



MIDWESTERN STATE UNIVERSITY

COURSE SYLLABUS

Summer 2021

COURSE TITLE:

Pulmonary Diagnostics

COURSE NUMBER:

RESP 4403-X30

COURSE DESCRIPTION:

This is an internet-based course that is designed as an in-depth study of the standard testing methodologies employed to diagnose and monitor patients with cardiopulmonary disease. Emphasis is placed on the technical aspects as well as disease presentation. Topics include measurement and analysis of lung volumes, ventilation, pulmonary mechanics, gas distribution, diffusion testing, cardiac and pulmonary exercise testing, quality assurance, blood gas analysis, and quality assurance in the pulmonary function lab.

CREDITS:

3 credits

COURSE INSTRUCTOR:

Mary Sue Owen MS, RRT-NPS, RRT-ACCS, RPFT, AE-C

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OFFICE HOURS:

By appointment

Please send messages to me via my university email mary.owen@msutexas.edu

AUDIENCE:

Distance Respiratory Care Students

COURSE OBJECTIVES:

1. Explain the instrumentation required to perform basic spirometry, lung volume determination, and diffusion tests.
2. Differentiate between volume sensing and flow sensing spirometers, citing strengths and weaknesses of each design
3. List the indications for pulmonary diagnostic testing.
4. Identify normal and abnormal diffusion study data and can explain challenges relating to the use of DLCO testing.
5. Interpret pulmonary function data and choose appropriate means of intervention.
6. Define commonly utilized pulmonary function terms with the proficiency of an advanced practitioner
7. Define provide normal values for lung volumes, performance parameters, and capacities, and perform pulmonary function testing with the proficiency of an advanced practitioner.
8. Discuss pathophysiology, clinical significance of, and techniques used to measure various pulmonary function parameters with the proficiency of an advanced practitioner.
9. Identify conditions relating to respiratory and metabolic dysfunction when evaluating blood gas values.
10. Evaluate exercise tests identifying anaerobic threshold, limitations to exercise based on de-conditioning, pulmonary and cardiac sources.

11. List pulmonary diagnostic tests that help identify abnormal responses to increased carbon dioxide and decreased oxygen levels.
12. Identify common mistakes in quality assurance testing relating to pulmonary diagnostic equipment.

REQUIRED TEXT: Ruppel GL. Manual of Pulmonary Function Testing, Eleventh Edition. Elsevier/Mosby, 2018. ISBN: 9780323356251

COURSE TOOLS:

1. **Syllabus**---contains the syllabus.
2. **Announcements**---All announcements will be posted under the NEWS section on the course homepage.
3. **Weekly Course Content Modules**---I have broken down your weekly reading assignments, discussion boards, as well as any exams/quizzes that pertain to that specific week and placed them in individual weekly modules. You will also find PowerPoints that pertain to the assigned chapters for that week.
4. **Learning Tools**---Here you will find information that may be helpful to you during this course. This may include APA and Writing Information as well as information to aid you in researching online databases.
5. **Email**--- My university email address is mary.owen@msutexas.edu. This is my preferred method of communication. I will check my email periodically throughout the day (Monday – Friday) (8am – 5pm). If you send an email after 5pm during the week or on the weekends, do not expect an immediate response. Those emails sent after hours will be responded to the following day, and those sent on the weekends will be responded to the following Monday.

MISSED Quiz, OR OTHER GRADED ITEM POLICY:

Anything not completed and handed in on time will be subjected to a “0” for that specific grade. Please talk with your professor, prior to the due date, regarding circumstances that may prevent you from completing an assignment. All assignments must be completed by 11:59pm of the due date.

APPROXIMATE GRADING SCALE

90-100 Points	A
80-89	B
75-79	C
60-74	D
< 60	F

A minimum grade of 75 (C) is required in all respiratory courses. Failure to attain a minimum grade of C will prevent the student from progressing in the program.

