North Central State College

MASTER SYLLABUS	2026-2027

A. Academic Division: Health Sciences

B. Discipline: Respiratory Care

C. Course Number and Title: RESP 2310 Respiratory Care Equipment/Procedures III

D. Assistant Dean: Dr. Jason Tucker, Ph.D.

E. Credit Hours: 2
Lecture: 1 hour
Laboratory: 3 hours

F. Prerequisites: RESP1220
Co-requisite(s): RESP2330, RESP2390

G. Last Course/Curriculum Revision Date: Fall 2023 Origin date: 12/22/2010

H. Textbook(s) Title:
Foundations in Neonatal and Pediatric Respiratory Care
- Authors: Volsko & Barnhart
- Copyright Year: 2022
- Edition: 2nd
- ISBN: 9781284234992

Neonatal/Pediatric Respiratory Care Pocket Guide
- Authors: Scot Jones, Dana Oakes
- Copyright Year: 2023
- Edition: 8th
- ISBN: 9780932887658

Egan's Fundamentals of Respiratory Care
- Authors: Kacmarek, Stoller, and Heuer
- Copyright Year: 2024
- Edition: 13th
- ISBN #: 9780323931991

I. Workbook(s) and/or Lab Manual: None

J. Course Description: This course is a continuation of RESP 1220 and has instruction and laboratory application in adult critical care procedures such as: advance assessment in respiration of oxygen and carbon dioxide, hemodynamic monitoring, high frequency ventilation, and nitric oxide administration. The course transitions the student from the adult critical care experience to the neonatal and pediatric clinical settings focusing on infant and pediatric mechanical ventilation, ventilation techniques, CPAP, Bi-Level ventilation, nitric oxide therapy, therapeutic procedures, and equipment specific to the neonatal and pediatric setting. The course will cover neonatal and pediatric pathologies such as HMD, BPD, CHD, asthma, meconium aspiration, SIDS, and CF.

K. College-Wide Learning Outcomes:

College-Wide Learning Outcome	Assessments - - How it is met & When it is met
Communication – Written	
Communication – Speech	
Intercultural Knowledge and Competence	
Critical Thinking	
Information Literacy	
Quantitative Literacy	

L. Course Outcomes and Assessment Methods:

Upon successful completion of this course, the student shall:

Outcomes	Assessments – How it is met & When it is met
1. Associate the indications, complications, hazards of arterial line monitoring	Quiz week 2, Examinations weeks 5 & 10
2. Interpret normal and abnormal hemodynamic monitoring pressures	Quiz week 2, Examinations weeks 5 & 10
3. Calculate hemodynamic monitoring values from given pressures	Quiz week 2, Examinations weeks 5 & 10
4. Operate conventional and non-conventional mechanical ventilators as they apply to the pediatric and neonatal patient	Lab check-off week 4 Quiz week 4 Examinations weeks 5 & 10
5. Associate pathology as it applies to pediatrics and neonates	Quiz weeks 2,3,4,6,7,8,9, Examinations week 5 & 10
6. Associate the indications, contraindications, hazards of ECMO, nitric oxide	Quiz week 8 & 9, Examination week 10
7. Generalize the concept of fluidics	Examination week 5
8. Apply oxygen assessment techniques	Examinations week 5 & 10
9. Perform the following procedures: a. Adult diagnostics: hemodynamic monitoring: hemodynamic monitoring: arterial line sampling, arterical line insertion, pulmonary artery pressure measurement, thermodilution cardiac output measurement b. Cardiology testing: electrocardiography c. Neonate/Pediatric procedures: d. Patient Data: vital signs, chest assessment, patient assessment, x-ray interpretation e. oxygen therapy: nasal CPAP, oxygen hood, nasal cannula, pulse oximetry, transcutaneous monitoring f. Aerosol drug administration: metered dose inhaler via manual resuscitator, small volume nebulizer via blowby, in-line metered dose inhaler, in-line small volume nebulizer g. Bronchial hygiene: chest physiotherapy h. Suction procedures: bulb suctioning, endotracheal suctioning, nasotracheal suctioning, in-line suctioning i. Ventilatory care: ventilator setup, routine ventilator check, ventilator parameter change, surfactant replacement therapy j. Weaning from mechanical ventilation: weaning k. Patient transports: manual ventilation during transport	Check-offs weeks 2,4,6 Examination week 10

M. Recommended Grading Scale:

NUMERIC	GRADE	POINTS	DEFINITION
93–100	A	4.00	Superior
90–92	A-	3.67	Superior
87–89	B+	3.33	Above Average
83–86	B	3.00	Above Average
80–82	B-	2.67	Above Average
77–79	C+	2.33	Average
73–76	C	2.00	Average
70-72	C-	1.67	Below Average
67–69	D+	1.33	Below Average
63-66	D	1.00	Below Average
60-62	D-	0.67	Poor
00-59	F	0.00	Failure

N. College Procedures/Policies:

North Central State College believes that every student is a valued and equal member of the community.* Every student brings different experiences to the College, and all are important in enriching academic life and developing greater understanding and appreciation of one another. Therefore, NC State College creates an inclusive culture in which students feel comfortable sharing their experiences. Discrimination and prejudice have no place on the campus, and the College takes any complaint in this regard seriously. Students encountering aspects of the instruction that result in barriers to their sense of being included and respected should contact the instructor, assistant dean, or dean without fear of reprisal.

