

GRAYSON COLLEGE
EMS Education

Course Syllabus

Please Note: Due to extenuating circumstances, including public health issues, course and testing delivery methods, instructional schedules, housing contracts, campus procedures and/or operating hours may be altered, interrupted and/or ceased for a limited or extended period of time. Such changes will be posted on the College website.

Course Information

EMSP 2544 – Cardiology – Spring 2021

Type of Course/Delivery Mode/Testing Requirements

Face-to-face course; lecture and lab 16 hrs/ week on campus; cognitive examinations conducted on campus in computer lab with test proctor.

Professor Contact Information

Brandon Poteet, 903-463-8677- poteetb@grayson.edu - Mary Moses Center for Health Science Center #HS 304 Office hours will be held before each class meeting day from 0700-0900 in person, and virtual office hours can be arranged by appointment. It is also best practice to use the e-mail option within Canvas for communications outside the classroom. I can respond quickly as I monitor e-mail after hours and there is an official record of our communications.

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Demonstration of college readiness in reading and math skills; current and completed immunizations for tetanus/diphtheria, measles, mumps, rubella, Hepatitis A, Hepatitis B, varicella, annual influenza, and a TB skin test within 6 months prior to clinical entry; completed pre-entrance physical exam and health statement without limitations; satisfactory completion of drug screen and background check; liability insurance is required before the student may attend clinical; concurrent enrollment in EMSP 1355, EMSP1149, EMSP 2237, EMSP 2330. and HPRS 1209.

Course Description

This course is an exercise and study of the assessment and management of patients with cardiac emergencies. This course includes single and multi-lead ECG interpretation.

Student Learning Outcomes

Upon successful completion of this course, the student will be able to:

1. Integrate pathophysiological principles and assessment findings to formulate a field impression.
 2. Implement a treatment plan for the cardiac patient.
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Required Textbooks and Materials

1. Pollack; Nancy Caroline's Emergency Care in the Streets; 8th Edition ISBN-978-1- 284-13718-7; Jones and Bartlett Learning, 5 Wall Street, Burlington, MA, 01803
2. Computer with Internet access to Canvas through the college website, www.grayson.edu.
3. Stethoscope. Must be of adequate quality to assess specific heart and lung sounds. Contact course professor for further details and specifications.
4. Student uniform.
5. EMT Paramedic Student ID.

Additional Resources

- State of Texas Department of State Health Services website:
 - www.dshs.state.tx.us/emstraumasystems/
 - Texas Administrative Code, Rules/ Policies
 - 157.33 – Certifications
 - 157.36 – Disciplinary Actions
 - 157.37 – Certification of Persons with Criminal Backgrounds
 - 157.38 – Continuing Education
 - National Registry of EMTs website:
 - www.nremt.org
 - American Heart Association:
 - www.americanheart.org
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Outline of Topics Covered – Course Objectives

Wednesday January 13	Cardiology EMSP 2544 Begins <i>Class will meet online via Conferences in Canvas</i> Intro to Cardiology - Physiology
Saturday January 16	Cardiology Sinus Rhythms - Atrial Rhythms - Practice Worksheets
Tuesday January 19	Cardiology Quiz - Junctional Rhythms - AV Blocks - Practice Worksheets
Friday January 22	Cardiology Quiz - Ventricular Rhythms - Life Threatening Arrhythmias - Practice Worksheets
Monday January 25	Cardiology Test One - Rhythm Recognition Practice
Thursday January 28	Cardiology Introduction to 12-lead - Fascicular and Bundle Branch Blocks
Wednesday February 3	Cardiology Quiz - 12-lead Review and Practice
Saturday February 6	Cardiology Pathophysiology of Cardiac Disease - MI recognition - ACLS introduction
Tuesday February 9	Cardiology Treatment of Bradycardia - Case Study - TCP
Friday February 12	Cardiology Test Two - Case Study
Monday February 15	Cardiology Treatment of Tachycardia - Case Study - Cardioversion
Thursday February 18	Cardiology Treatment of Cardiac Arrest - Case Study - Defibrillation
Wednesday February 24	Cardiology Cardiovascular Diseases - Case Study - DVT
Saturday February 27	Cardiology Make-up Day as Needed
Tuesday March 2	Cardiology ACLS Course
Friday March 5	Cardiology FINAL EXAM - ECG Rhythm Recognition Verification

This schedule is subject to change. The student will be notified of any changes at the end of the current class meeting.