GRADED ITEMS AND GRADE DETERMINATION:

Assignments	Due Date	Grade Percentage
Case Studies	As assigned in course schedule	30%
Project Presentation	July 25th	30%
Project Feedback	August 1st	
Quiz # 1	June 13 th	40%
Quiz # 2	June 27th	
Quiz # 3	July 11 th	
Quiz # 4	August 4 th	

INTRODUCTIONS:

Please post an introduction to the discussion board. Please introduce yourself with a brief overview of who you are. Give your Name, where you work, how long you have been in RT, Why you got into the profession, family, hobbies, etc. Also, post a picture of yourself so we can put a face with the name!

CASE STUDIES (30% of Final Grade):

Throughout the semester, you will have a series of case studies that focus on Pulmonary Diagnostics. These Case Studies are meant for you to put the information you have gathered from your reading assignments into practice. Each Case Study will give you a situation, along with PFT results for a specific patient as well as a few questions about the case study. You are required to answer these questions in a word document and submit in the dropbox. These case studies may challenge you. I am not looking for perfection in your answers. I am looking to see that you are critically thinking about the concepts of PFTs and how they pertain to different patients. There are a total of 3 Case Studies within the semester.

QUIZZES (40% of Final Grade):

There will be four quizzes in this class. These will be open book, as you may use any of your assigned resources, notes from discussions online, posted content from the professor. You may NOT consult your classmates. These quizzes may consist of multiple choices, short answer, definitions, listing, true false, and/or essay. Each quiz is 30 questions and you are given 120 minutes for each quiz. Once you have reached the time limit, the quiz will close and be submitted for grading. Make sure you allow yourself the appropriate amount of time to take the quiz in one sitting.

PROJECT PRESENTATION (30% of Final Grade) (Rubric at the end of this syllabus):

Select a topic of interest to you within (Pulmonary Diagnostics Respiratory Care) and post a 15-20 slide presentation.

- Include indications/contradictions, associated pathologies, equipment, and any new technology that may be available.
- What is known and reported in the literature and research about your topic?
- Given what the literature and research say about your topic, what conclusions can you draw?
- Will your findings affect your practice or understanding of your given topic?

You must site your references at the end of your project. The project must have at least 5 references. References must be current (within the last 5 years). Use scholarly sources; apply APA style referencing, including pictures and graphics you use. With that said, general rules must be followed.

- One must create parenthetical citations whenever you quote, paraphrase, or summarize information from another source.
- The parenthetical citations are generally located at the end of the sentence (before the period), or as close as possible to the text which you quoted, paraphrased, or summarized.
- One must create parenthetical citations for all graphics used.
- The PowerPoint presentation must have a slide that is the References page. Normally this would be the last slide.
- References on the slide are formatted exactly as they would be formatted for the references page of a paper.

You are not limited to but may consider the following topics:

Polysomnography, Cardiopulmonary Exercise Testing, Specialized Test Regimens, Pediatric Pulmonary Diagnostics, Quality Assurance in Pulmonary Diagnostics, Metabolic and Nutritional Assessment, Arterial Blood Gas Analysis, Challenge Testing, etc.

Please use the following link to help you research databases for your projects:

[Respiratory Library Guide](#)

Project Submission: You will need to submit your project in 2 places. The first will be in the dropbox provided. You will also need to submit/attach your project in the discussion area titled Project Downloads and Feedback. These need to be turned in to both places by **July 25th at 11:59pm.**

Student Feedback:

After presentations are posted you will provide feedback for **two** student's projects. Try and make sure everyone receives feedback! Feedback must be posted by **August 1st at 11:59pm.**

Guidelines for feedback are as follows:

- a) Acknowledge those things that have been done well,
- b) Determine where you think there could be flaws in the data presented, or alternatives to consider.
- c) Ask questions and offer suggestions that might enhance the response and help expand critical thinking.