* *Inclusive of race, color, religion, gender, gender identity or expression, national origin (ancestry), military status (past, present or future), disability, age (40 years or older), status as a parent during pregnancy and immediately after the birth of a child, status as a parent of a young child, status as a foster parent, genetic information, or sexual orientation*

Important information regarding College Procedures and Policies can be found on the syllabus supplement located at
https://ncstatecollege.edu/documents/President/PoliciesProcedures/PolicyManual/Final%20PDFs/14-081b.pdf

North Central State College

SYLLABUS ADDENDUM

Academic Division:	Health Sciences	**Discipline:**	Respiratory Care
Course Coordinator:	Nychole Rose		
Course Number:	RESP 2310-50	**Course Title:**	Resp Care Equipment and Procedures
Semester / Session:	Summer 2026	**Start / End Date:**	May 26th 2026- July 16th, 2026

Instructor Information

Name:	Nychole Rose	**Credentials:**	BS/RRT/RCP
Phone Number:	419-755-4825	**E-Mail Address:**	nrose@ncstatecollege.edu
Office Location:	HS-326	**Office Hours:**	By appt.

I. Topical Timeline / Course Calendar (Subject to Change):

Weeks	Topics	Assignment	Due Date
1	Electrophysiology review	EKG rhythm worksheet, Begin peds pathology project	June 1st
2	Evaluation of the Neonate infant ventilation and Non-invasive ventilation/nCPAP	Read Ch 6, 26, and 27 EKG quiz	June 8th
3	Pediatric Assessment, airway management and Oxygen and Aerosol Therapy	Read Ch 12, 22, 23 and 24 EKG quiz	June 15th
4	Airway clearance/Lung expansion Cardiopulmonary monitoring, Imagining	Peds vent quiz, Midterm Exam Read Ch 19, 20, and 25	June 22nd
5	Maternal and Fetal Assessment, HFOV, ECMO, Specialty Gas Administration	Read 5, 30, and 31 Monitor and imaging quiz Peds path project due	June 29th
6	Neo disorders from Resp Care Transport and Pharmacology	Read Ch 10, 33, and 34 Quiz INO/HFO/ECMO	July 6th
7	Peds Pathology/Final review	Review questions	July 5th
8	Final Exam		July 14th

II. Grading and Testing Guidelines:

Final Grade Calculation

Activity	Qty	Points	Percentage
Pediatric Pathology Project	1	100	20
Homework	5	10	20
Quizes	5	10	20
Midterm	1	58	20
Final Exam	1	100	20

1. **Topic description Electrophysiology Review**
   a. EKG interpretation
   b. Arrhythmia recognition
      - EKG rhythm worksheet

2. **Evaluation of the Neonate**
   a. Infant Ventilation
   b. Non-invasive ventilation/CPAP
   c. Pediatric Assessment
   d. Airway management
   e. Oxygen and Aerosol Therapy
   f. Airway clearance/lung expansion

3. **Maternal and Fetal Assessment**
   a. HFOV
   b. ECMO
   c. Specialty Gas Administration
   d. Neo disorders
      - Transport
      - Pharmacology
   e. Peds Pathology

II. Examination Policy:

Exams will be scheduled and proctored by the instructor; they will be given in the classroom. If you cannot attend your scheduled exam
time, you must notify me prior to the exam so that accommodation can be made. Failure to do so will result in an automatic 10% deduction of the exam grade. Make-up exams MUST be taken within one week of original exam date.

III. Class Attendance and Homework Make-Up Policy:

Attendance to Zoom lecture sessions and face to face (classroom) sessions are mandatory as understanding of the topics covered are essential to your success this semester in this class.
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Homework is due by the date/time posted in Canvas. Assignments that cannot be submitted by the posted due date will be accepted for 3 calendar days following the due date with a 20% reduction in grade earned. Following the 3-day grace period, work submitted late will receive 0 points.
Students who do not attend classes may be administratively withdrawn from those classes. However, failure to attend classes does not constitute withdrawal, and students are expected to process a formal withdrawal though the Student Records Office in Kee Hall

IV. Classroom Expectations:

All students are expected to conduct themselves in a professional and respectful manner with any interaction between student and staff/instructor. This applies to interaction in the classroom, lab, clinical, and online environment as well as your interactions outside of a formal setting while performing work and discussions