

NS255 : Basic Electrocardiography

General Information

Author:	<ul style="list-style-type: none"> Kohar Kesian
Course Code (CB01) :	NS255
Course Title (CB02) :	Basic Electrocardiography
Department:	NS
Proposal Start:	Fall 2022
TOP Code (CB03) :	(1230.10) Registered Nursing
CIP Code:	(51.3801) Registered Nursing/Registered Nurse.
SAM Code (CB09) :	Clearly Occupational
Distance Education Approved:	No
Will this course be taught asynchronously?:	No
Course Control Number (CB00) :	CCC000619247
Curriculum Committee Approval Date:	Pending
Board of Trustees Approval Date:	Pending
Last Cyclical Review Date:	07/01/2020
Course Description and Course Note:	<p>NS 255 is designed to provide an overview and introduce the novice healthcare provider to the basics of electrocardiography (EKG). Course content reviews principles of cardiac anatomy, physiology, and electrophysiology which are foundational to course content. Content includes cardiac hemodynamics, proper lead placement to obtain EKG waveforms, waveform identification, rate calculation, normal rhythm, and arrhythmia recognition and treatment. Note: This course is intended for nursing students, nurses, EMT students, EMTs, or individuals working in health care settings who have sufficient background knowledge to master the content and the concepts. Note: This course is Pass/No Pass only.</p>
Justification:	<p>New Course</p> <p>NT FR</p>
Academic Career:	<ul style="list-style-type: none"> Credit
Mode of Delivery:	No value
Author:	No value
Course Family:	No value

Academic Senate Discipline

Primary Discipline:	<ul style="list-style-type: none"> Nursing
Alternate Discipline:	No value
Alternate Discipline:	No value

Course Development

Basic Skill Status (CB08)

Course is not a basic skills course.

Allow Students to Gain Credit by Exam/Challenge

Course Special Class Status (CB13)

Course is not a special class.

Pre-Collegiate Level (CB21)

Not applicable.

Grading Basis

- Pass / No-Pass Only

Course Support Course Status (CB26)

Course is not a support course

General Education and C-ID

General Education Status (CB25)

Not Applicable

Transferability

Not transferable

Transferability Status

Not transferable

Units and Hours

Summary

Minimum Credit Units (CB07)	2
Maximum Credit Units (CB06)	2
Total Course In-Class (Contact) Hours	36
Total Course Out-of-Class Hours	72
Total Student Learning Hours	108

Credit / Non-Credit Options

Course Type (CB04)

Credit - Degree Applicable

Noncredit Course Category (CB22)

Credit Course.

Noncredit Special Characteristics

No Value

Course Classification Code (CB11)

Credit Course.

Variable Credit Course

Funding Agency Category (CB23)

Not Applicable.

Cooperative Work Experience Education Status (CB10)

Weekly Student Hours

	In Class	Out of Class
Lecture Hours	2	4
Laboratory Hours	0	0
Studio Hours	0	0

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	0
Course In-Class (Contact) Hours	
Lecture	36

Laboratory	0
Studio	0
Total	36

Course Out-of-Class Hours

Lecture	72
Laboratory	0
Studio	0
Total	72

Time Commitment Notes for Students

No value

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No Value	No Value	No Value	No Value

Prerequisites, Corequisites, Recommended Corequisites, and Recommended Preparation

No Value

Entry Standards

Entry Standards	Description
No value	No value

Course Limitations

Cross Listed or Equivalent Course	Description
No value	No value

Specifications

SLOs

Identify on a heart diagram the cardiac structure, the conduction system, and normal blood flow

Expected Outcome Performance: 70.0

NS Registered Nursing - A.S. Degree Major	Demonstrate requisite knowledge of the profession of registered nursing by successfully passing the NCLEX-RN Board Exam.
---	--

NS Registered Nursing - Certificate	Demonstrate requisite knowledge of the profession of registered nursing by successfully passing the NCLEX-RN Board Exam.
---	--

ILOs Core ILOs	Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems.
-------------------	--

NS Critical Care Nursing Skill Award	Integrate critical knowledge, skill, and attitude in the nursing process.
--	---

Describe the physiology of the heart to include, Starling's Law, $CO=HR \times SV$, electrophysiology and the effects of the autonomic nervous system

Expected Outcome Performance: 70.0

NS Registered Nursing - A.S. Degree Major	Demonstrate requisite knowledge of the profession of registered nursing by successfully passing the NCLEX-RN Board Exam.
---	--

NS Registered Nursing - Certificate	Demonstrate requisite knowledge of the profession of registered nursing by successfully passing the NCLEX-RN Board Exam.
---	--

ILOs Core ILOs	Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems.
-------------------	--

NS Critical Care Nursing Skill Award	Integrate critical knowledge, skill, and attitude in the nursing process.
--	---

Demonstrate competency in rhythm recognition

Expected Outcome Performance: 70.0

NS Registered Nursing - A.S. Degree Major	Complete the nursing program with requisite knowledge of the discipline including clinical evidenced-based practice within a required time frame.
---	---

NS Registered Nursing - Certificate	Complete the nursing program with requisite knowledge of the discipline including clinical evidenced-based practice within a required time frame.
---	---

ILOs Core ILOs	Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems.
-------------------	--

NS Critical Care Nursing Skill Award	Integrate critical knowledge, skill, and attitude in the nursing process.
--	---

Course Content

Lecture Content

Cardiac Anatomy and Physiology (4 hours)

- Physiology of heart muscle

- Electrical conduction and conduction system
- Mechanical function
- Influence of the central nervous system
- Influence of electrolytes
- Introduction to pathophysiology of this system
- Mechanisms that cause arrhythmias

Introduction to obtaining an EKG (5 hours)

- Leads and lead placement
- Waveforms
- Intervals
- Complexes
- Segments
- Terminology

Systematically Analyzing Rhythm Strips (5 hours)

- Rate
- Regularity
- Sinus rhythms
- Rhythms arising from other sites

Ectopic Beats versus Escape Beats (2 hours)

- Foci
- Terminology & patterns (unifocal versus multifocal, bigeminy, trigeminy, "runs & couplet")
- Possible etiologies
- Clinical manifestations
- Evidenced based care options

Atrial Rhythms (7 hours)

- Atrial flutter
- Atrial fibrillation
- Potential etiologies
- Clinical manifestations
- Evidenced based care options

Recognizing Atrial-Ventricular (AV) Blocks and Fascicular blocks (3 hours)

- First degree
- Second degree
- Third degree
- Bundle branch blocks
- Clinical manifestations
- Evidenced based care options

Junctional Rhythms (1 hour)

- Escape
- Premature

Ventricular Dysrhythmias (6 hours)

- Premature
- Escape
- Ventricular tachycardia
- Ventricular fibrillation
- Clinical manifestations
- Evidenced based care options

Asystole, Pulseless Electrical Activity, Agonal Rhythms (1 hour)

Introduction to analysis of a 12 Lead EKG (2 hours)

Total hours: 36