Midland College
Master Syllabus
RSPT 2360
Clinical IV

Course Description
This course is a method of instruction providing detailed education, training and work-based learning experience that enables the student to apply direct patient/client care, generally at a clinical site. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the college faculty.

End-of Course Outcomes
As outlined in the learning plan, apply the theory, concepts, and skills, involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry; and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

Text, References and Supplies:
Colbert, J. C., & Gonzalez III, L. S., (2016). *Integrated Cardiopulmonary Pharmacology* (4th). California: BVT Publishing.
Kacmarek, Stoller and Heuer, Egan's Fundamentals of Respiratory Care, 12th edition, St. Louis, Missouri; Mosby, 2017
Kacmarek, R. M., Dimas, S., & Mack, C. W. The Essentials of Respiratory Care 4th edition, St. Louis, Missouri, Elsevier. 2005
Walsh, Perinatal and Pediatric Respiratory Care. 4th ed. Evolve Saunders. 2015
Wilkins. Clinical Assessment in Respiratory Care. 7th Edition, Elsevier. 2014.

Student Contributions, Responsibilities and Class Policies:
Each student will spend at least 8 hours per week preparing for class. Attendance is critical in this class. All clinical performance and behavior are considered academic. Students are expected to observe the guidelines for behavior in the clinical agency:

1. Students are to adhere to the guidelines outlined by the clinical agencies during orientation.
2. Students may not bring children to the clinical agency at any time.
3. Students should be in the clinical agency only when supervised or with the permission of their instructor. In those instances, students should adhere strictly to agency guidelines in terms of chart review, visiting with patients and proper attire.
4. Students are to park in designated areas only.
5. Students may not use cell phones in the clinical setting and pagers/beepers, if used must be set on silence during clinical.
6. Students are subject to all policies regarding drugs, alcohol, and criminal background checks of assigned clinical facilities, including drug screening prior to starting a clinical rotation, random drug testing and background checks.

It is expected that students remain at the clinical agency/organization/facility for the entire time assigned. Students should not expect to run personal errands or otherwise leave the clinical site during scheduled mealtimes or breaks. Emergency requests are granted at the discretion of the instructor and no student shall leave the clinical site without instructor approval prior to leaving. Extenuating circumstances should be brought to the attention of the clinical director as soon as possible. If the student will be absent; the student is responsible for notifying the clinical site and the clinical instructor.

Course Objectives and Student Learning Outcomes:

During the course of Clinical V, students may perform, but are not limited to the following:

I. Patient Data

A. Evaluate Data in the Patient Record

1. Patient history, for example
    a) History of present illness (HPI)
    b) Orders
    c) Medication reconciliation
    d) Progress notes
    e) DNR status / advance directives
    f) Social, family, and medical history
2. Physical examination relative to the cardiopulmonary system
3. Lines and drains
    a) Chest tube
    b) Vascular lines
    c) Artificial airway
4. Laboratory results, for example,
    a) CBC
    b) Electrolytes
    c) Coagulation studies
    d) Sputum culture and sensitivities
    e) Cardiac biomarkers
5. Blood gas analysis and/or hemoximetry (CO-oximetry) results
6. Pulmonary function testing results, for example
    a) Spirometry
    b) Lung volumes
    c) DLCO
7. Imaging study results, for example
    a) Chest radiograph
    b) CT scan
    c) Ultrasonography and/or echocardiography
    d) PET scan
    e) Ventilation / perfusion scan
8. Maternal and perinatal / neonatal history, for example
    a) Apgar scores
    b) Gestational age
    c) L/S ratio

