COURSE INFORMATION
Title: Evidence Based Clinical Decision Making
Number: PHTH 747
Credit Hours: 2
Clock Hours: 36
Semester: Summer 2017
Meeting Time(s): See attached schedule

COURSE INSTRUCTOR INFORMATION
Course Coordinator/Director/Lecturer:
Ryan Torgrude, PT, DPT, OCS
Ryan.Torgrude@usd.edu
952.240.5705
Virtual Office Hours: Will respond within 48 hours

COURSE DESCRIPTION
Course Prerequisites
Enrolled in the transitional Doctor of Physical Therapy Curriculum, this includes successful completion of PHTH 718, PHAR 720, PHTH 782, PHTH 784, PHTH 722, and PHTH 735.

Graduate Catalog Description/Expanded Course Description
Building upon the introductory courses in critical evaluation of literature and evidence-based practice, this course enables students to utilize the best available evidence in diagnosis, prognosis and intervention. The student will be required to integrate best evidence with clinician expertise and client characteristics, to improve the quality of clinical decision-making. This course is designed to prepare the student for completion of the independent clinical project required in PHTH 785.

Course Teaching Methodology/Instruction Methods:
Teaching methods include completing assignments and discussion on Desire 2 Learn (D2L) to promote active class participation. The students will be completing self-directed activities with faculty advisement.

REQUIRED TEXTS AND READINGS:
Required Texts:

Supplementary Materials(it is not required to purchase these for the course):


**Recommended Resources:**

The following is a link to online resource guide available to USD Physical Therapy students. You may find it helpful throughout the curriculum & in clinical practice.

[http://libguides.usd.edu/pt](http://libguides.usd.edu/pt)

**STUDENT LEARNING OUTCOMES:**

<table>
<thead>
<tr>
<th>Course Learning Objectives/Goals:</th>
<th>CAPTE Evaluative Criteria</th>
<th>Normative Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upon completion of this course, the student will:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Demonstrate the need for evidence-based research by completing discussion boards, journal club project and literature review.</td>
<td>CC-5.21-22 &amp; CC 5.23</td>
<td>9.3</td>
</tr>
<tr>
<td>2. Demonstrate proficiency of information technology to access and secure sources of published information for discussions, literature review and journal club project.</td>
<td>CC-5.21</td>
<td>9.1</td>
</tr>
<tr>
<td>3. Critically evaluate research articles related to discussions, Literature Review and Journal Club project.</td>
<td>CC-5.22 &amp; CC-24</td>
<td>9.2 &amp; 9.4</td>
</tr>
<tr>
<td>4. Compose clinical reflections in using the discussions, Literature Review and journal club project.</td>
<td>CC-5.23, CC-5.24 &amp; CC-5.25 (Also CC-2)</td>
<td>9.3, 9.4 &amp; 9.5</td>
</tr>
<tr>
<td>5. Value the importance of being an educated consumer of literature related to the area of health sciences through self assessment, discussions, literature review, and journal club project.</td>
<td>CC-5.12, CC-5.22 &amp; CC-5.23</td>
<td>5.2, 9.2 &amp; 9.3</td>
</tr>
<tr>
<td>6. Appraise the performance of self (in small group and with assignments) and others (with small group activities).</td>
<td>CC-5.11, CC-5.12, CC-5.13 &amp; CC-5.17</td>
<td>5.1, 5.2, 5.3 &amp; 6.1</td>
</tr>
<tr>
<td>7. Critically evaluate research articles related to a research project via a written research literature review, journal club project, and discussions.</td>
<td>CC-5.22, CC-5.24</td>
<td>9.2, 9.4</td>
</tr>
</tbody>
</table>

*Evidence-Based Practice: 3, 5, 6*
8. Design a research project that contributes to the body of knowledge of physical therapy practice.  
   CC-5.24 9.4 Evidence-Based Practice

9. Compose a written literature review.  
   CC-5.24, CC-5.61 9.4, 21.5 Evidence Based Practice: 5, 6 Practice Management – Patient Rights, Patient Consent, Confidentiality, and HIPPA: 1, 2 Professionalism – Core Values

    CC-5.1, CC-5.3 CC-5.61 1.1, 1.3, 21.5 Practice Management – Patient Rights, Patient Consent, Confidentiality, and HIPPA: 1, 2 Professionalism – Core Values

- **CAPTE Evaluative Criteria CC-5.3 (2006) & Professional Practice Expectation 1.3 (NMV2004):** Practice in a manner consistent with the professional Code of Ethics.
- **CAPTE Evaluative Criteria CC-5.22 (2006) & Professional Practice Expectation 9.2 (NMV2004):** Consistently and critically evaluate sources of information related to physical therapy practice, research, and education, and apply knowledge from these sources in a scientific manner and to appropriate populations.

