychomotor examinations at the conclusion of the semester and serve as an evaluator, assistant, or patient. Failure to complete this assignment will result in a loss of all points for the affective domain grade for all courses in the semester. **Conflict notification due by Friday**

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September 25th, 2020 at 5 pm EST to Clinical Coordinator by e-mail. If a true conflict does exist, the student will be released by the Clinical Coordinator by signed counseling report and be required to complete five (5) additional hours of Educational/Leadership to graduate the program.

Objective 2: Formative Affective Domain Assessment 20 points

The student will be assessed on a weekly basis by faculty in all EMSP courses for a comprehensive weekly assessment. The assessment will start on Friday at 3 pm EST and end on Friday the next week at 3 pm EST. During finals week the assessment will start on Friday at 3 om EST on the previous week and end at the close of grades as established by SMCC. In the event that a student receives an incomplete, incomplete plan will include a plan for the assessment of their affective domain score during the period.

The student will be notified by email from the Program Director if they have received an affective domain evaluation that is less than a two (2) in all categories. Students are reminded that grading is comprehensive, behavior in one class or outside of class effects grades in all EMSP classes for the semester. The table below will be the grading rubric. Please see the “Advanced Life Support Program Affective Domain Assessment Policy” for further information.

Grading Rubric:

Score	Attendance	Dress Code	Behavior	Preparation	Participation
2	Attended all classes, not late, and did not leave early (<i>includes breaks</i>)	Adhered to assigned dress code	Adheres to EMS Department & SMCC code of conduct	Student has all assigned equipment and is prepared to utilize it	Student actively and positively participates in all aspects of the day
1	Left early or tardy, without proper notification (<i>includes breaks</i>)	Minor dress code violation	Warned for minor code of conduct violation and behavior is immediately ceased	Student is missing a piece of equipment or a single necessary piece of class equipment is missing	Student is reminded to stay on task
0	Did not attend & failed to follow notification process (<i>counseling session</i>)	Major dress code violation (<i>student sent home and counseling session</i>)	More than one warning for minor violation or major violation (<i>student sent home and counseling session</i>)	Student missing more than one piece of equipment or multiple pieces of class equipment (<i>counseling session</i>)	Student is reminded more than once to stay on task (<i>student sent home and counseling session</i>)

The student will lose five (5) points from their total Affective Domain points for each point lost for the overall weekly domain assessment. The overall assessment provides a final score of two (2), one (1), or zero (0). A student that receive a one (1) for attendance and preparation, will only lose five (5) points from the affective domain grade as the overall score for the week would be a one (1).

Learning Management System Access and Log-In:

Computer usage and internet access is a required component of this course. If the student does not have internet access at home, the campus has multiple computer labs available for access. Lack of home access is not an acceptable reason to not complete assignments.

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Students will be required to complete assignments through the SMCC learning management systems. Assignments will be posted weekly with expected completion dates on the learning management system.

The SMCC learning management system is accessed by going to <https://my.smccme.edu/ics/>.

To log in

1. **Username** = the student's first name + middle initial + last name - WITH NO SPACES AND NO CAPITAL LETTERS (i.e. johnqsmith) - maximum of 20 characters
2. **Password** = the student's first initial + the first four letters of the student's last name + the last four digits of the student's social security # - NO SPACES (i.e. jsmit1234)

If the student cannot log on, please e-mail the instructor that the student are having problems logging in and then contact technical support through the webpage. **The instructor cannot fix access problems; the student must remedy them with the assistance of technical support.**

Required Electronic Formatting:

All materials that are submitted electronically to the instructor must be in the following formats:

- X.doc; X.docx; X.pdf; X.rtf

Any materials submitted in a different format will receive a zero (0).

SMCC E-Mail and Communications

Students are **REQUIRED** to use their SMCC provided e-mail account for this course. ALL communications with the instructors will be through the SMCC address. Students are required to check their SMCC e-mail account at least once daily (Monday-Saturday) and respond to all e-mails from the class instructors upon receipt. The student will contact the help desk for assistance with e-mail access.

How to succeed

1. The student is expected to be prepared for the class session by completing all assigned reading and work assignments for the day. **Keep up with the weekly assigned readings.** This course proceeds at a fast pace. If you get behind, it can be a lot of work to keep up.
2. The student is expected to attend all class sessions and be on time. The student will manage their absences, to facilitate their needs. You can't learn if you are not here.
3. The student will make up all missed work on their own time.
4. Ask questions in class. If you don't understand something, chances are that others don't understand it either. If you need extra help, ask us.
5. The student is expected to dedicate an average of **1-3 hours per credit hour** of time per week outside of class to study, review and complete assignments.
6. You are entering the healthcare profession and professional behavior is expected at all times. Students with inappropriate behavior will be asked to leave class for the day. Repeated incidents may result in dismissal from class. The student is expected to be respectful of fellow class members, the instructors and the college.
7. In the realm of Emergency Medicine our patients rarely get a second chance. You want to view your first opportunity as your only opportunity to affect your outcome, study for assessments, exams and quizzes as if there isn't a second chance.