9.Trends in monitoring results

a) Fluid balance

b) Vital signs

c) Intracranial pressure

d) Ventilator liberation parameters

e) Pulmonary mechanics

f) Noninvasive, for example

- Pulse oximetry
- Capnography
- Transcutaneous

g) Cardiac evaluation / monitoring results, for example

- ECG
- Hemodynamic parameters

10. Determination of a patient's pathophysiological state

B. Perform Clinical Assessment

1.Interviewing a patient to assess

a) Level of consciousness and orientation, emotional state, and ability to cooperate

b) Level of pain

c) Shortness of breath, sputum production, and exercise tolerance

d) Smoking history

e) Environmental exposures

f) Activities of daily living

g) Learning needs, for example

- Literacy
- Preferred learning style
- Social / cultural

2.Performing inspection to assess

a) General appearance

b) Characteristics of the airway, for example

- Patency
- Mallampati classification
  - Tracheal shift

c) Cough, sputum amount and character

d) Status of a neonate, for example

- APGAR score
- Gestational age

e) Skin integrity, for example,

- Pressure ulcers
- Stoma site

3.Palpating to assess

a) Pulse, rhythm, intensity

b) Accessory muscle activity

c) Asymmetrical chest movements, tactile fremitus, crepitus, tenderness,

tactile rhonchi, and / or tracheal deviation

4.Performing diagnostic chest percussion

5.Auscultating to assess

a) Breath sounds

b) Heart sounds and rhythm

c) Blood pressure

6.Reviewing a chest radiograph to assess

a) Quality of imaging, for example

- Patient positioning
- Penetration
- Lung inflation

b) Presence and position of airways, lines and drains

c) Presence of foreign bodies

d) Heart size and position

e) Presence of, or change in cardiopulmonary abnormalities, for example

- Pneumothorax
- Consolidation
- Pleural effusion
- Pulmonary edema
- Pulmonary artery size

f) Presence of, or change in diaphragm, mediastinum and / or trachea

C. Perform Procedures to Gather Clinical Information

1.12-lead ECG

2.Noninvasive monitoring, for example

a) Pulse oximetry

b) Capnography

c) Transcutaneous

3.Peak flow

4.Mechanics of spontaneous ventilation linked to tidal volume, minute volume, maximal inspiratory pressure, and vital capacity

5.Blood gas sample collection

6.Blood gas analysis and / or hemoximetry (CO-oximetry)

7.Cardiopulmonary calculations, for example

a) P(A-a)O2

b) VD/VT

c) P/F

d) OI

8.Hemodynamic monitoring

9.Pulmonary compliance and airways resistance

10. Plateau pressure

11. Auto-PEEP determination

12. Spontaneous breathing trial (SBT)

13. Apnea monitoring

14. Apnea test (brain death determination)

15. Cuff management, for example
    a) Tracheal
    b) Laryngeal
16. Sputum induction
17. Spirometry outside or inside a pulmonary function laboratory
18. DLCO inside a pulmonary function laboratory
19. Lung volumes inside a pulmonary function laboratory
20. Tests of respiratory muscle strength – MIP and MEP
21. Therapeutic bronchoscopy

D. Evaluate Procedure Results

1.12-lead ECG
2.Noninvasive monitoring, for example
    a) Pulse oximetry
    b) Capnography
    c) Transcutaneous
3.Peak flow
4.Mechanics of spontaneous ventilation linked to tidal volume, minute volume, maximal inspiratory pressure, and vital capacity
5.Blood gas analysis and / or hemoximetry (CO-oximetry)
6.Cardiopulmonary calculations, for example,
    a) P(A-a)O2
    b) VD/VT
    c) P/F
    d) OI
7.Hemodynamic monitoring
8.Pulmonary compliance and airways resistance
9.Plateau pressure
10. Auto-PEEP
11. Spontaneous breathing trial (SBT)
12. Apnea monitoring
13. Apnea test (brain death determination)
14. Cuff status, for example
    a) Laryngeal
    b) Tracheal
15. Spirometry outside or inside a pulmonary function laboratory
16. DLCO inside a pulmonary function laboratory
17. Lung volumes inside a pulmonary function laboratory
18. Tests of respiratory muscle strength – MIP and MEP

E. Recommend Diagnostic Procedures

1.Testing for tuberculosis
2.Laboratory tests, for example
    a) CBC
    b) Electrolytes
    c) Coagulation studies

d) Sputum culture and sensitivities
e) Cardiac biomarkers
3.Imaging studies
4.Bronchoscopy
a) Diagnostic
b) Therapeutic
5.Bronchoalveolar lavage (BAL)
6.Pulmonary function testing
7.Noninvasive monitoring, for example
a) Pulse oximetry
b) Capnography
c) Transcutaneous
8.Blood gas and/or hemoximetry (CO-oximetry)
9.ECG
10. Exhaled gas analysis, for example
a) CO2
b) FENO
11. Hemodynamic monitoring
12. Thoracentesis

