

CSC481/ISS481/MTH481 Senior Seminar (1 unit)

Time and Place: Mondays 4:05-5:15 RS13

Instructor: Jesus Jimenez, Ph.D.

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Office Hours:

Monday	11:00 am – 12:00 pm. and 1:00 – 2:30 pm
Wednesday	11:00 am – 12:00 pm and 1:00 – 2:30 pm
Friday	11:00 am – 12:00 pm

These are the hours that I will definitely be available. You can come by my office any time and if I am free I will help you. If you have a question or just want to hang out, come by my office or send me email.

Course Description:

This one-unit capstone course is a seminar in which faculty members, some guests, and the students give lectures on topics of general interest in mathematics. Graded Credit/No Credit.

Texts:

- *Forgetting Ourselves on Purpose: Vocation and the Ethics of Ambition* by Brian Mahan
- *Living Your Heart's Desire: God's Call and Your Vocation* by Gregory Clapper

Content:

This one-unit capstone course is a seminar in which students give lectures on topics of general interest in computer science, information systems and mathematics. Issues related to vocation are discussed. Prerequisite: Senior standing or Junior standing if a December graduate

Learning Outcomes:

This class is a capstone course for our majors. The learning outcomes are:

- Students will be able to apply their technical knowledge to solve problems.
- Students will be able to speak about their work with precision, clarity and organization.
- Students will be able to write about their work with precision, clarity and organization.
- Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
- Students will be able to gather relevant information, examine information and form a conclusion based on that information.
- Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats.

University Mission:

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

Department Mission:

The Mathematical, Information, and Computer Sciences department at Point Loma Nazarene University is committed to maintaining a curriculum that provides its students with the tools to be productive, the passion to continue learning, and Christian perspectives to provide a basis for making sound value judgments.

Grading:

This class is graded pass/fail as determined by requirements described in this syllabus and on the class schedule. You will have a number of intermediate assignments that you must complete and turn in via Canvas.

Note that there are five ways to fail: lack of participation (e.g. missing more than one class, not turning in vocation reflections or texting/doing email during class), missing the ETS exam, missing the mock interview, missing the GE exam, getting a poor grade on Oral or Written presentation.

You will not get credit for an item unless it appears to them that the expected amount of time, as defined below, has been spent on each item

Literature Review/Background Reading	10 hours
In-depth reading / outline prep	10 hours
1 st paper draft	5 hours
PowerPoint draft	4 hours
Paper/PPT revisions	6 hours

For each day that an assignment is late, **one page will be added to the length of the written report.** For example, if the literature review is 2 days late, and the PowerPoint draft is 1 day late, you will have to write 3 extra pages.

The rubrics use a 1-4 grading scale with 4 being a high score. You will not pass if you receive an average of less than 2.5 on either your written report or your oral report. You can see the rubrics at the end of this document.

General Education Exam:

As per the assessment requirements of the school, a GE exam will be administered in an effort to determine how well our GE classes have met PLNUs objectives. The date is February 22nd. Should you be absent on this date, you will have to take the exam at another time. **Class will be from 4:00-5:30 on that day.**

ETS Exam:

The two hour ETS field exam will be given as a mid-term for the course. This exam covers a wide range of topics from your four years of course work. CS and IS majors will take the CS exam and Math majors will take the Math exam. **Please note that the class will meet until 6:00 on February 29th, the day of the exam.** If you do not take an exam, this is grounds for failing the class. Late exams may be taken only by prior arrangement or with a documented emergency. I must participate in the decision for you to miss the exam; this means that you need to phone me before missing the exam.

Writing About Vocation:

You will be given a weekly reading assignment from one of the two texts on vocation. Along with that reading you will be given a list of questions for reflection. Your responses to those comments are due at **11:00 p.m. on the Saturday night before the next class** (see schedule for the readings). Inadequate participation in written assignments could lead to a failing grade.

Mock Interviews and Resume Review:

Everyone in the class will be expected to schedule a mock interview and resume review through the Office of Strengths and Vocation (OSV) which is tentatively set for on March 21. Details will be handed out in class.

Senior Seminar Written and Oral Report:

Near the start of the semester you will work with a faculty member in your major to select a topic for giving a written (min 9 pages including abstract, bibliography, and table of contents) and an oral (20 minutes) report. This should be done using technology and terminology standard to your discipline. The reports will be scored by faculty using rubrics (which is attached to the end of this assignment). Your topic must include things that you have learned outside of regular coursework.

You may report on your honors thesis, your service learning project, your internship, or a topic from your discipline that you want to learn more about. If the report is based on work done with a group, you must do your own unique presentation and report. The material must not overlap substantially with material presented by others in the class. It may be necessary to do additional work or to concentrate on different aspects of your project. Be sure to discuss this with your advisor before working on your report or presentation.