All of the objectives are related to the following Modules of the APTA’s Preferred Curricular Model for the tDPT Program and Learner:
- Research Methods/Design
- Evidence-Based Clinical Decision Making
- Teaching and Learning Theory
- Communication and Cultural Competencies
- Role of an Educator
- Clinical Reasoning and Diagnostic Decision Making
- Evidence-Based Prognosis, Prevention, and Plan of Care
- Coordination and Provision of Evidence-Based Interventions Across Lifespan (NeuromuscularSystem, Musculoskeletal System, Cardiovascular/Pulmonary/Lymphatic Systems, Integumentary System, Other Systems)
- Use and interpretation of Outcome Measures

The following objectives are related to the following APTA Competencies of the tDPT Graduate:
- Foundation and Clinical Science(Objectives 1-9)
- Communication(Objectives 1-9)
- Individual and Cultural Differences(Objectives 1-10)
- Professional Behavior(Objectives 1-10)
- Critical Inquiry and Clinical Decision Making(Objectives 1-10)
- Education(Objectives 1-10)
- Screening(Objective 4)
- Examination(Objective 4)
- Evaluation(Objective 4)
- Diagnosis(Objective 4)
- Prognosis(Objective 4)
- Plan of Care(Objective 4)
- Intervention(Objective 4)
- Outcome Assessment(Objectives 1-3, 5, 7-9)
- Management of Care Delivery(Objectives 1-9)
- Professional Responsibility and Advocacy(Objectives 7-10)

**COURSE REQUIREMENTS:**

**PERFORMANCE STANDARDS**
The student is referred to the USDPT Student Handbook for all academic performance expectations and professional behavior requirements.

**STUDENT ASSESSMENT**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100.00-90.00</td>
<td>89.99-80.00</td>
<td>79.99-70.00</td>
<td>69.99-60.00</td>
<td>59.99-50.00</td>
</tr>
</tbody>
</table>

**COURSE ASSIGNMENTS:**

You will be responsible for assignments throughout the course including class participation in discussion boards. Each student should complete the following required assignments. Each assignment should be turned in on the due date by 11:59 PM Central Time. *Late submissions will result in a 10% reduction in the assignment grade for each business day the assignment is late, unless prior approval is given by the instructor.*

1. **Journal Club Project and Discussion (100 points)  *due June 12, 2017 and July 10, 2017***
   
   The goal of Journal Club Project is to use scientific evidence to guide practice, which helps to demonstrate the efficacy of various diagnostic tests and measures, interventions and prognostic indicators. The purpose of this project is to lead a journal club discussion based on one peer-reviewed journal article from your literature review project and complete the provided “Journal Club Guide” to help guide your discussion.

   This assignment will be completed as an individual project related your determined Literature Review/Research Project. Reference formatting must be done with appropriate AMA guidelines. Use your *Practical English Handbook* to ensure your paper is free of grammatical errors.

   You will need to submit your “Journal Club Guide” paper via the *dropbox for the course director*. If you do not have Microsoft Word, please save your written works as a .pdf version prior to uploading in the dropbox. You will receive written feedback from Course Director within 3 weeks of the due date.

   a. **Journal Club Guide form** → Students will select their own peer-reviewed journal article for the Journal Club Project based on their Literature Review. Only one article should be selected for review. Journal Club Guide form will be completed by the individual and submitted via dropbox to the course director and submitted to their specific Discussion Board on D2L to lead discussion by June 12, 2017.  **50 points**

   b. **Leading Discussion Board** → After posting your Journal Club form on your specific discussion board, you are required to participate and lead a discussion related to your “Journal Club Guide.” Ideas to help lead your discussion may be related to the article and how it should or should not be implemented into practice, if you currently participates in a journal club, and barriers to completing a journal club in your practice setting. The discussion boards often lead to very good discussions and can go in different directions. I would like to see active participation by everyone in the course. The discussion boards will be closed on July 10, 2017.  **25 points**