In case of inclement weather, emergency closings, or other unforeseen disruptions to scheduled classes, student must log onto their Canvas accounts for directions on where, or how, to continue their coursework. Due to the ongoing COVID-19 public health emergency, testing may be delayed until adequate proctoring can be obtained.

<u>Topic</u>	<u>Objective</u>	<u>Cognitive</u>
Preparatory	Integrates comprehensive knowledge of EMS systems, the safety/well-being of the paramedic, and medical/legal and ethical issues, which is intended to improve the health of EMS personnel, patients, and the community.	
<i>EMSP</i>	1438	
Anatomy and Physiology	Integrates a complex depth and comprehensive breadth of knowledge of the anatomy and physiology of all human systems.	
<i>EMSP</i>	1438	1455 1456 2544 2434
Medical Terminology	Integrates comprehensive anatomical and medical terminology and abbreviations into the written and oral communication with colleagues and other health care professionals.	
<i>EMSP</i>	1438	
Pathophysiology	Integrates comprehensive knowledge of pathophysiology of major human systems.	
<i>EMSP</i>	1438	1455 1456 2544 2434 2430 2143
Life Span Development	Integrates comprehensive knowledge of life span development.	
<i>EMSP</i>	1438	2430
Public Health	Applies fundamental knowledge of principles of public health and epidemiology including public health emergencies, health promotion, and illness and injury prevention.	
<i>EMSP</i>	1438	1455 2430
Pharmacology	Integrates comprehensive knowledge of pharmacology to formulate a treatment plan intended to mitigate emergencies and improve the overall health of the patient.	
<i>EMSP</i>	1438	1456 1455 2544 2434 2143
Airway Management, Respiration and Artificial Ventilation	Integrates complex knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of assuring a patent airway, adequate mechanical ventilation, and respiration for patients of all ages.	
<i>EMSP</i>	1456	

Assessment		Integrate scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. This includes developing a list of differential diagnoses through clinical reasoning to modify the assessment and formulate a treatment plan.			
<i>EMSP</i>	1456	2143			
Medicine		Integrates assessment findings with principles of epidemiology and pathophysiology to formulate a field impression and implement a comprehensive treatment/disposition plan for a patient with a medical complaint.			
<i>EMSP</i>	2544	2434	2143		
Shock and Resuscitation		Integrates comprehensive knowledge of causes and pathophysiology into the management of cardiac arrest and peri-arrest states. Integrates a comprehensive knowledge of the causes and pathophysiology into the management of shock, respiratory failure or arrest with an emphasis on early intervention to prevent arrest.			
<i>EMSP</i>	1438	1455	2544	2430	
Trauma		Integrates assessment findings with principles of epidemiology and pathophysiology to formulate a field impression to implement a comprehensive treatment/disposition plan for an acutely injured patient.			
<i>EMSP</i>	1438	1455			
Special Patient Populations		Integrates assessment findings with principles of pathophysiology and knowledge of psychosocial needs to formulate a field impression and implement a comprehensive treatment/disposition plan for patients with special needs.			
<i>EMSP</i>	2430	2143			
		<i>Psychomotor</i>			
Skills		Safely and effectively perform within the National EMS Scope of Practice and state Scope of Practice at the Emergency Medical Technician (EMT) –Paramedic level.			
<i>EMSP</i>	1438	1456	1455	1361, 2544, 2434, 2430, 2143,	2462
		<i>Affective</i>			
Therapeutic Communication		Effectively communicate in a manner that is culturally sensitive and intended to improve the patient outcome.			
<i>EMSP</i>	1361	2462			
Professionalism		Is a role model of exemplary professional behavior including: but not limited to, integrity, empathy, self-motivation, appearance/personal hygiene, self-confidence, communications, time- management, teamwork/ diplomacy, respect, patient advocacy, and careful delivery of service.			
<i>EMSP</i>	1361	2462			
Decision Making		Performs basic and advanced interventions as part of a treatment plan intended to mitigate the emergency, provide symptom relief, and improve the overall health of the patient.			