II. TROUBLESHOOTING AND QUALITY CONTROL OF EQUIPMENT, AND INFECTION CONTROL

A. Assemble / Troubleshoot Devices

1.Medical gas delivery interfaces, for example
a) Mask
b) Cannula
c) Heated high-flow nasal cannula
2.Long-term oxygen therapy
3.Medical gas delivery, metering, and/or clinical analyzing devices, for example
a) Flowmeter
b) Regulator
c) Gas cylinder
d) Blender
e) Air compressor
f) Gas analyzers
4.CPAP / NPPV with patient interfaces
5.Humidifiers
6.Nebulizers
7.Metered-dose inhalers, spacers, and valved holding chambers
8.Dry powder inhalers (DPI)
9.Resuscitation equipment, for example
a) Self-inflating resuscitator
b) Flow-inflating resuscitator
c) AED
10. Mechanical ventilators
11. Intubation equipment

12. Artificial airways
13. Suctioning equipment, for example
    a) Regulator
    b) Canister
    c) Tubing
    d) Catheter
14. Blood analyzers, for example
    a) Hemoximetry (CO-oximetry)
    b) Point of care
    c) Blood gas
15. Patient breathing circuits
16. Hyperinflation devices
17. Secretion clearance devices
18. Heliox delivery device
19. Portable spirometer
20. Testing equipment in a pulmonary function laboratory
21. Pleural drainage
22. Noninvasive monitoring, for example
    a) Pulse oximeter
    b) Capnometer
    c) Transcutaneous
23. Bronchoscopes and light sources
24. Hemodynamic monitoring
    a) Pressure transducers
    b) Catheters, for example
        - Arterial
        - Pulmonary artery

B. Ensure Infection Prevention

1.Adhering to infection prevention policies and procedures, for example
    a) Standard Precautions
    b) Donning/doffing
    c) Isolation
2.Adhering to disinfection policies and procedures
3.Proper handling of biohazardous materials

C. Perform Quality Control Procedures

1.Blood analyzers
2.Gas analyzers
3.Pulmonary function equipment for testing
    a) Spirometry results
    b) Lung volumes
    c) Diffusion capacity (DLCO)
4.Mechanical ventilators
5.Noninvasive monitors

III. INITIATION AND MODIFICATION OF INTERVENTIONS

A. Maintain a Patent Airway Including the Care of Artificial Airways

1. Proper positioning of a patient
2. Recognition of a difficult airway
3. Establishing and managing a patient's airway
    a) Nasopharyngeal airway
    b) Oropharyngeal airway
    c) Esophagealtracheal tubes / supraglottic airways
    d) Endotracheal tube
    e) Tracheostomy tube
    f) Laryngectomy tube
    g) Speaking valves
    h) Devices that assist with intubation, for example
        - Endotracheal tube exchanger
        - Video laryngoscopy
4. Performing tracheostomy care
5. Exchanging artificial airways
6. Maintaining adequate humidification
7. Initiating protocols to prevent ventilator-associated infections
8. Performing extubation

B. Perform Airway Clearance and Lung Expansion Techniques

1. Postural drainage, percussion, or vibration
2. Suctioning, for example
    a) Nasotracheal
    b) Oropharyngeal
3. Mechanical devices, for example
    a) High frequency chest wall oscillation
    b) Vibratory PEP
    c) Intrapulmonary percussive ventilation
    d) Insufflation / exsufflation device
4. Assisted cough, for example
    a) Huff
    b) Abdominal thrust
5. Hyperinflation therapy
6. Inspiratory muscle training