   c. **Participating in Classmate’s Discussion Board’s** → Active participation in the other groupstudent’s discussion boards is required. It is expected that you will individually make a substantive response in each of the other students’ discussion boards and read all posts in the each of the Journal Club discussion boards. This will be due on the date to the discussion boards closing, July 10, 2017.  **25 points**
2. **Research Literature Review (Pass/Fail).  *due July 24, 2017*  
Students must individually or in groups complete a comprehensive review of the literature related to their clinical questions/research topic and turn in a written literature review paper. This Literature Review will be used to help guide your research project that begins next semester. The Literature Review will be a Pass/Fail grade. All components of the Literature Review grading rubric at the end of the syllabus must be addressed to receive a passing grade. This project will be the initial phase of evidence gathering and organization for your research project which will begin this fall. This assignment must be typewritten and double spaced, using appropriate AMA formatting. Students are also expected to utilize the *Practical English Handbook* (or similar text) to ensure the papers are free from grammatical errors. It is recommended that this assignment will be completed in groups of 2-3. You may choose to complete your research as an individual, but many find it more beneficial to work on this in a group. **Groups need to be identified by the week of May 29**, so that we can assign you to faculty research advisors and you can begin work towards your Journal Club Project related to your Lit Review topic as soon as possible. Students should designate in an email to Dr. Torgrude specific details of how their group worked together to write the paper (ie, did everyone write or participate in editing, researching, etc). The assignment is **due via dropbox to Course Director by July 24, 2017 (11:59 PM)**.

3. **On-line IRB Training/CITI Training (P/F)  *due August 3, 2017*** 
***Please do earlier in the semester if you are planning to submit for IRB approval this summer***

You are required to complete the on-line Institutional Review Board Training. Registration is at the following Web site: [http://www.citiprogram.org](http://www.citiprogram.org). More information can be found at the Research Compliance Office/Human Subject website or they can be contacted at 677-6184. **Completion is due by August 3, 2017**.  
This will take approximately 10 hours of your time to complete. During the final step of registration, you will need to answer several questions.

- **If you have NOT completed the CITI training in the past please answer the questions as stated below:**
  - Question 1 — Human Subject Research  →  Choose “Group 2: Social Behavioral Research Investigators and Key Personnel.”
  - Question 2  →  Choose “I have not previously completed an approved Basic Course”
  - Question 3 – Responsible Conduct of Research  →  Choose “Social and Behavioral Responsible Conduct of Research Course”
  - Question 4  →  Choose “No”
  - Question 5  →  Choose “Not at this time”

- **At some point, you will also list yourself as a “student researcher” [may have changed slightly]. Make sure you complete the main course, not the refresher course, if you have not completed CITI training in the past.**

- **You will need to complete the following modules [names may have changed slightly]:**
  - Belmont Report and CITI Course Introduction
  - History and Ethical Principles – SBE
  - Defining Research with Human Subjects – SBE
  - The Federal Regulations – SBE
  - Assessing Risk – SBE
  - Informed Consent – SBE
  - Privacy and Confidentiality – SBE
  - Research with Prisoners – SBE
  - Research with Children – SBE
  - Research in Public Elementary and Secondary Schools – SBE
  - International Research – SBE
  - Internet-Based Research – SBE
  - Research & HIPAA Privacy Protections
  - Conflicts of Interest in Research Involving Human Subjects
  - University of South Dakota
If you HAVE completed part or all of the CITI training in the past, send your prior completion report to Dr. Torgrude. Dr. Torgrude will work with the IRB office to determine if you need to update or retake any new or current modules.

Each module will take 10-30 minutes. The course can be downloaded and a hard copy printed out. The course does not have to be completed in one sitting. The passing score required is 70% and is based on the overall score from all the required modules. **Once you have completed all required modules, you should save evidence of completion from the Web site [making sure all the required modules are included].** Please submit your “Coursework Requirements Report” and your “Coursework Transcript Report” in the D2L Drop box. Your Certification is good for two-three years, and then must be renewed.

This assignment is graded pass/fail. To pass this assignment you must submit (hard or electronic copy) a Completion Report “Coursework Requirements Report” and “Coursework Transcript Report”) by August 3, 2017 [5:00 PM]. Your report will include that the date completed and your score for each section. You will need to use your completion date for the IRB forms for USD. **You will also need to access this Web site periodically throughout your time at USD, so be sure to keep track of your username and password.**

4. **Class Participation (180 points)**
   Class participation is a large component of this class. Our focus, is to stimulate academic and clinical discussion of research and evidence as it applies to clinical decision making related to clinical application. The first requirement is to read “Discussion #1” and post a statement/introduction of your own using the “Discuss” in D2L (30 pts). “Discussion #2-6” will each be worth 30 points(postings and responses), for a total of 180 points for class participation. Please see each week’s discussion for specific due dates.