Evaluates the effectiveness of interventions and modifies treatment plan accordingly.

EMSP 1361 2462 2143

Record Keeping Report and document assessment findings and interventions. Collect and report data to be used for epidemiological and research purposes.

EMSP 1361 2462

Scene Function as the team leader of a routine, single patient advanced life support emergency call.

EMSP 2462
Scene Safety Ensure the safety of the rescuer and others during an emergency.

EMSP 1361 2462

Methods of Evaluation

Important Notice Concerning Final Course Grading: In order for the following calculation to apply to the EMSP 2544 course grade, the student MUST have earned an *average* of 74 or better on the three (3) major exams of the course. Failure to achieve this average will constitute failure of the EMSP 2544 course and the student will not be permitted to continue the Paramedic 2020-2021 course of study. However, the student will be permitted to re-apply to the program for the 2021-2022 academic year.

Categories:	Percentage:
Professional Behavior (Affective)	10%
Blackboard Exercises (Cognitive)	10%
Quizzes (Cognitive)	10%
Examinations (Cognitive)	70%
Skills Competency (Psychomotor)	Pass/Fail

Professional Behavior will be based on daily performance in the classroom as it relates to attitude and professionalism. The student will be graded each class meeting by their course instructors using criteria determined as outlined below. The scores will be tabulated and posted in the grade book within Canvas. At the beginning of the course the student will start with 100 total points. A deduction from the 100 points will occur each time a violation occurs. The remaining points will be calculated as 10% of the final course grade. If the student has a deduction of more than 10 points in any of the areas listed below, the course instructor will counsel the student. If the total number of points falls below 74, the Program Director and instructor will counsel the student, as this indicates failure of the affective domain. Please note; some offenses are so severe they may result in the student being referred to the EMS Program Director for counseling and/or dismissal from the program. These offenses are listed in the EMS Program Policy Manual pages 19-22.

1. Integrity 10 points

2. Empathy 10 points

3. Self-Motivation	10 points
4. Appearance and Personal Hygiene	10 points
5. Self-Confidence	10 points
6. Communications	10 points
7. Time Management	10 points
8. Teamwork and Diplomacy	10 points
9. Respect	10 points
10. Careful Delivery of Service	10 points

Canvas/E-Learning Exercises must be completed by the due date posted in Canvas. These exercises may include, multiple-choice assignments and discussion questions. Multiple-choice assignments are graded on percentage of correct items while discussion questions are graded on content using the rubric below. These exercises will make up 10 % of the final course grade. It is the student responsibility to monitor due dates and times. There will be **NO** extensions on the due dates or times.

Discussion Question Rubric:

Points	Criteria
4	Clearly defined response with 2 or more references in APA format.
3	Weak response ideas with less than 2 references, or no APA format.
2	Complete opinion without references.
1	Totally off topic, does not contribute to the discussion.
0	No response.

**The student must intelligently reply to at least two other responses in order to receive credit for their discussion question posting.*

Quizzes will be administered by the professor at any time throughout the course. Quizzes may be given in any form: oral, paper or via the web. Any incomplete quizzes will be scored as **0%**. The average score of all quizzes will determine 10% of the course grade.

Examinations will be administered on the GC campus as scheduled by the professor. The length of time allowed for testing is based on the number of test items on the exam and will be determined by the professor. Examinations will begin on time and finish on time. Students who arrive late will be admitted at the discretion of the professor, and, if admitted, will have only the remaining time available. Students who are absent from an examination may be eligible for a

make-up examination only when certain circumstances are met and approved by the professor. The average score of all examinations will determine 70% of the course grade.