American Disabilities Act (ADA)

Midwestern State University (MSU) does not discriminate on the basis of an individual's disability and complies with Section 504 and the Americans with Disabilities Act in its admission, accessibility and employment of individuals in programs and activities. MSU provide academic accommodations and auxiliary aids to individuals with disabilities, as defined by law, who are otherwise qualified to meet academic and employment requirements. For assistance call (940) 397-4618 or 397-4515. Please see the instructor outside of class to make any arrangements involving special accommodations. It is the student's responsibility to declare any disabilities. After declaration, preferably at the beginning of each semester, the student needs to contact individual instructors to determine any reasonable accommodations that may be required.

For more information regarding Disability Services at MSU, please click here: [Disability Services](#)

ACADEMIC HONESTY:

Plagiarism is the use of someone else's thoughts, words, ideas, or lines of argument in your own work without appropriate documentation (a parenthetical citation at the end and a listing in "Works Cited")-whether you use that material in a quote, paraphrase, or summary. It is a theft of intellectual property and will **not be tolerated**, whether intentional or not.

Student Honor Creed:

As an MSU Student, I pledge not to lie, cheat, steal, or help anyone else do so."

As students at MSU, we recognize that any great society must be composed of empowered, responsible citizens. We also recognize universities play an important role in helping mold these responsible citizens. We believe students themselves play an important part in developing responsible citizenship by maintaining a community where integrity and honorable character are the norm, not the exception. Thus, we, the Students of Midwestern State University, resolve to uphold the honor of the University by affirming our commitment to complete academic honesty. We resolve not only to be honest but also to hold our peers accountable for complete honesty in all university matters. We consider it dishonest to ask for, give, or receive help in examinations or quizzes, to use any unauthorized material in examinations, or to present, as one's own, work or ideas which are not entirely one's own. We recognize that any instructor has the right to expect that all student work is honest, original work. We accept and acknowledge that responsibility for lying, cheating, stealing, plagiarism, and other forms of academic dishonesty fundamentally rests within each individual student. We expect of ourselves academic integrity, personal professionalism, and ethical character. We appreciate steps taken by University officials to protect the honor of the University against any who would disgrace the MSU student body by violating the spirit of this creed. Written and adopted by the 2002-2003 MSU Student Senate.

Honor System:

All components of this course are designed to represent the efforts of each student INDIVIDUALLY and are NOT to be shared, copied, or plagiarized from other sources. When students submit their efforts for grading, they are attesting they abided by this rule. Cheating includes, but is not limited to, (1) use of any unauthorized assistance in taking quizzes, tests, or examinations; (2) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or completing other assignments; or (3) the acquisition of tests or other academic materials belonging to the university faculty or staff without permission.

Plagiarism includes, but is not limited to, the use of, by paraphrase or direct quotation without correct citation in the text and on the reference list, the published or unpublished works of another person. Students may NOT submit papers and assignments that they have previously submitted for this or other courses. The use of materials generated by agencies engaged in "selling" term papers is also plagiarism. Students are encouraged to review the tutorials and suggested websites for more information about plagiarism. Academic dishonesty (cheating, plagiarism, etc.) will not be tolerated in this class. Whenever a student is unsure of whether a particular situation will be interpreted as academic dishonesty, he/she should ask the instructor for clarification. If students are guilty of academic dishonesty, a grade of zero (0) will be given for the quiz, assignment, etc. Cases may also be referred to the Dean of Students for possible dismissal from the university.

*****Research papers and projects must be original work for each course assignment. The faculty will not accept a submission that has been or is being submitted for another course. No Exceptions!**

PLEASE NOTE:

By enrolling in this course, the student expressly grants MSU a "limited right" in all intellectual property created by the student for the purpose of this course. The "limited right" shall include but shall not be limited to the right to reproduce the student's work product in order to verify originality and authenticity, and for educational purposes. Specifically, faculty may submit student papers and assignments to an external agency to verify originality and authenticity, and to detect for plagiarism.