Refer to printed grading rubric for class participation at the end of the syllabus/

<table>
<thead>
<tr>
<th>Evaluative Item</th>
<th>Due Date</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Participation –</td>
<td>Will be noted on each week’s</td>
<td>180</td>
<td>64%</td>
</tr>
<tr>
<td>Per each week’s instructions (30 points</td>
<td>discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>each of the 6 weeks of discussions)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journal Club Project/Discussion</td>
<td>Due June 12, 2017/July 10, 2017</td>
<td>100</td>
<td>36%</td>
</tr>
<tr>
<td>Literature Review Final Written</td>
<td>Due July 24, 2017</td>
<td>P/F</td>
<td>NA</td>
</tr>
<tr>
<td>On-line IRB Training</td>
<td>Due August 3, 2017</td>
<td>P/F</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>280</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

**FEEDBACK**

Students should submit their written assignments via the dropbox option in D2L. If this option is too confusing, email the attachment directly to the course director using D2L email, as an attachment. Feedback on submitted papers will be included in the feedback portion of the dropbox, or in the form of an email or email attachment, directed specifically to the student. It is my goal to have all papers graded and returned within 3 weeks after their due date, hopefully sooner.

**POLICIES**

**Professional Behavior**
The student is referred to the Department of Physical Therapy Student Handbook, Section 2-IIC, for Physical Therapy Program expectations regarding Professional Behavior Requirements. When posting questions or statements on D2L for discussion purposes, please be courteous to all those in the class. Please type in complete
sentences, using appropriate grammar and follow the discussion board guidelines. Use only appropriate acronyms, for example UE for upper extremity.

**ATTENDANCE AND MAKE-UP POLICY**
The student is expected to watch/listen to the presentations each week in which the class is scheduled. As this is an on-line environment, please notify the course director of any planned absences. When a student has missed a learning experience it is the responsibility of the student to obtain the information necessary to complete the learning process. The student is referred to the Department of Physical Therapy Student Handbook Section II-A for further information regarding Attendance and Course of Study Preparedness.

**FREEDOM IN LEARNING**
Under Board of Regents and University policy student academic performance may be evaluated solely on an academic basis, not on opinions or conduct in matters unrelated to academic standards. Students should be free to take reasoned exception to the data or views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled. Students who believe that an academic evaluation reflects prejudiced or capricious consideration of student opinions or conduct unrelated to academic standards should contact department chairperson to initiate a review of the evaluation.

**ADA POLICY**
Any student who feels s/he may need academic accommodations or access accommodations based on the impact of a documented disability should contact and register with Disability Services during the first week of class. Disability Services is the official office to assist students through the process of disability verification and coordination of appropriate and reasonable accommodations. Students currently registered with Disability Services must obtain a new accommodation memo each semester. For information contact: Ernetta L. Fox, Director; Disability Services; Room 119 Service Center; (605) 677-6389; dservices@usd.edu.

**PLAGIARISM AND ACADEMIC DISHONESTY**
Plagiarism is defined as using the words and/or ideas of another and representing them to be your own, without proper credit to the author or source. Whether intentional or unintentional, plagiarism will result, at a minimum, in a grade of zero for that assignment.

Academic dishonesty is defined as, but not limited to the following: copying a classmate’s work, using crib notes during a test, stealing or conveying examination questions, informing classmates of information on practical examination, maintaining library materials so that classmates cannot utilize the materials, falsely representing clinical cases, turning in written assignments that are not authentic, or fabrication of any sort.

The University of South Dakota Board of Regents has established a policy for plagiarism that is firmly upheld by the USD Physical Therapy Program. No credit can be given for a dishonest assignment. At the discretion of the instructor, a student caught engaging in any form of academic dishonesty, including plagiarism, may be:
- Given a zero for that assignment.
- Allowed to rewrite and resubmit the assignment for credit.
- Assigned a reduced grade for the course.
- Dropped from the course.
- Failed in the course.