SMCC Paramedic Program Handbook

In addition to this syllabus, the course will be governed by all academic policies of SMCC and the SMCC Paramedic Program Handbook.

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Student Evaluation and Grading

20%	Affective Domain Objectives
60%	Cognitive Domain Objectives
20%	Psychomotor Domain Objectives

Grading Scale:

A =	93-100	C =	73-77
A- =	90-92	C- =	70-72
B+ =	88-89	D+ =	68-69
B =	83-87	D =	60-67
B- =	80-82	F =	Below 60
C+ =	78-79		

To receive credit towards a degree in Paramedicine and meet pre-requisites for other EMSP courses, a student must receive a minimum grade of **B- (80%)** in this course as specified by Maine EMS.

Students that are not achieving at least a **B- (80%)** average or have missed a class before the early alert and academic alert periods will receive an early/academic alert notice from the college.

No late work will be accepted in this course. As computer access is a requirement for this course and provided by the college, students are expected to deliver the work by the assigned time regardless of attendance at the course.

No individual extra credit will be provided in this course.

Text, Tools and / or Supplies

Required Texts:

- 12-Lead ECG: The Art of Interpretation 2nd edition
- American Heart Association BLS Provider Manual 2015
- SMCC EMSP 150: ECG Workbook

Special Equipment Note

- Mobile phones and other electronic notification devices will not be used during classroom time. They will be set to vibrate or silent. Answering or making calls, checking e-mail or sending text messages during class time is not permissible.
- Computers may be utilized during class time for note taking and researching materials related to the class lecture or topic. Computers used for any other function during class time are prohibited, without consent of the instructor. The instructor reserves the right to refuse a student the ability to use a computer in class if the student cannot abide by the rules.

Attendance Policy

Please review the Paramedic Program manual for the attendance standards.

A student may be absent for 2 class (Lecture/Laboratory) sessions but should make every effort to attend all classes. **The 3rd class (Lecture/Laboratory) session missed will result in the receipt of an unexcused absence (per occurrence) in accordance with the affective domain policy** It is the responsibility of the student to manage their absences accordingly. Please notify your instructor of any known scheduling conflicts.

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End-of-Course Evaluation

Students complete evaluations for each course attended at SMCC. Evaluations are submitted online and can be accessed through the student portal. Students can access the course evaluations beginning one week before the end of classes. The deadline for submission of evaluations occurs Monday at 5 p.m. following the last day of the class. You will receive an e-mail to your student e-mail account when course evaluations are available.

For Classes with any Face- to -Face Component

While the syllabus represents current plans, there may be changes during the semester in response to the on-going Covid-19 pandemic. Depending on the progression of the virus, it is possible that the College may have to suspend face-to-face instruction for part of the semester. If we must stop face to face instruction anytime during the semester, your instructor will contact you via your SMCC email or the Brightspace course homepage to discuss next steps for the course.

ADA Statement

Southern Maine Community College is an equal opportunity/affirmative action institution and employer. For more information, please call (207) 741-5798. If you have a disabling condition and wish to request accommodations in order to have reasonable access to the programs and services offered by SMCC, you must register with the Disability Services Coordinator, Sandra Lynham, who can be reached at 741-5923. Further information about services for students with disabilities and the accommodation process is available upon request at this number. Course policies about online testing are modified to suit each individual's accommodations.

The Learning Commons:

The library, tutoring and writing centers, and reference/research assistance (typically located on the second floor of South Portland's Campus Center and in the Midcoast's LL Bean Learning Commons and Health Science Center) will be fully available online during the fall 2020 semester.

Here you can find free academic support through individually scheduled and drop in, online tutoring. You can also find information literacy/research librarians, and professional academic strategy/planning mentoring online. While the physical space of the Learning Commons will not be available at this time, we can also work with you to set up zoom classrooms for small group study. Services are offered by appointment or as drop-in assistance.

To access services:

- Visit My Learning in My Maine Guide or
- Select the "tutoring needed" button if it appears inside your Brightspace course.

