



North Central State College

MASTER SYLLABUS	2025-2026
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- A. Academic Division: Health Science
- B. Discipline: Respiratory Care
- C. Course Number and Title: RESP2490 – Practicum IV
- D. Assistant Dean: Heidi Kreglow, PT
- E. Credit Hours: 2.5
Practicum Hours: 12
Lecture: 1 hour
- F. Prerequisites: RESP2310, RESP2330, RESP 2390
Co-requisites: RESP2410, RESP2450, RESP2470
- G. Last Course/Curriculum Revision Date: Fall 2023 Origin date: 12/22/2010
- H. Textbook(s) Title:

Clinical Practitioner's Pocket Guide to Respiratory Care

- Author: Oakes
- Year: 2008
- Edition: 7th edition
- ISBN # 978-0932887313

Neonatal/Pediatric Respiratory Care: A Critical Care Pocket Guide

- Author: Oakes
- Year: 2009
- Edition: 2009
- ISBN # 978-0932887399

- I. Workbook(s) and/or Lab Manual: None
- J. Course Description: This is a practicum course and is a continuation of RESP2390. The student will be assigned to a hospital 12 hours per week for 13 weeks (156 total hours) to work under the supervision of a practicum instructor. Six weeks will be spent in adult critical care and seven weeks will be spent in neonatal and pediatrics setting. This course provides a more intense look at adult mechanical ventilation focusing on the understanding of pathophysiology of the critical care patient as it applies to mechanical ventilation and critical care procedures. The student will learn to assess and troubleshoot mechanical ventilators, assess patient outcomes, analyze and apply mechanical ventilator techniques to adapt to the patient's pathophysiological needs. As a part of this practicum experience the student will perform an intubation rotation in a surgical environment under the supervision of an anesthesiologist. The course covers practical application in a pediatric hospital performing practicum procedures as they relate to the neonatal/pediatric patient including assessment, oxygen therapy, humidity/aerosol therapy, aerosolized medication delivery methods, airway management and suctioning, oximetry, apnea monitoring, conventional mechanical ventilation, CPAP, high frequency oscillation, and weaning procedures. The student may be involved in emergency medical procedures including cardiopulmonary resuscitation and the use of manual resuscitators. Seminar time is provided at campus.

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	Interaction with patients, hospital staff. Evaluated in Student evaluations weeks 8 and 16. Intercultural Knowledge and Competence VALUE Rubric
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. Collect, evaluate, and review existing data in the patients' record to assess the patient's cardiopulmonary system and make recommendations to initiate or modify therapy	S.O.A.P. rubric, daily beginning week 2 Practical examinations weeks 8 & 16
2. Perform respiratory care procedures for the adult critically ill patients to include: a. Aerosol drug administration: small volume nebulizer, metered dose inhaler, dry powder inhaler, adult inline metered dose inhaler, adult inline small volume nebulizer b. Oxygen therapy: nasal cannula, simple mask, partial rebreather mask, non-rebreather mask, air entrainment mask, high flow nasal cannula, transport with oxygen, manual ventilation with transport c. Lung expansion: incentive spirometry, intermittent positive pressure breathing d. Suction procedures: endotracheal suctioning, nasotracheal suctioning, tracheal suctioning, in-line suctioning e. Adult arterial blood: ABG sampling, ABG analysis, ABG analyzer quality assurance f. Bronchopulmonary hygiene: coughing, chest physiotherapy, mucous clearance g. Noninvasive positive pressure ventilation: noninvasive ventilator setup, noninvasive ventilator check h. Endotracheal tube/ tracheostomy care: securing artificial airway, tracheostomy care, cuff management, heat/moisture exchanger, intubation, extubation i. Resuscitation: setup and ventilation via endotracheal tube, setup and ventilation via mask, adult CPR airway and ventilation, adult CPR compressions	SOAP rubric, daily Check-offs weeks 8 & 16 Student practicum evaluation weeks 8 & 16