Skills Competency in all of the following:

1. IV Piggy Back set-up with drug administration
2. Mega-Code Competency
3. Obtaining a 3-lead ECG tracing
4. Obtaining a 12-lead ECG tracing
5. ECG Interpretation of 25 rhythms
6. 12 lead ECG interpretation
7. Electrical therapy:
 - a. Transcutaneous pacing
 - b. Manual defibrillation
 - c. Synchronized cardioversion

Competency will be verified in an individual station using the National Registry of EMT's skills testing document which can be found on the website www.fisdap.net. IV Piggy-Back drug administration will be verified at the time of IV bolus injection testing. All skills will be verified prior to course completion utilizing documents made available to the students throughout the course. The skills will be verified by at least two different adjunct faculty who each will indicate that the student is competent in the skill. If the student fails an attempt, then the faculty member will indicate to the student and the lead course instructor the reason for the failure. After ample time for remediation the student will be permitted to conduct the skill under the observation of a different faculty member. The student must have in his or her records documentation of at least two faculty members indicating competency in the skill. Failure to successfully demonstrate competency of one or more of the required skills will result in failure of the course.

Grading

<u>Letter Grade</u>	<u>Interpretation</u>	<u>Numerical Grade</u>	<u>Grade Points/ Semester Hour</u>
A	Excellent	91.50 – 100.00	4
B	Good	82.50 – 91.49	3
C	Satisfactory	73.50 – 82.49	2
D	Failing	64.50 – 73.49	1
F	Failing	64.49 and below	0

Students will be notified of grades via the Canvas “My Grades” link. It is the intent of the professor to release grades as soon as possible. Canvas exercise grades will generally be released immediately upon completion of the exercise. Quiz grades may require up to three days for release.

Note Concerning Major Exam Grades:

Major exam results will be processed through item analysis and peer review, including medical direction, once the exam is submitted for grading. This will insure accuracy of the results and validate the exam. While every effort will be made to complete this in a timely fashion, please understand that releasing the student's grade for the exam may be delayed until the process is complete. At no time will 'raw' scores be released to the student.

Methods of Instruction

Methods of instruction include lecture, discussion, required reading, audio and visual aids, computer aided instruction, research, skill demonstration.

Because many assignments and study tools are performed via Canvas, access to computer hardware with internet connection and software to allow web navigation is required. Microsoft Office software, Word, PowerPoint, and Excel, may also be required. However, owning a personal computer is not required. EMS students may access several computer lab resources on and off campus to facilitate completion of assignments. If the student is dependent upon computer resources outside the home, significant time management, organizational skill, and personal commitment is necessary to be successful.

In the event of technology failure, the student should contact the GC Help Desk for guidance.

Course & Professor Policies

Refer to the GC EMS Education Policy Manual for specific information relating to General Policy, Admission Policy, Student Conduct Policy, Health and Safety Policy, Examination Policy, and Certification and Licensure Policy. Any conflict between this syllabus and the GC EMS Education Policy Manual will be interpreted by the program director.

Class Attendance

Attendance and Participation Academic success is closely associated with regular class attendance and course participation. All successful students, whether on campus or online, are expected to be highly self-motivated. All students are required to participate in courses regularly and are obliged to participate in class activities and complete and submit assignments following their faculty's instructions. Students taking courses during compressed semester time frames such as mini-mester, summer sessions, and 8-week courses should plan to spend significantly more time per week on the course. Responsibility for work missed because of illness or school business is placed upon the student. Instructors are required to include in their syllabi the attendance policy for the course(s) they teach. The college considers absences equal to or greater than 15% of the course's requirements to be excessive.

In order for students to be counted as having attended a class before the census date, the following guidelines are to be used: • Physical attendance in class with an opportunity for instructor and student interaction • Submission of an academic assignment • Completion of an exam, interactive tutorial, or computer-assisted instruction • Attendance at a study group assigned by the faculty • Participation in an online discussion in the class • Contact with a faculty member to ask a question

Student Conduct & Discipline

Students are expected to maintain classroom decorum that includes respect for other students and the professor.

