

NS M30: BASIC CARDIAC DYSRHYTHMIA INTERPRETATION

Originator

clee

Co-Contributor(s)
Name(s)

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College

Moorpark College

Discipline (CB01A)

NS - Nursing Science

Course Number (CB01B)

M30

Course Title (CB02)

Basic Cardiac Dysrhythmia Interpretation

Banner/Short Title

Basic Cardiac Dysrhyth Interp

Credit Type

Credit

Start Term

Fall 2023

Formerly

HS M30 - Basic Cardiac Dysrhythmia Inte

Formerly

HS M30

Catalog Course Description

Introduces the skills necessary to interpret basic cardiac dysrhythmias and identify related healthcare interventions. Covers a systematic approach for the identification and classification of dysrhythmias according to site of origin and prognosis.

Taxonomy of Programs (TOP) Code (CB03)

1201.00 - *Health Occupations, General

Course Credit Status (CB04)

D (Credit - Degree Applicable)

Course Transfer Status (CB05) (select one only)

B (Transferable to CSU only)

Course Basic Skills Status (CB08)

N - The Course is Not a Basic Skills Course

SAM Priority Code (CB09)

C - Clearly Occupational

Course Cooperative Work Experience Education Status (CB10)

N - Is Not Part of a Cooperative Work Experience Education Program

Course Classification Status (CB11)

Y - Credit Course

Educational Assistance Class Instruction (Approved Special Class) (CB13)

N - The Course is Not an Approved Special Class

Course Prior to Transfer Level (CB21)

Y - Not Applicable

Course Noncredit Category (CB22)

Y - Credit Course

Funding Agency Category (CB23)

Y - Not Applicable (Funding Not Used)

Course Program Status (CB24)

2 - Not Program Applicable

General Education Status (CB25)

Y - Not Applicable

Support Course Status (CB26)

N - Course is not a support course

Field trips

Will not be required

Grading method

(L) Letter Graded

Alternate grading methods

(O) Student Option- Letter/Pass

(P) Pass/No Pass Grading

Does this course require an instructional materials fee?

No

Repeatable for Credit

No

Is this course part of a family?

No

Units and Hours

Carnegie Unit Override

No

In-Class

Lecture

Minimum Contact/In-Class Lecture Hours

26.25

Maximum Contact/In-Class Lecture Hours

26.25

Activity**Laboratory****Total in-Class****Total in-Class****Total Minimum Contact/In-Class Hours**

26.25

Total Maximum Contact/In-Class Hours

26.25

Outside-of-Class**Internship/Cooperative Work Experience****Paid****Unpaid****Total Outside-of-Class****Total Outside-of-Class****Minimum Outside-of-Class Hours**

52.5

Maximum Outside-of-Class Hours

52.5

Total Student Learning**Total Student Learning****Total Minimum Student Learning Hours**

78.75

Total Maximum Student Learning Hours

78.75

Minimum Units (CB07)

1.5

Maximum Units (CB06)

1.5

Student Learning Outcomes (CSLOs)**Upon satisfactory completion of the course, students will be able to:**

1	interpret basic cardiac dysrhythmias correctly and identify related healthcare interventions.
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Course Objectives**Upon satisfactory completion of the course, students will be able to:**

1	describe cardiopulmonary anatomy, physiology, and circulation.
2	identify basic electrocardiogram (ECG) waveforms of the cardiac cycle via analysis of a telemetry reading.
3	define anatomical locations and properties of cardiac pacemaker cells.
4	utilize a systematic approach to identify cardiac rhythms.
5	identify and describe common dysrhythmias and related treatment interventions.
6	analyze cardiac rhythms initiated by an artificial pacemaker, troubleshoot pacemaker malfunctions, and identify artifact.

- 7 describe the appropriate interventions for each cardiac dysrhythmia in accordance with American Heart Association Advanced Cardiac Life Support guidelines.

Course Content

Lecture/Course Content

- 25% Anatomy and Physiology of the Heart
- Basic Electrophysiology and Basic Electrocardiography
- 12.5% Pacemakers and Artifact
- 12.5% Atrioventricular Conduction Defects, Bundle Branch Blocks and Asystole
- 12.5% Ventricular Dysrhythmias
- 12.5% Junctional Dysrhythmias and Wandering Pacemaker
- 12.5% Atrial Dysrhythmias
- 12.5% Sinus Rhythm and Sinus Dysrhythmias

Laboratory or Activity Content

n/a

Methods of Evaluation

Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):

- Written expression
- Problem solving exercises
- Skills demonstrations

Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):