C. Support Oxygenation and Ventilation

1. Initiating and adjusting oxygen therapy
2. Minimizing hypoxemia, for example,
    a) Patient positioning
    b) Secretion removal
3. Initiating and adjusting mask or nasal CPAP
4. Initiating and adjusting mechanical ventilation settings
    a) Continuous mechanical ventilation
    b) Noninvasive ventilation
    c) High frequency ventilation

d) Alarms

5.Recognizing and correcting patient-ventilator desynchrony

6.Utilizing ventilator graphics

7.Performing lung recruitment maneuvers

8.Liberating a patient from mechanical ventilation

D. Administer Medications and Specialty Gases

1. Aerosolized preparations

a) Antimicrobials

b) Pulmonary vasodilators

c) Bronchodilators

d) Mucolytics / proteolytics

e) Steroids

2.Endotracheal instillation

3.Specialty gases, for example

a) Heliox

b) Inhaled NO

E. Ensure Modifications are Made to the Respiratory Care Plan

1.Treatment termination, for example

a) Life-threatening adverse event

2.Recommendations

a) Starting treatment based on patient response

b) Treatment of pneumothorax

c) Adjustment of fluid balance

d) Adjustment of electrolyte therapy

e) Insertion or change of artificial airway

f) Liberating from mechanical ventilation

g) Extubation

h) Discontinuing treatment based on patient response

i) Consultation from a physician specialist

3.Recommendations for changes

a) Patient position

b) Oxygen therapy

c) Humidification

d) Airway clearance

e) Hyperinflation

f) Mechanical ventilation

4.Recommendations for pharmacologic interventions

a) Bronchodilators

b) Anti-inflammatory drugs

c) Mucolytics and proteolytics

d) Aerosolized antibiotics

e) Inhaled pulmonary vasodilators

f) Cardiovascular

g) Antimicrobials

h) Sedatives and hypnotics
i) Analgesics
j) Narcotic antagonists
k) Benzodiazepine antagonists
l) Neuromuscular blocking agents
m) Diuretics
n) Surfactants
o) Changes to drug, dosage, administration frequency, mode, or concentration

F. Utilize Evidence-Based Practice

1.Classification of disease severity
2.Recommendations for changes in a therapeutic plan when indicated
3.Applications of guidelines, for example
a) ARDSNet
b) NAEPP
c) GOLD

G. Provide Respiratory Care Techniques in High-Risk Situations

1.Emergency
a) Cardiopulmonary emergencies excluding CPR
b) Disaster management
c) Medical emergency team (MET) / rapid response team
2.Intra-professional communication
3.Patient transport
a) Within a hospital

H. Assist a Physician / Provider in Performing Procedures

1.Intubation
2.Bronchoscopy
3.Thoracentesis
4.Tracheotomy
5.Chest tube insertion
6.Insertion of arterial or venous catheters
7.Moderate (conscious) sedation
8.Cardioversion
9.Withdrawal of life support

I. Conduct Patient and Family Education

1.Safety and infection control
2.Lifestyle changes, for example
a) Smoking cessation
b) Exercise
3.Disease / condition management, for example
a) Asthma
b) COPD
c) CF
d) Tracheostomy care
e) Ventilator dependent

Clinical Competencies (I-III) 40%

The following is a list of clinical competencies that must be completed by the last week of scheduled rotations:

- Adult Ventilator System Check (Course Objectives I-III)
- Adult Ventilator Graphics Analysis (Course Objectives I, II, IV, VI, VII, XI, XII)
- Neonatal or Pediatric Routine Ventilator System Check Competency (Course Objectives I-III)
- 1st Therapist Multiple Choice practice exam (TBA)
- 2nd Therapist Multiple Choice practice exam (TBA)
- 3rd Therapist Multiple Choice practice exam (TBA)
- ***Adult Extubation*** (Course Objectives I-III)
- ***Adult Spontaneous Pulmonary Mechanics*** (Course Objectives I-III)

The above competencies must have two **"Assisted"** or **"Performed"** documented in Trajecsys, prior to the instructor evaluation. During the instructor evaluation the student must satisfactorily PASS the competency evaluation items, including core components. At that time APPROVE will be documented in Trajecsys and the student will receive a 100% for the competency evaluation. If the student does not satisfactorily PASS the competency evaluation items, including core components, the competency will be documented as NOT APPROVED in Trajecsys, the student will receive a 50% for that attempt, and may have one attempt at re-evaluation after approved remediation. Upon re-evaluation, the student must satisfactorily PASS the competency evaluation items, including core components; however, an average of the two attempts (75%) will be recorded in the grade book. **If the student is unsuccessful on the re-evaluation, they will be removed from the course.**

Clinical Evaluation (Course Objectives I -III) 10%.