Whether On Site or Online, students have consistently reported that the Learning Commons is a friendly, risk-free, and helpful place to seek academic support. It has also been shown that those who make use of the Learning Commons do better in a course than those who do not. We strongly encourage you to take advantage of this valuable and enjoyable resource.

SMCC Pay-for-Print Policy

Each semester students receive a \$20 printing credit. The balance resets at the end of the semester and any remaining credits are removed. The College's pay-for-print system monitors printing on all printers (including those in general access labs, library printers, Tutoring Services, Campus Center Lounge and technology labs). Be sure to log OUT of the system when you've finished your printing, to prevent unauthorized access to your account. Students can check the number of pages they have printed by using the Printing Balance tool available on SMCC computers (located in the lower right corner of the screen, near the clock). Departments with work study students who need to print documents for the department should contact the Help Desk at 741-5696 to have a special account set up. To find ways to reduce your printing charges, please go to the IT Help tab on My SMCC. If you have questions about the pay-for-printing policy or your printing charges, please contact the Help Desk at 741-5696 or send an e-mail to helpdesk@smccme.edu.

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Refunds

Print jobs are eligible for a refund in the event of mechanical or electronic error on the part of the printer, print server, or software used to submit the job. Jobs are not eligible for a refund in cases where the job was not set up correctly, was submitted multiple times, or the student is not satisfied with the result. To request a refund, please bring the offending print to the IT Department in the basement of the Ross Technology Center. Refunds will be granted in the form of a credit to the student's account.

Add-Drop Policy

Students who drop a course during the one-week "add/drop" period in the fall and spring semesters and the first three days of summer sessions receive a 100% refund of the tuition and associated fees for that course. Please note any course that meets for less than the traditional semester length, i.e., 15 weeks, has a pro-rated add/drop period. There is no refund for non-attendance.

Withdrawal Policy

A student may withdraw from a course only during the semester in which s/he is registered for that course. The withdrawal period is the second through twelfth week of the Fall and Spring semesters and the second through ninth week of twelve-week Summer courses. This period is pro-rated for shorter-length courses, usually 75 percent of course meeting times; please check with the Registration Office. To withdraw from a course, a student must complete and submit the appropriate course withdrawal form, available at the Registration Office. This process must be completed either in person or by using SMCC e-mail accounts.

Plagiarism Statement

If an instructor suspects that a student has knowingly committed a violation defined in the Maine Community College System Policy on Student Grade Appeals and Academic Misconduct, the instructor has the authority to review the alleged misconduct and determine the grade that the student should receive for the assignment and the course. The instructor may assign a failing grade for the assignment or course and may require the student to complete additional work for the course. The instructor may consult with the department chair and/or the College's chief academic officer prior to making such decisions. If a student seeks to challenge an instructor's determination, the student should submit a grade appeal. Grade appeal forms are available in the Advising Office on the South Portland Campus or in the administrative offices in the Learning Commons on the Midcoast Campus. An instructor may also refer the matter to the College's disciplinary officer for review under the procedures of the MCCS Student Code of Conduct.

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Emergency Medical Services Department

Syllabus Acknowledgement

Student Name: _____ **Course:** Introductory Cardiology

I have been given a copy of the syllabus for the above listed class, and I have reviewed the syllabus and asked the instructor questions clarifying the expectations for this course. Please read and initial each statement below:

- _____ I have reviewed and understand the course schedule. I understand that the course schedule may change at the discretion of the instructor and a new syllabus will be made available to me upon the change if necessary.
- _____ I have reviewed and understand the student grading and evaluation process. I also understand what is required of me for cognitive, psychomotor, affective and clinical objectives and/or evaluation.
- _____ I understand how to log into the MySMCC portal and/or Brightspace system as needed for the course. I understand this is where my current estimated grade will be maintained for my review.
- _____ I have reviewed and understand the attendance policies for the course.
- _____ I understand what textbook and materials are required for this course.
- _____ I understand that in addition to this syllabus I am also governed by the SMCC code of conduct, SMCC policies as indicated in the current course catalog and compass, clinical handbook and the program handbook all located at www.smccme.edu.
- _____ I have reviewed and understand the ADA Statement.
- _____ I have reviewed and understand the Add-Drop Policy.
- _____ I have reviewed and understand the Withdrawal Policy.
- _____ I have reviewed and understand the Plagiarism Statement.
- _____ I have reviewed and understand the SMCC Pay for Print Policy.
- _____ I have reviewed and understand the process for Course Evaluation.

I acknowledge that I have received the syllabus and that I was afforded an opportunity to ask questions for clarification.

Student Signature

Date

Student Printed Name