The MSU Code of Student Conduct can be found in the MSU Student Handbook, which can be found here: [Student Handbook](#)

Course Schedule:

Date	Assignment
Week 1 – June 1 – June 6	*Readings: Chapter 1 - Indications for PFTs *Review Syllabus *Introductions: Personal biographies posted on Discussion Board
Week 2 – June 7 – June 13	*Readings: Chapter 2 - Spirometry *Quiz #1: Chapters 1 & 2 (Due June 13 th)
Week 3 – June 14 – June 20	*Readings: Chapter 3 – Diffusing Capacity Tests *Readings: Chapter 4 - Lung Volumes, Airway Resistance and GDT *Assignment: Case Study Chapter 4 (Due June 20 th)
Week 4 – June 21 – June 27	*Readings: Chapter 5 – Ventilation and Ventilatory Control Tests *Quiz #2: Chapters 3, 4, & 5 (Due June 27 th)
Week 5 – June 28 – July 4	*Readings: Chapter 6 – Blood Gases and Related Tests *Readings: Chapter 7 - Cardiopulmonary Exercise Testing *Assignment: Case Study Chapter 6 (Due July 4 th)
Week 6 – July 5 – July 11	*Readings: Chapter 8 - Pediatric Pulmonary Function Testing *Quiz #3: Chapters 6, 7, & 8 (Due July 11 th)
Week 7 – July 12 – July 18	*Readings: Chapter 9 – Bronchoprovocation Testing *Assignment: Case Study Chapter 9 (Due July 18 th)
Week 8 – July 19 – July 25	*Readings: Chapter 10 - Specialized Test Regimens *Assignment: PROJECT DUE!!!!!! (Due July 25 th)
Week 9 – July 26 – Aug 1	*Readings: Chapter 11 - PFT Equipment *Assignment: Project Feedback (Due Aug 1 st)
Week 10 – Aug 2 – Aug 4	*Quiz #4: Chapters 9, 10, & 11 (Due Aug 4 th) Post final thoughts, comments, and suggestions for the course

Below, you will find each week's assignments broken up into modules. The same content will be within each module in D2L as well. I suggest printing a copy of the course schedule as well as each module below to help you stay organized and submit your assignments by the deadlines.

Module 1 - Week 1:

Indications for Pulmonary Function Testing

Learning Objectives

1. Categorize pulmonary function tests according to specific purposes
2. List indications for spirometry, lung volumes, and diffusing capacity
3. Identify at least one obstructive and one restrictive pulmonary disorder
4. Relate pulmonary history to indications for performing pulmonary function tests
5. Identify three indications for exercise testing
6. Name at least two diseases in which air trapping may occur
7. Describe the use of a technologist-adapted protocol for pulmonary function studies

Learning Activities and Assignments

Read

- Chapter 1 – Indications for PFTs
- Review Syllabus

Discussion Board Topic – Introduction

Please post an introduction to the discussion board. Please introduce yourself with a brief overview of who you are. Give your Name, where you work, how long you have been in RT, Why you got into the profession, family, hobbies, etc. Also, post a picture of yourself so we can put a face with the name!

Module 2 - Week 2:

Spirometry

Learning Objectives

1. Determine whether spirometry is acceptable and repeatable
2. Identify airway obstruction using VC and FEV1
3. Determine whether there is a significant response to bronchodilators
4. Select the appropriate VC and FEV1 for reporting from a series of spirometry maneuvers
5. Quantify the degree of obstruction according to ATS-ERS criteria
6. Describe the characteristics of an intra or extrathoracic obstruction pattern
7. Evaluate flow volume curve

Learning Activities and Assignments

Read

- Chapter 2 - Spirometry

Evaluation

Quiz 1 –Will cover Chapters 1 & 2.