Outcomes	Assessments – How it is met & When it is met
3. Perform the following procedures for the adult critically ill patients to include: a. Ventilatory care: adult ventilator setup, adult routine ventilator check, adult ventilator parameter change, adult ventilator circuit change, adult ventilator graphics analysis, adult capnography b. Pathophysiology of the critically ill patient. c. Weaning from mechanical ventilation: weaning parameters, weaning d. Adult hemodynamic monitoring: arterial line sampling, pulmonary artery line sampling, pulmonary artery pressure measurement, thermodilution cardiac output measurement e. Cardiology testing: electrocardiography, cardiac catheterization, echocardiography	S.O.A.P. rubric, daily beginning week 1 Check-offs weeks 8 & 16 Practical Final week 16
4. Perform the following neonatal and pediatric critical care procedures: a. Patient data: vital signs, chest assessment, patient assessment, x-ray interpretation b. Oxygen therapy: nasal CPAP, oxygen hood, nasal cannula, pulse oximetry, transcutaneous monitoring c. Aerosol drug administration: metered dose inhaler via manual resuscitator, small volume nebulizer via blowby, in-line metered dose inhaler, in-line small volume nebulizer d. Bronchial hygiene: chest physiotherapy e. Resuscitation: manual ventilation via endotracheal tube, setup and ventilation via mask, newborn assessment/resuscitation, neonatal CPR, infant apnea monitoring f. Suction procedures: bulb suctioning, endotracheal suctioning, nasotracheal suctioning, in-line suctioning g. Ventilatory care: ventilator setup, routine ventilator check, ventilator parameter change, ventilator circuit change, surfactant replacement therapy h. Weaning from mechanical ventilation: weaning i. Patient transports: manual ventilation during transport, transport ventilation setup	Check-offs week 8 & 16 SOAP rubric, daily beginning week 2 Practical Exam Weeks 8 & 16
5. Discuss the pediatric and neonatal pathophysiology such as asthma, cystic fibrosis, IRDS, HMD, BPD, CHD, croup, epiglottitis, RSV as they relate to the critically ill patient	Student evaluation week 8 & 16 SOAP rubric, daily beginning week 2 Exam week 16
6. Discuss pharmacological intervention associated with pediatric and neonatal diseases.	S.O.A.P. rubric, daily beginning week 2 Student Evaluation week 8 & 16 Exam week 16
7. Discuss the indications, complications, monitoring and circuit of a patient receiving ECMO	S.O.A.P. rubric, daily beginning week 2 Student evaluation week 8 & 16, Exam week 16
8. Describe pulmonary diagnostic procedures associated with a children's hospital setting such as TOP Studies, PFT, SAT studies, sweat chloride test	S.O.A.P. rubric, daily beginning week 2 Student evaluation week 8 & 16 Exam Week 16

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:	Randee Frangella		
Course Number:	RESP 2490-03	Course Title:	Practicum IV
Semester / Session:	Fall 2025	Start / End Date:	8/11/2025 – 12/12/2025

Instructor Information

Name:	Randee Frangella (Seminar Hour) Paul Osborne (Clinical Instructor)	Credentials:	BSRT, RRT/RCP RRT/RCP
Phone Number:	419-755-4849 740-225-3740	E-Mail Address:	rfrangella@ncstatecollege.edu karpulo5@gmail.com
Office Location:	HS-324 (RF)	Office Hours:	Monday 9-12 & Thursday 9-11 (RF)

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

In Clinical Setting

Weeks	Topics	Assignment
3-8	In the Neonatal/Pediatric Setting: • Patient Assessment • Neonatal/pediatric mechanical ventilation, indications, initiation, maintaining, mode, weaning • Trouble shooting equipment • Monitoring therapy and modifying care • Medication intervention and administration • Pathology: BPD, CF, Asthma, HMD, Meconium Aspiration, CHD • ECMO: indications, contraindications, circuit, monitoring, weaning • HFOV: indications, contraindications, hazards, initiation, maintaining, weaning • Nitric Oxide: administration indications, contraindications, hazards, initiation, maintaining, weaning • Oxygen therapy for the neonate/pediatric setting: indications, contraindications, hazards, initiation, maintaining, mode, weaning • Intermittent Therapy for the neonate/pediatric setting: indications, contraindications, hazards, initiation, maintaining, mode, weaning • CPAP, Bi-level, SIPAP • PECO₂, TcPO₂, TcCO₂ monitoring • ABG, CBG, UAC, VBG analysis • SaO₂, SVO₂ monitoring	• Direct hands-on patient care • Additional assignments and projects will be completed and shared with the class such as: laboratory test and results, definitions of medical terms, diagnostic testing, medications, and pathology. • Weekly student evaluation form to be completed by preceptor and submitted by student

Course Number: RESP 2490-02
Semester / Session: Fall 2025

Course Title: Practicum IV
Start / End Date: 8/11/2025 – 12/12/2025

Weeks	Topics	Assignment
9-14	In the Adult Acute Care Setting: • Patient Assessment • Continuous oxygen therapy for the critical patient • Intermittent therapy for the critical ill patient • Adult Mechanical Ventilation, indications, initiation, maintaining, mode, weaning • Waveform graphics and analysis • Trouble shooting equipment • Monitoring therapy and modifying care • Medication intervention and administration • EKG's • Hemodynamic Monitoring • Chest Tubes • Intubation/Extubation • Airway management, airways and suctioning • ABG puncture and analysis • CPAP, BI-LEVEL	• Daily SOAP (subjective, objective, assessment and plan) charting • Direct hands-on patient care • Additional assignments and projects will be completed and shared with the class such as: laboratory test and results, definitions of medical terms, diagnostic testing, medications, and pathology. • Collect 15 ECG rhythm strips and analyze • Research assigned medication and present to the practicum group • The Other Side of the Tube, interview a patient from the practicum site who was successfully weaned from mechanical ventilation. Write (typed) a paper describing the patient's perspective of the experience • Complete Intubation Rotation (scheduled per student)