- Objective exams
- Problem-solving exams
- Problem-solving homework
- Quizzes
- Skills demonstrations
- Other (specify)
- Classroom Discussion
- Participation
- Reports/Papers/Journals

Other

- Fill in the blank and short answer essay
- Cardiac dysrhythmia interpretation worksheets
- Research on current Advanced Cardiac Life Support guidelines

Instructional Methodology

Specify the methods of instruction that may be employed in this course

- Audio-visual presentations
- Case studies
- Class activities
- Class discussions
- Collaborative group work
- Computer-aided presentations
- Demonstrations
- Distance Education
- Group discussions
- Instructor-guided interpretation and analysis
- Instructor-guided use of technology
- Internet research
- Lecture
- Problem-solving examples
- Readings
- Small group activities
- Other (specify)

Specify other method of instruction

Readings on Advanced Cardiac Life Support guidelines
 Demonstration of basic math to calculate rate and duration
 Skill demonstration of cardiac dysrhythmia interpretation

Describe specific examples of the methods the instructor will use:

Oral presentation of material
 Facilitation of class discussion and critical thinking exercises
 Instructor-led case studies describing appropriate avenues of treatment for basic cardiac dysrhythmias
 Application of ECG leads on a mannequin

Representative Course Assignments**Writing Assignments**

complete written worksheets requiring basic math calculations, assessments, analyses, and critical thinking skills to identify proper treatment of cardiac dysrhythmias.

write a short essay on the advantages of using the systematic approach to cardiac rhythm interpretation and demonstrate the use on a given cardiac rhythm strip.

write a short essay on the electrical and mechanical functions of the heart.

Critical Thinking Assignments

analyze a case scenario to differentiate between artifact and the patient's true cardiac rhythm.

evaluate cardiac rhythms to determine the proper functioning of an artificial pacemaker.

Reading Assignments

read assigned chapters in course textbook in preparation for participating in lecture
 research and review peer-reviewed journal articles that relate to cardiac dysrhythmias

Skills Demonstrations

Student-analysis of simulated live ECG tracings and small group discussion of the interpretation and treatment interventions
 Correct application of ECG leads on a mannequin

Problem-Solving and Other Assignments (if applicable)

analyze a case study to identify the appropriate treatment and drug therapy for a given cardiac dysrhythmia.

analyze an ECG tracing and an image of patient wearing ECG leads, identify if there are problems with the lead placement, and describe lead placement adjustments to implement.

Outside Assignments**Representative Outside Assignments**

conduct library/Internet research on commonly occurring cardiac dysrhythmias in particular clinical conditions.

utilize drug reference resources to investigate the pharmacologic actions of the drugs indicated for cardiac dysrhythmias covered each week.

conduct Internet research on the current Advanced Cardiac Life Support(ACLS) guidelines.

Articulation**Equivalent Courses at 4 year institutions**

University	Course ID	Course Title	Units
UCSF	Nursing 225	Cardiac Rhythm: Theory and Analysis	2

Equivalent Courses at other CCCs

College	Course ID	Course Title	Units
Columbia College	EMS 20	Basic Cardiology and Cardiac Dysrhythmias	3

District General Education

A. Natural Sciences

B. Social and Behavioral Sciences

C. Humanities

D. Language and Rationality

E. Health and Physical Education/Kinesiology

F. Ethnic Studies/Gender Studies

Course is CSU transferable

Yes

CSU Baccalaureate List effective term:

SS2001

CSU GE-Breadth

Area A: English Language Communication and Critical Thinking

Area B: Scientific Inquiry and Quantitative Reasoning

Area C: Arts and Humanities

Area D: Social Sciences

Area E: Lifelong Learning and Self-Development

Area F: Ethnic Studies

CSU Graduation Requirement in U.S. History, Constitution and American Ideals:

IGETC

Area 1: English Communication

Area 2A: Mathematical Concepts & Quantitative Reasoning

Area 3: Arts and Humanities

Area 4: Social and Behavioral Sciences

Area 5: Physical and Biological Sciences

Area 6: Languages Other than English (LOTE)

Textbooks and Lab Manuals

Resource Type

Textbook

Description

Aehlert, Barbara. *ECGs Made Easy*. 7th ed., Elsevier, 2022.

Resource Type

Textbook

Description

Ellis, Karen. *EKG Plain and Simple*. 4th ed., Pearson, 2016.

Resource Type

Textbook

Description

Beasley, Brenda. *Understanding EKGs: A Practical Approach*. 5th ed., Pearson, 2019.

Library Resources**Assignments requiring library resources**

Research using the library's print and specialized medical/nursing online resources for reports on topics pertinent to cardiac dysrhythmia interpretation and treatment.