Disruptive behaviors such as harassment of fellow students and/or professors; persistent talking in class while lecture is in progress; using electronic equipment without authorization (cell phone/ texting) or repeated tardy arrival to class will not be tolerated. Students will be counseled initially, but may be dismissed from the classroom for repeated offenses.

Dress for the classroom includes the GC EMS student uniform described in the Uniform Policy section of the GC EMS Education Policy Manual.

Refer to the GC EMS Education Policy Manual for information regarding Conflict Resolution, Disciplinary Action, and Grievance procedures.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, and the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the college's policy on plagiarism (see GC Student Handbook for details). Grayson College subscribes to turnitin.com, which allows faculty to search the web and identify plagiarized material.

Plagiarism is a form of scholastic dishonesty involving the theft of or fraudulent representation of someone else's ideas or words as the student's original work. Plagiarism can be

intentional/deliberate or unintentional/accidental. Unintentional/Accidental plagiarism may include minor instances where an attempt to acknowledge the source exists but is incorrect or insufficient. Deliberate/Intentional plagiarism violates a student's academic integrity and exists in the following forms:

- Turning in someone else's work as the student's own (such as buying a paper and submitting it, exchanging papers or collaborating on a paper with someone else without permission, or paying someone else to write or translate a paper)
- Recycling in whole or in part previously submitted or published work or concurrently submitting the same written work where the expectation for current original work exists, including agreeing to write or sell one's own work to someone else
- Quoting or copy/pasting phrases of three words or more from someone else without citation, • Paraphrasing ideas without citation or paraphrasing incompletely, with or without correct citation, where the material too closely matches the wording or structure of the original
- Submitting an assignment with a majority of quoted or paraphrased material from other sources
- Copying images or media and inserting them into a presentation or video without citation
- Using copyrighted soundtracks or video and inserting them into a presentation or video without citation
- Giving incorrect or nonexistent source information or inventing source information
- Performing a copyrighted piece of music in a public setting without permission
- Composing music based heavily on someone else's musical composition.

Student Responsibility

You have already made the decision to go to college; now the follow-up decisions on whether to commit to doing the work could very well determine whether you end up working at a good paying job in a field you enjoy or working at minimum wage for the rest of your life. Education involves a partnership that requires both students and instructors to do their parts. By entering into this partnership, you have a responsibility to show up for class, do the assignments and reading, be engaged and pay attention in class, follow directions, and put your best effort into it. You will get out of your experience here exactly what you put into it – nothing more and nothing less.

TITLE IX

GC policy prohibits discrimination on the basis of age, ancestry, color, disability, gender identity, genetic information, national origin, race, religion, retaliation, serious medical condition, sex, sexual orientation, spousal affiliation and protected veterans status.

Furthermore, Title IX prohibits sex discrimination to include sexual misconduct: sexual violence (sexual assault, rape), sexual harassment and retaliation.

For more information on Title IX, please contact:

- Dr. Molly M. Harris, Title IX Coordinator (903)463-8714
- Ms. Logan Maxwell, Title IX Deputy Coordinator - South Campus (903) 415-2646
- Mr. Mike McBrayer, Title IX Deputy Coordinator - Main Campus (903) 463-8753
- Website: <http://www.grayson.edu/campus-life/campus-police/title-ix-policies.html>
- GC Police Department: (903) 463-8777- Main Campus) (903-415-2501 - South

Campus)

- GC Counseling Center: (903) 463-8730

For Any On-campus Emergencies: 911

Grayson College is not responsible for illness/injury that occurs during the normal course of classroom/lab/clinical experiences.

These descriptions and timelines are subject to change at the discretion of the Professor.

Grayson College campus-wide student policies may be found on our Current Student Page on our website:

<http://grayson.edu/current-students/index.html>

Revised: December 15, 2020