The quiz is in multiple-choice format. The assessment will test knowledge learned in module 1 & 2, including the readings. You will have approximately four (4) minutes per question for a total of 120 minutes per quiz. This time allotment is a guideline to help with test completion. Some questions may take less time; some questions may take a bit more time. Students should not depend on a D2L clock to track the time. Many students report success with setting a kitchen timer to ring when there are 5 minutes left. This allows you time to review your answers and submit without penalty. Quiz closes on June 13th @ 11:59 pm.

Module 3 - Week 3:

Diffusing Capacity Tests & Lung Volumes, Airway Resistance and GDT

Learning Objectives

1. Identify the steps for performing the single-breath DLCO
2. List at least two criteria for an acceptable DLCO test
3. Describe why DLCO is often reduced in emphysema
4. Describe at least two non-pulmonary causes for a reduced DLCO
5. Explain the significance of a reduced DL/VA
6. Describe the measurement of lung volumes using gas dilution/washout methods
7. Calculate residual volume and total lung capacity from FRC and the subdivisions of VC
8. Describe the measurement of airway resistance using the body plethysmograph
9. Calculate FRC using helium dilution and nitrogen washout methods
10. Describe the differences between RAW, sGAW, and sRAW

Learning Activities and Assignments

Read:

- Chapter 3 – Diffusing Capacity Tests
- Chapter 4 – Lung Volumes, Airway Resistance, and Gas Distribution Tests

Written Assignment:

1. Open the attached case study in D2L.
2. Answer all questions with complete sentences and ample thought.
3. Attach your answers in a word document.
4. Submit your final answers by due date, **June 20th by 11:59pm.**

Module 4 - Week 4:

Ventilation and Ventilatory Control Tests

Learning Objectives

1. Describe the measurement of tidal volume and minute ventilation
2. Identify at least two causes of decreased minute ventilation
3. Calculate the V_D/V_T ration, using modified Bohr equation
4. Compare the calculation of V_D/V_T , using P_aCO_2 and $PETCO_2$
5. Describe the High Altitude Simulation Test (HAST)

Learning Activities and Assignments

Read

- Chapter 5 – Ventilation and Ventilatory Control Tests

Evaluation

Quiz 2 –Will cover Chapters 3, 4, & 5.

The quiz is in multiple-choice format. The assessment will test knowledge learned in module 3 & 4, including the readings. You will have approximately four (4) minutes per question for a total of 120 minutes per quiz. This time allotment is a guideline to help with test completion. Some questions may take less time; some questions may take a bit more time. Students should not depend on a D2L clock to track the time. Many students report success with setting a kitchen timer to ring when there are 5 minutes left. This allows you time to review your answers and submit without penalty. Quiz closes on June 27th @ 11:59 pm.

Module 5 - Week 5:

Blood Gases and Related Tests & Cardiopulmonary Exercise Testing

Learning Objectives

1. Describe how pH and PCO₂ are used to assess acid-base status
2. Interpret PO₂ and oxygen saturation to assess oxygenation
3. Identify the appropriate procedure for obtaining an arterial blood gas sample
4. Describe the use of pulse oximetry and capnography
5. Calculate the shunt fraction, using appropriate laboratory data
6. Understand and select an appropriate exercise protocol based on the reason for performing the test
7. Identify the ventilator/anaerobic threshold
8. Identify indications for terminating a cardiopulmonary stress test
9. Understand the importance of evaluating breathing kinetics during exercise
10. Evaluate exercise flow-volume loop data

Learning Activities and Assignments

Read:

- Chapter 6 – Blood Gases and Related Tests
- Chapter 7 – Cardiopulmonary Exercise Testing

Written Assignment:

1. Open the attached case study in D2L.
2. Answer all questions with complete sentences and ample thought.
3. Attach your answers in a word document.
4. Submit your final answers by due date, **July 4th by 11:59pm.**

Module 6 - Week 6:

Pediatric Pulmonary Function Testing

Learning Objectives

1. Identify common techniques for approaching young children during pulmonary function testing
2. State limitations and considerations for equipment as they relate to testing in children
3. Identify various passive techniques to evaluate pulmonary function in infants, toddlers, and preschool children
4. Explain the limitations of the FEF25%-75% in a very young child performing spirometry
5. Discuss the added benefit of performing lung volume measurements in pediatric patients
6. Identify the potential problems in obtaining diffusion capacity measurements in children

Learning Activities and Assignments

Read

- Chapter 8 – Pediatric Pulmonary Function Testing

Evaluation

Quiz 3 –Will cover Chapters 6, 7, & 8.