The USD Physical Therapy Program reserve the right to expel a student, based upon the severity of the academic transgression. Students are referred to the Department of Physical Therapy Student Handbook, Section 2-V, for Physical Therapy Program expectations regarding Academic Integrity.
PHTH 747 Course Schedule Summer Semester 2017

Week of May 15, 2017
- Read Syllabus and Welcome Letter
- Read Introductory powerpoint lecture #1/Readings
- Post Introduction and Discussion on “Discussion #1”
- Decide on Groups for Literature Review/Research Project (groups need to be identified by May 29)
- Begin work on Journal Club Project (relate article to Literature Review)

Week of May 22
- Read powerpoint lecture #2/Readings
- Read assigned readings
- Post on Discussion #2
- Continue working on Journal Club Project
- Begin working on CITI Training

Week of May 29
- No powerpoint lecture (Memorial Day holiday)
- Continue work on Journal Club Project (inform instructor of Literature Review topic)

Week of June 5
- Read powerpoint lecture #3/Readings
- Begin working on Literature Review (determine topic and inform instructor if this has not been completed already)

Week of June 12
  *Journal Club Project is due (submit to instructor and post to designated Discussion forum)*
- Read powerpoint lecture #4/Readings
- Post on “Discussion #3”
- Continue working on Literature Review

Week of June 19
- Read powerpoint lecture #5/Readings
- Continue working on Literature Review
- Participate in each student’s Journal Club Discussion Boards

Week of June 26
- Read powerpoint lecture #6/Readings
- Post on “Discussion #4”
- Continue working on Literature Review
- Participate in each student’s Journal Club Discussion Boards

Week of July 3
- (4th of July Holiday)
- Read assigned readings
- Work on Literature Review (due July 24)
- Participate in each group’s Journal Club Discussion Boards (due July 10)
- Continue working on CITI Training
Week of July 10

***Journal Club Discussion Boards close***
Read powerpoint lecture #7/readings
Post on “Discussion #5”
Continue working on CITI Training

Week of July 17

***Literature Review is due***
Read powerpoint lecture #8/readings

Week of July 24
Read powerpoint lecture #9/readings
Post on “Discussion #6”

Week of July 31
*CITI Training/On-line IRB is due.*
Read powerpoint lecture #10/readings
PHTH 747 Class Discussion/Participation Rubric

Discussion #1 Introduction (30 points) Full points will be awarded for posting.

Discussions #2-#6 30 points for each Graded per rubric below.

Total of 180 points give for class discussion/participation

**The instructor reserves the right to determine if comments or questions are substantive in order to assign the appropriate grade.

<table>
<thead>
<tr>
<th>Answers Questions</th>
<th>Level 1</th>
<th>Level 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posting a response to weekly questions/discussions</td>
<td>3 points Discussion question answered</td>
<td>0 points Did not answer question/discussion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initial Postings</th>
<th>Level 3</th>
<th>Level 2</th>
<th>Level 1</th>
<th>Level 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantiveness of initial posting</td>
<td>9 points Provides complete substantive posting to question/discussion</td>
<td>6 points Provides postings to question, but minor improvements could be made to breadth and/or depth of the posting</td>
<td>3 points Answers a question or questions, but major improvements to breadth and/or depth needed</td>
<td>0 points Does not provide substantive posting</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responding to Peer Postings</th>
<th>Level 1</th>
<th>Level 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responds to at least 2 peer postings</td>
<td>3 points Responds to at least 2 peer postings</td>
<td>0 points Does not respond to at least 2 peer postings</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substantiveness of Response</th>
<th>Level 3</th>
<th>Level 2</th>
<th>Level 1</th>
<th>Level 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantiveness of response to peer postings</td>
<td>9 points Provides complete substantive response to 2 peer postings</td>
<td>6 points Provides responses to 2 peer postings, but minor improvements could be made to breadth and/or depth of the responses</td>
<td>3 points Provides responses to 2 peer postings, but major improvements could be made to breadth and/or depth the responses or provides response to at least 1 peer postings</td>
<td>0 points Does not provide response to at least 1 peer postings</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reading of peer postings</th>
<th>Level 2</th>
<th>Level 1</th>
<th>Level 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading of peer postings and responses</td>
<td>6 points Read 100% of peer postings and responses</td>
<td>3 points Read 50 - 99% of peer postings and responses</td>
<td>0 points Read 49 % or less of peer postings and responses</td>
</tr>
</tbody>
</table>
# Literature Review Grading Form