Each clinical instructor will complete one "Clinical Evaluation" of each student after each of the listed rotations.

SOAP Sheets and Case Study (Course Objectives I-III) 20%

In RSPT 2360, the student will be required to complete ONE SOAP sheet for each of the following rotations:

- Adult Critical Care
- Adult General Therapy
- Neonatal/Pediatric ICU

All ICU SOAP sheets will have a ventilator patient with ventilator settings. Only one SOAP sheet per rotation will be accepted. The date on the SOAP sheet will reflect the day the student assumed patient care. The SOAP sheet will be due on or before the assigned dates

Final Examination Mock Therapist Multiple Choice Exam (Course Objectives I-III) 20%

A TMC (Therapist Multiple Choice) examination will be administered during the scheduled finals week.

Required Tasks (Course Objectives I-III) 10%

- Physician Interaction: All students are required to have 10 physician contact points logged and verified in Trajecsys by the end of the semester.
- The student will be required to complete the following evaluation:
  Clinical Site Evaluations for each clinical site attended
  Clinical Instructor Evaluations
- Skills – students are required to log skills practiced in Trajecsys

Proof of Professional Credits

The student will be required to provide proof of 10 professional credits. Professional Credit selection is due on September 23rd, 2022. (See Professional Credit attachment at the end of the syllabus)

These tasks will be completed by the student no later than **November 22, 2022 at 1200**. If late or incomplete, the student will receive a ZERO in the gradebook. (Incomplete grade can be assigned at the discretion of the instructor).

*****NO LATE PAPERWORK WILL BE ACCEPTED*****

Make Up exam Policy

Any student that misses an the final TMC exam, will be unable to continue within the program. (Any and all exam makeups are at the discretion of the instructor and the instructor may require documented reason for absence).

All personal communication devices are to be placed on silence/vibrate during class time. If you must answer your device, please leave the immediate area.

No personal communication devices allowed in testing areas.

Scholastic Dishonesty and Academic Misconduct

The Midland College Policy will be followed.

Attendance

Your attendance is the biggest predictor of your success. Attendance every clinical day is expected, however, you are allowed TWO days of absence. Attendance at post conference is required as per the schedule given at the first of the semester. **Every absence over the two days will decrease the final grade for clinical by 10%.** If the students is more than 15 minutes late to clinical rotations or post conference, this will constitute an absence. 3 tardies count as 1 day absent. **See "Academic Standards" and "Attendance for Clinical" in the student handbook for the proper procedure.**
Any absence or tardy will be reported to the assigned clinical instructor.

Course Schedule:
Days: Monday and Wednesday
Time: 0615 – 1345 pm at Midland Memorial Hospital & Medical Center Hospital
0515 – 1245 at Odessa Regional Medical Center
0615 – 1345 Medical Center Hospital

Safety Training:
Students receive annual training in the following: blood and air borne pathogens, electrical safety, back safety, hazardous chemicals, latex allergies, fire and disaster procedures, security and personal safety procedures and safety requirements of clinical facilities. Students must maintain current CPR, immunizations, and health insurance during all clinical courses.

Division Information:
Division Chairman: Miranda Poage, PhD
Division Office Location and Telephone: 208, 685-4600

Americans with Disabilities Act (ADA):
Any student who, because of a disabling condition, may require some special arrangements in order to meet course requirements should contact the Counselor/Disability Specialist at 432-685-4505 as soon as possible. The office is located in the Scharbauer Student Center Building. These conditions may include documented physical or educational disabilities. Please be aware that services or accommodations are not automatic. Each student must request them and secure the proper authorizations/documentation.

NON-DISCRIMINATION STATEMENT:

Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its program and activities. The following individuals have been designated to handle inquiries regarding the non-discrimination policies:

Wendy A. Kane
Dean of Student Life
Midland College
Title IX Coordinator/Compliance Officer
3600 N. Garfield, SSC 131
Midland, TX 79705
(432) 685-4781
Title9@midland.edu

For further information on notice of non-discrimination, visit the ED.gov Office of Civil Rights website, or call 1 (800) 421-3481.