The quiz is in multiple-choice format. The assessment will test knowledge learned in module 5 & 6, including the readings. You will have approximately four (4) minutes per question for a total of 120 minutes per quiz. This time allotment is a guideline to help with test completion. Some questions may take less time; some questions may take a bit more time. Students should not depend on a D2L clock to track the time. Many students report success with setting a kitchen timer to ring when there are 5 minutes left. This allows you time to review your answers and submit without penalty. Quiz closes on July 11th @ 11:59 pm.

Module 7 - Week 7:

Bronchoprovocation Testing

Learning Objectives

1. Describe two methods of performing bronchial challenge tests
2. Identify a positive response to a methacholine challenge test
3. Select an appropriate protocol to test for exercise-induced asthma
4. Describe direct versus indirect challenge mechanisms
5. Describe the dilution process for preparation of methacholine doses

Learning Activities and Assignments

Read:

- Chapter 9 – Bronchoprovocation Testing

Written Assignment:

1. Open the attached case study in D2L.
2. Answer all questions with complete sentences and ample thought.
3. Attach your answers in a word document.
4. Submit your final answers by due date, **July 18th by 11:59pm.**

Module 8 - Week 8:

Specialized Test Regimens

Learning Objectives

1. Describe the indications for respiratory muscle strength testing
2. List two indications for preoperative pulmonary function testing
3. Understand the difference between open- and closed-circuit calorimetry
4. Judge the reliability of metabolic measurements
5. Understand the equation of motion and the impact of impedance and elastance on flow

Learning Activities and Assignments

Read:

- Chapter 10 – Specialized Test Regimens

Written Assignment:

Select a topic of interest to you within (Pulmonary Diagnostics Respiratory Care) and post a 15-20 slide presentation.

- Include indications/contradictions, associated pathologies, equipment, and any new technology that may be available.
- What is known and reported in the literature and research about your topic?
- Given what the literature and research say about your topic, what conclusions can you draw?
- Will your findings affect your practice or understanding of your given topic?

You must site your references at the end of your project. The project must have at least 5 references. References must be current (within the last 10 years). Use scholarly sources; apply APA style referencing, including pictures and graphics you use. I have included a sample APA style Powerpoint in D2L for you to reference. With that said, general rules must be followed.

- One must create parenthetical citations whenever you quote, paraphrase, or summarize information from another source.
- The parenthetical citations are generally located at the end of the sentence (before the period), or as close as possible to the text which you quoted, paraphrased, or summarized.
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Polysomnography, Cardiopulmonary Exercise Testing, Specialized Test Regimens, Pediatric Pulmonary Diagnostics, Quality Assurance in Pulmonary Diagnostics, Metabolic and Nutritional Assessment, Arterial Blood Gas Analysis, Challenge Testing, etc.

Please use the following link to help you research databases for your projects:

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Project Submission: You will need to submit your project in 2 places. The first will be in the dropbox provided. You will also need to submit/attach your project in the discussion area titled Project Downloads and Feedback. These need to be turned in to both places by **July 25th at 11:59pm.**

Module 9 - Week 9:

PFT Equipment

Learning Objectives

1. Describe two types of volume-displacement spirometers
2. Select a directional breathing valve for a specified testing situation
3. Identify the types of gas analyzers used for diffusing capacity and dilutional lung volumes tests
4. Contrast and compare measurement of oxygen saturation by multi-wavelength and pulse oximeters
5. Discuss various types of data storage applicable to pulmonary function data

Learning Activities and Assignments

Read:

- Chapter 11 – Pulmonary Function Testing Equipment

Written Assignment:

Student Feedback:

After presentations are posted you will provide feedback for **two** student's projects. Try and make sure everyone receives feedback! Feedback must be posted by **August 1st at 11:59pm**.