## Review of Literature

### Content

<table>
<thead>
<tr>
<th>Introductory Information</th>
<th>Introduction is thorough but concise. Background information and problem are stated clearly. Appropriate information is included in the introduction. Attention has been given to organization.</th>
<th>Introduction is thorough but could be more concise. Background information and problem are stated clearly. Most of the information included in the introduction is appropriate. Attention has been given to organization.</th>
<th>Introduction is adequate but may not be thorough or concise. Some information about background or problem may not be appropriate for this section. For the most part, attention has been given to organization.</th>
<th>Introduction is not thorough. Important information is missing or overlooked. This section lacks focus and organization.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10/9</td>
<td>8/7/6</td>
<td>5/4/3</td>
<td>≤ 2</td>
</tr>
<tr>
<td>Literature Review Analysis</td>
<td>Review of literature is thorough and concise. Information from reference articles is appropriate and is well integrated and synthesized. Attention has been given to organization.</td>
<td>Review of literature is thorough but could be more concise. Most of the information included from the reference articles is appropriate and is integrated and synthesized the majority of the time. Attention has been given to organization.</td>
<td>Review of literature is adequate but may not be thorough or concise. Some information from the reference articles may not be appropriate. Information integration and synthesis is minimal. For the most part, attention has been given to organization.</td>
<td>Review of literature is not adequate. Important information is missing or overlooked. Information is not integrated or synthesized. This section lacks focus and organization.</td>
</tr>
<tr>
<td></td>
<td>30/29/28/27</td>
<td>26/25/24/23/22</td>
<td>21/20/19/18/17/16/15</td>
<td>≤ 14</td>
</tr>
</tbody>
</table>

## Sources & Citations

<p>| Appropriate Type of Sources | &gt;90% of the sources are appropriate (i.e., refereed journals, primary sources, etc). | 75 to 89% of the sources are appropriate (i.e., refereed journals, primary sources, etc). | 60 to 74% of the sources are appropriate (i.e., refereed journals, primary sources, etc). | &lt; 60% of the sources are appropriate (i.e., refereed journals, primary sources, etc). |
|                           | ≤10% of the sources are secondary sources, books, Web-based materials, etc. | 11 and 25% of the sources are secondary sources, books, Web-based materials, etc. | 26 and 40% of the sources are secondary sources, books, Web-based materials, etc. | &gt; 40% or more of the sources are secondary sources, books, Web-based materials, etc. |
|                           | 7/6                                                                                                           | 9/4                                                                                                           | 3/2                                                                                                           | ≥ 1                                                                                                           |
| Sufficient Number of Sources | The number of sources utilized is highly reflective of the available literature addressing the given research problem/question/topic. | The number of sources is moderately to minimally reflective of the available literature addressing the given research problem/question/topic. | There is an insufficient number of available sources utilized to address the given research problem/question/topic. | There is an insufficient number of available sources utilized to address the given research problem/question/topic. |
|                           | 7/6                                                                                                           | 5/4/3                                                                                                          | ≤ 2                                                                                                           | ≥ 2                                                                                                          |
| Reference Page | This reference page follows AMA formatting. There are no errors with AMA formatting. | This reference page follows AMA formatting. There are less than 5 errors with AMA formatting. | This reference page follows AMA formatting. There are 5-10 errors with AMA formatting. | The reference page does not follow AMA formatting or has major errors (&gt;10) in AMA formatting. |
|                           | 6                                                                                                              | 5/4                                                                                                           | 3/2                                                                                                           | ≤ 1                                                                                                          |</p>
<table>
<thead>
<tr>
<th>Technical Writing</th>
<th>Grammar and Word Usage</th>
<th>Editing</th>
<th>Vocabulary</th>
<th>Writing Style</th>
<th>AMA Formatting throughout the paper</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>There are minimal to no errors (5 or less) in grammar and word usage, including but not limited to, verb tense, subject verb agreement, modifiers, parallel construction, and singular/plural usage. 8/7</td>
<td>There are some errors (5-10) in grammar and word usage, including but not limited to, verb tense, subject verb agreement, modifiers, and parallel construction. 6/5/4</td>
<td>Vocabulary is appropriate for the given research topic and the manuscript audience. 8/7</td>
<td>The writing style is appropriate for the given research topic and manuscript audience. The writing style flows appropriately between paragraphs / sections / topics. Attention has been given to organization. 8/7</td>
<td>The research manuscript follows AMA guidelines for formatting throughout the paper, including, but not limited to, reference citations within the text of the paper, use of numbers, abbreviations, and quotations. There are no errors with AMA formatting. 8/7</td>
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<td>There are some errors (5-10) in editing, including but not limited to, spelling, capitalization, and punctuation. 6/5/4</td>
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