Licensure Eligibility Notification
Completion of Midland College degrees and/or certificates does not guarantee eligibility to take a certification/registry/licensure examination. The eligibility of each person is determined on an individual basis by the regulatory body of the specific discipline. If you have a conviction of a crime other than a minor traffic violation, physical or mental disability/illness, hospitalization/treatment for chemical dependency within the past five years, current intemperate use of drugs or alcohol or a previous denial of a licensure or action by a licensing authority, you will need to contact the specific

regulatory body for an individual ruling. Some programs require a criminal background check and urine and drug screen.

Professional Credits are a requirement for each clinical course in the Respiratory Care Program. You must earn a minimum number of credits each semester to successfully complete each clinical course. The number of required of professional credits per semester is as follows:

RSPT 1260	Clinical I	8 Credits
RSPT 1360	Clinical II	8 Credits
RSPT 1362	Clinical III	10 Credits
RSPT 2360	Clinical IV	10 Credits
RSPT 2361	Clinical V	10 Credits

Activities	**Credits**
Continuing Education (CEU's): Online or in-person	2 credits per hour
Article Summary	2 credits
Original research paper	10 credits
Community service (must obtain permission from faculty before performing community service)	1 credit per hour
TSRC/AARC membership	5 credits
Sputum Bowl Participation	8 credits
Attend TSRC convention	5 credits
TSRC student volunteer	10 credits
Attend "Better Breathers" club	2 credits per hour
In-services	2 credit per hour
Create instructional video for social media platform (must obtain permission from faculty on topic and video approval)	3 credits per video
Create recruitment video for social media platform (must obtain permission from faculty for video approval)	3 credits per video
Create a TikTok Challenge (must obtain permission from faculty on topic and video approval)	3 credits per video
Volunteer opportunity directly related to healthcare (must be approved)	2 credit per hour
Respiratory Care Week Activity	5 credits per hour
Welcome Week Activity	5 credits per hour
**Great American Smokeout (Clinic IV and V)	5 credits per hour
**A&P/classroom recruitment (Clinic IV and V)	5 credits per class visit
**Respiratory recruitment/respiratory promotion event (Clinic IV and V)	5 credits per hour
Article Summary from a Respiratory Care publication or Chest, Heart & Lung, etc.	3 credits per article
Attend local RC seminars/symposia	3 credits per hour

Each reported professional credit should be submitted with supporting documentation verifying the professional credit (examples: receipts, copy of membership card, CEU certificates, clinical instructor signature for in services, etc.) The deadline for turning in professional credits and all supporting documentation for each semester is <u>two weeks</u> prior to the last day of class. Failure to turn in professional credits prior to this deadline will result in a zero for this portion of the grade. Please upload and submit all required professional credit documentation to canvas along with the professional credits form that indicates what credits you have chosen. If the professional credit selected does not provide sufficient documentation, please use the proof form attached for documentation. <u>Please see specific course syllabus for selection due dates.</u>

There will be a limit on how many types of professional credit you can complete each semester. For example, you cannot do *all* social media videos/challenges to achieve credits for the semester. You must

choose a mix of options to achieve the points. If you have specific questions, please refer to one of the faculty members for further instructions.

Professional Credits

Name: _____ Semester: _____

Professional Credit Activities	Credits
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Total Credits for the semester: _____

The activates above and the documentation attached represent my Professional Credit activity for this semester

_____ _____

Signature Date

Clinical V

Student _____Final Grade _____

40% Competencies _____
10% Tasks _____
10% Evaluations _____
20% C.S.& SOAPS _____
20% Final (TMC) _____
Total _____

CPR expiration date _____

Required Tasks (10%)	**Case Study & SOAPS (20%)**	**Evaluations (10%)**	**Competencies (40%)**
Skills (__/60) _____	Case Study _____	_____ average	Competencies (__/5)
Clinical Site Eval ____	SOAP 1 _____		TMC 1 _____
Clinical Inst. Eval ____	SOAP 2 _____		TMC 2 _____
Prof Credit _____	SOAP 3 _____		TMC 3 _____
Average _____	Average _____		Average _____