Guidelines for feedback are as follows:

- a) Acknowledge those things that have been done well,
- b) Determine where you think there could be flaws in the data presented, or alternatives to consider.
- c) Ask questions and offer suggestions that might enhance the response and help expand critical thinking.

Module 10 - Week 10:

Final Week

Evaluation

Quiz 4 –Will cover Chapters 9, 10, & 11.

The quiz is in multiple-choice format. The assessment will test knowledge learned in modules 7, 8, & 9, including the readings. You will have approximately four (4) minutes per question for a total of 120 minutes per quiz. This time allotment is a guideline to help with test completion. Some questions may take less time; some questions may take a bit more time. Students should not depend on a D2L clock to track the time. Many students report success with setting a kitchen timer to ring when there are 5 minutes left. This allows you time to review your answers and submit without penalty. Quiz closes on August 4th @ 11:59 pm.

PFT Project Presentation Rubric:

Criteria	Level 5 5 points	Level 4 4 points	Level 3 3 points	Level 2 2 points	Level 1 1 point
Organization	Project is perfectly organized and extremely detailed. This project is exemplary in focus and providing information to the reader.	Has a well-organized and detailed project that catches audience's interest; maintains focus throughout; summarizes main points	Project that is mostly organized; provides adequate "road map" for the listener	Project is heading in the right direction, yet is lacking the necessary organization. Difficult to follow at times.	Has irrelevant and/or unorganized statements; gives listener no focus or outline of the presentation
Content	Content, substance, and source material are considered exemplary throughout presentation.	Demonstrates substance and depth; is comprehensive; shows mastery of material	Covers topic; uses appropriate sources; is objective	Does not give adequate coverage of topic; lacks sources	No content of substance is presented within this project.
Grammar/ Mechanics	Presentation is presented with no grammatical, sentence structure, spelling, or punctuation errors.	Sentence form and word choices are appropriate. Punctuation grammar, spelling, and mechanics are appropriate	Some mistakes in sentence form and word choices. Makes a few grammar, spelling, and mechanical errors.	Numerous grammatical and sentence structure errors noted throughout presentation.	Sentence form and word choices are unacceptable; Punctuation grammar, spelling, and mechanics are unacceptable
Assignment Specific Criteria	Project completely captures the appropriate research. All aspects of the assignment are superbly responded to.	Responds to all aspects of the assignment; Documents research appropriately; considers appropriate audience	Responds to some aspects of the assignment; has some mistakes in research documentation	Lacking substance within research and is minimally associated with projected audience.	Does not give adequate coverage of assignment; does not document research appropriately; does not consider appropriate audience
Components	Demonstrates superior quality in the form of providing all of the required elements of the project as well as APA styling and required references.	Demonstrates good quality in the form of providing all of the required elements of the project as well as APA styling and required references.	Demonstrates average quality in the form of providing all of the required elements of the project as well as APA styling and required references. Missing some components.	Demonstrates poor quality in the form of providing all of the required elements of the project as well as APA styling and required references. Missing numerous components.	Completely lacking the required elements of the project as well as APA styling and required references.
PEER Submission Evaluation	Correctly submitted project to the dropbox and provided superior feedback to two classmate's projects.	Correctly submitted project to the dropbox and provided quality feedback to two classmate's projects.	Correctly submitted project to the dropbox but did not provide feedback to two classmate's projects.	Did not submit project to the dropbox, yet provided feedback to two classmate's projects.	Did not submit project to the dropbox and did not provide feedback to two classmate's projects.
Overall Score	Level 5 24 or more	Level 4 19 or more	Level 3 14 or more	Level 2 9 or more	Level 1 0 or more