Sufficient Library Resources exist

Yes

Example of Assignments Requiring Library Resources

Research using the library's print and specialized medical/nursing online resources for reports on topics pertinent to cardiac dysrhythmia interpretation and treatment.

Distance Education Addendum**Definitions****Distance Education Modalities**

Hybrid (1%–50% online)
Hybrid (51%–99% online)
100% online

Faculty Certifications

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.

Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities. Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.

Yes

Regular Effective/Substantive Contact

Hybrid (1%–50% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	<p>Online instructors will provide lesson plans that require activities such as reading course material from a mandatory textbook and participating in discussion forums or chat room topics. Instructors will provide students with feedback on the content and quality of assignments and discussion posts.</p> <p>Additionally, instructors may engage students using the following communication activities available in the online classroom: contact students via e-mail within the course shell, by campus e-mail, and/or MyVCCCD.</p> <p>Instructors may involve students in active learning with the following activities: students may complete homework and receive feedback through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes; students may interact with the instructor and classmates using an online discussion forum to ask questions; students may submit questions to the instructor by email or ask in person in a virtual classroom; instructor may create student groups or group activities using the online course</p>
E-mail Other DE (e.g., recorded lectures)	<p>Contact with students by college or Canvas email</p> <p>Lectures, study sessions.</p> <p>Instructors may involve students in active learning with the following activities: students may view video lessons and/or text-based lessons corresponding to course content and learning objectives; students may complete homework through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes; students may interact with the instructor and classmates using an online discussion forum to ask questions; instructor may create student groups or group activities using the online course</p>
Video Conferencing	<p>Lectures, study sessions.</p> <p>Instructors may involve students in active learning with the following activities: students may view video lessons and/or text-based lessons corresponding to course content and learning objectives; students may complete homework through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes; students may interact with the instructor and classmates using an online discussion forum to ask questions; instructor may create student groups or group activities using the online course.</p>

Hybrid (51%–99% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	<p>Online instructors will provide lesson plans that require activities such as reading course material from a mandatory textbook and participating in discussion forums or chat room topics. Instructors will provide students with feedback on the content and quality of assignments and discussion posts.</p> <p>Additionally, instructors may engage students using the following communication activities available in the online classroom: contact students via e-mail within the course shell, by campus e-mail, and/or MyVCCCD.</p> <p>Instructors may involve students in active learning with the following activities:</p> <p>students may complete homework and receive feedback through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes; students may interact with the instructor and classmates using an online discussion forum to ask questions; students may submit questions to the instructor by email or ask in person in a virtual classroom; instructor may create student groups or group activities using the online course</p>
E-mail	Contact with students by college or Canvas email
Other DE (e.g., recorded lectures)	<p>Lectures, study sessions.</p> <p>Instructors may involve students in active learning with the following activities:</p> <p>students may view video lessons and/or text-based lessons corresponding to course content and learning objectives; students may complete homework through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes; students may interact with the instructor and classmates using an online discussion forum to ask questions; instructor may create student groups or group activities using the online course</p>
Video Conferencing	<p>Lectures, study sessions.</p> <p>Instructors may involve students in active learning with the following activities:</p> <p>students may view video lessons and/or text-based lessons corresponding to course content and learning objectives; students may complete homework through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes; students may interact with the instructor and classmates using an online discussion forum to ask questions; instructor may create student groups or group activities using the online course.</p>

100% online Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	<p>Online instructors will provide lesson plans that require activities such as reading course material from a mandatory textbook and participating in discussion forums or chat room topics. Instructors will provide students with feedback on the content and quality of assignments and discussion posts.</p> <p>Additionally, instructors may engage students using the following communication activities available in the online classroom: contact students via e-mail within the course shell, by campus e-mail, and/or MyVCCCD.</p> <p>Instructors may involve students in active learning with the following activities:</p> <p>students may complete homework and receive feedback through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes; students may interact with the instructor and classmates using an online discussion forum to ask questions; students may submit questions to the instructor by email or ask in person in a virtual classroom; instructor may create student groups or group activities using the online course</p>
E-mail	Contact with students by college or Canvas email
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Examinations**Hybrid (1%–50% online) Modality**

On campus
Online

Hybrid (51%–99% online) Modality

On campus
Online

Primary Minimum Qualification

NURSING

Review and Approval Dates**Department Chair**

09/13/2022

Dean

09/19/2022

Technical Review

09/29/2022

Curriculum Committee

10/04/2022

DTRW-I

MM/DD/YYYY

Curriculum Committee

MM/DD/YYYY

Board

MM/DD/YYYY

CCCCO

MM/DD/YYYY

Control Number

CCC000439852

DOE/accreditation approval date

MM/DD/YYYY