Seminar Hour

Weeks	Topics	Assignment	Due Date
1	Course overview		
2	Kettering Classmates Orientation	Kettering Classmates registration and practice	08/25/25
3	Kettering Classmates Practice	Kettering Classmates Problems #1	09/1/25
4	Review of Kettering Classmates Problems #1	Kettering Classmates Problems #2	09/08/25
5	Review of Kettering Classmates Problems #2	Kettering Classmates Problems #3	09/15/25
6	Review of Kettering Classmates Problems #3	Kettering Classmates Problems #4	09/22/25
7	Review of Kettering Classmates Problems #4	Kettering Classmates Problems #5	09/29/25
8	Review of Kettering Classmates Problems #5	Kettering Classmates Problems #6	10/13/25
9	Review of Kettering Classmates Problems #6	Kettering Classmates Problems #7	10/20/25
10	Review of Kettering Classmates Problems #7	Kettering Classmates Problems #8	10/27/25
11	Review of Kettering Classmates Problems #8	Kettering Classmates Problems #9	11/03/25
12	Review of Kettering Classmates Problems #9	Kettering Classmates Problems #10	11/10/25
13	Review of Kettering Classmates Problems #10	Kettering Classmates Problems #11	11/17/25
14	Review of Kettering Classmates Problems #11	Kettering Classmates Problems #12	11/24/25
15	Review of Kettering Classmates Problems #12	Kettering Classmates Problems #13	12/01/25

II. Grading and Testing Guidelines:

Final Grade Calculation (subject to change)

Activity	Qty	Points	Percentage
Kettering Classmates Activities	14	195	
SOAP assessment	4	96	
Intubation Rotation	1	50	
Adult/Critical Care Practical Final	1	50	
Adult/Critical Care Student Evaluation	1	200	
Neonatal/Pediatric Weekly Student Evaluation (scores averaged X total points available)	6	200	
Neonatal/Pediatric Weekly Student Summary	6	144	

Course Number: RESP 2490-02
Semester / Session: Fall 2025

Course Title: Practicum IV
Start / End Date: 8/11/2025 – 12/12/2025

Clinical Instructor/Site Evaluation	2	30	
Clinical Attendance	1	100	
Seminar Hour Attendance	1	50	
Flu vaccination	1	10	

III. Examination Policy:

1. Exams to be completed on assigned date or as instructor discretion
2. The reasons for which a student will be excused from taking an examination
 - a. Hospitalization (with documented verification)
 - b. Death in the immediate family (with documented verification)
 - c. Personal illness or illness in immediate family - (doctor's excuse required).

IV. Class Attendance and Homework Make-Up Policy:

A student may not miss TWENTY percent (20%) of the clinical time for whatever reason, excused or unexcused, the student CAN NOT meet the objectives of the course and the highest grade the student **will receive is a D+**. Defined as **32 hours** for RESP 2490. Attendance penalty guidelines for **excused absence**:

- a. first 4 hours no penalty,
- b. each additional 4 hours missed there will be -3% deducted from the student's final grade.

Penalty for **unexcused absence**: 1% drop in grade for each hour or portion of an hour of unexcused absence. Missed hours will accumulate toward the 20% missed clinical time.

Students should plan with their clinical instructor to make up any missed clinical time. Failure to do so will result in a reduction of grade. If an arrangement between the student and clinical instructor cannot be reached, an additional assignment may be arranged at the discretion of the Director of Clinical Education or course coordinator.

V. Classroom Expectations:

You are expected to arrive at the clinical site and report to the designated meeting location prior to the scheduled start time. If you are going to be late or absent you are to contact the Clinical Instructor ASAP as well as Clinical Coordinator failure to do so will result in an **Unexcused Absence**. You are required to wear scrubs and have necessary equipment (stethoscope, scissors, pen, etc.) with you.

See student handbook for further details regarding required clinical supplies and uniform.

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.

Attendance to Zoom class sessions are mandatory as understanding of the topics covered are essential to your success throughout the program. Zoom attendance will be counted for students who remain on camera for the duration of the session and who participate in discussions/answer questions. Students who are seen with the camera turned to off or are routinely out of frame will be counted as absent for the class period. If special accommodations must be made, the student must contact the instructor at least 30 minutes before the class is scheduled to begin.