Reference Selection Assignment:

Once you and your faculty mentor have identified the specific topic that you will be using for your presentation and report, you need to build a good foundation of references for the report. The following steps should guide you in the process:

- Define carefully the topic to be discussed.
- Determine key concepts or information needed to present this topic.
- Select resources necessary to provide the information (note that this should be more than websites). It is not sufficient to use only "what my boss said" from your internship experience.
- Explain your reasoning for selecting each of the resources that you will be using.

What to turn in: A brief document 1-3 pages that provides the information listed above should be turned in to the course instructor. You should also take a look at the Information Literacy Rubric to be sure that you are on track with what you are providing. Your reference selection assignment will be due roughly three weeks into the course (see the class calendar). Before you finish your project, you may find that you need additional references but the expectation is that your literature review will be thorough and that your final bibliography will not be significantly different from the list you turn in initially.

Written Report Instructions:

You will be writing a paper of at least 9 pages in length (including abstract, bibliography, and table of contents). Please be sure to pay attention to all of the critical elements of a well written paper:

- Clear structure that includes and abstract, table of contents, clear sections, a summary/conclusion and a bibliography)
- A clear statement at the beginning of the paper about the main topic covered by the paper
- Carefully crafted language
- Good transitions between sections
- Appropriate grammar and spelling
- Do not use the first person in writing the paper, good scientific writing is always in the third person. Your paper should not read like a summer travel log.
- Careful use of references to support your points. Ideas should be attributed and references should be quoted or cited in the body of the paper as appropriate and there should be a link between the citation and the bibliography (pick one style and stick with it - MLA or APA is fine).
- You should not just report the ideas of others but should synthesize them to draw your own conclusions.

Before you turn in your paper, look at both the Information Literacy, Critical Thinking and Written Report rubrics and verify that you have covered all topics.

Note that your paper will be peer reviewed in class. You should make adjustments to your paper based on the input of your fellow students before turning in the paper.

What to turn in: Your final paper and your self-assessment of your own work using the Information Literacy, Critical Thinking and Written Report Rubrics should be turned in to the course instructor.

Oral Presentation Instructions:

You will give a 13 minute presentation on your topic in class (10 minutes of presentation and 3 minutes for questions). Here are some important things to keep in mind:

- You should focus on extracting the most relevant information from your paper for the presentation.
- 15 minutes is a much shorter period of time than you imagine, practice repeatedly and time yourself.
- Project your slides in a classroom and stand at the back of the room. Can you see all important graphics and figures? If not, make the text larger.
- Find ways to engage the class. Have them do an activity, answer a question, make a guess about an example, etc.
- You should not read your slides during the presentation. You should be familiar with the material and the order of the slides so that you can make eye contact with the class. Practice, practice, practice.
- While you are practicing, have someone record you using a phone or camera. When you look at yourself talking you will gain some insights about good and bad habits and can prepare your final talk accordingly.
- Empty your pockets.... One of the most annoying tics that people display when giving a talk is rattling keys, change, etc. in their pockets. Remove the temptation.

Be sure to take a look at the Oral Presentation Rubric before you give your presentation. The rubric will guide you in making sure that your slides are well prepared and that you are ready to talk to a group.

What to turn in: Provide the course instructor with a final printed copy of your PowerPoint slides.

Final Exam: Date and Time:

The final exam date and time is set by the university at the beginning of the semester and may not be changed by the instructor. Only in the case that a student is required to take three exams during the same day of finals week is an instructor authorized to change the exam date and time for that particular student. We will meet at the final exam time for a “summative experience.” The final is **FRIDAY May 6th from 4:30-7:00 PM.** (the final involves dinner).

Attendance:

Attendance is expected at each class session. In the event of an absence you are responsible for the material covered in class and the assignments given that day.

Regular and punctual attendance at all classes in which a student is registered is considered essential to optimum academic achievement. Therefore, regular attendance and participation in each course are minimal requirements to be met. There are no allowed or excused absences except as approved in writing by the Provost for specific students participating in certain university-sanctioned activities. Excused absences still count toward the 10%-20% limits, but allow students to make up work, quizzes, or tests missed as a result of a university-sanctioned activity. Activities of a unique nature, such as labs or other activities identified clearly on the syllabus, cannot be made up except in rare instances when instructors have given advanced, written approval for doing so. Whenever the number of accumulated

absences in a class, for any cause, exceeds ten (10) percent of the total number of class meetings, the faculty member should send an e-mail to the student and the Vice Provost for Academic Administration (VPAA) warning of attendance jeopardy. If more than twenty (20) percent of the total number of class meetings is reported as missed, the faculty member or VPAA may initiate the student's de-enrollment from the course without further advanced notice to the student. If the date of de-enrollment is past the last date to withdraw from a class, the student will be assigned a grade of W or WF consistent with university policy in the Grading section of the catalog. There are no refunds for courses where a de-enrollment was processed. For more details see the PLNU catalog:

http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278#Class_Attendance

Class Enrollment:

It is the student's responsibility to maintain his/her class schedule. Should the need arise to drop this course (personal emergencies, poor performance, etc.), the student has the responsibility to follow through (provided the drop date meets the stated calendar deadline established by the university), not the instructor. Simply ceasing to attend this course or failing to follow through to arrange for a change of registration (drop/add) may easily result in a grade of F on the official transcript.

Academic Accommodations:

While all students are expected to meet the minimum academic standards for completion of their courses as established by the instructors, students with special needs may require academic accommodations. At Point Loma Nazarene University, students requesting academic accommodations must file documentation with the Disability Resource Center (DRC), located in the Bond Academic Center. Students can also reach the Disability Resource Center by phone at 619-849-2486 or by e-mail at DRC@pointloma.edu. Once the student files documentation, the Disability Resource Center contacts the student's instructors and provides written recommendations for reasonable and appropriate accommodations to meet the individual needs of the student. This policy assists the university in its commitment to full compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities (ADA) Act of 1990, and ADA Amendments Act of 2008, all of which prohibit discrimination against students with special needs and guarantees all qualified students equal access to the benefits of PLNU programs and activities. For more details see the PLNU catalog:

http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278#Academic_Accommodations

Students with learning disabilities who may need accommodations should discuss options with the instructor during the first two weeks of class.

Academic Honesty:

The Point Loma Nazarene University community holds the highest standards of honesty and integrity in all aspects of university life. Any violation of the university's commitment is a serious affront to the very nature of Point Loma's mission and purpose. Violations of academic honesty include cheating, plagiarism, falsification, aiding academic dishonesty, and malicious interference. The details of PLNU's meaning of each of these words can be found in the PLNU catalog at:

http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278#Academic_Honesty

A student remains responsible for the academic honesty of work submitted in PLNU courses and the consequences of academic dishonesty beyond receipt of the final grade in the class and beyond the awarding of the diploma. Ignorance of these catalog policies will not be considered a valid excuse or defense. Students may not withdraw from a course as a response to a consequence.

A student who is caught cheating on any item of work will receive a zero on that item and may receive an "F" for the semester. See the PLNU Catalog for a further explanation of the PLNU procedures for academic dishonesty

(http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278#Academic_Honesty).

Copyright Protected Materials:

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

Credit Hour:

In the interest of providing sufficient time to accomplish the stated course learning outcomes, this class meets the PLNU credit hour policy for an 1 unit class delivered over 16 weeks. Specific details about how the class meets the credit hour requirements can be provided upon request.

Week	Monday – Topic and assignment due	Friday – Assignments due in Canvas – these are due by 11:59 PM	Saturday – Reading Assignment due by 11 PM
1	Jan 11 (Tuesday) Orientation	Jan 15	Jan 16
2	Jan 18 MLK Day	Jan 22 Report topic submission – 1-2 sentence description.	Jan 23 Reflections from Mahan Chapter 1
3	Jan 25 Student introductions Vocation: Mahan Chapter 1 discussion Discuss resume/cover letter	Jan 29 Resume Draft Cover Letter Draft	Jan 30 Reflections from Mahan Chapter 2
4	Feb 1 Vocation: Mahan Chapter 2 discussion Peer review of resume/cover letter Sign up for Mock Interviews	Feb 5 Literature review draft due	Feb 6 Reflections from Mahan Chapter 3
5	Feb 8 Vocation: Mahan Chapter 3 discussion Meet with faculty advisor to discuss literature review and outline.	Feb 12 Final literature review along with Information Literacy self-review due	Feb 13 Reflections from Mahan Chapter 4
6	Feb 15 Presentation dates determined Vocation: Mahan Chapter 4 discussion Quantitative Assignment	Feb 19 Paper outline due	Feb 20 No writing this week.
7	Feb 22 GE Test	Feb 26	Feb 27 Reflections from Mahan Chapter 5
8	Feb 29 Vocation: Mahan Chapter 5 discussion ETS Pizza and class until 6:00	Mar 4	Mar 5 Reflections from Clapper Chapter 1 Written Report draft #1 due Power Point draft #1 due
9	Mar 7 Spring Break – no class	Mar 11 Spring Break	Mar 12 Spring Break
10	Mar 14 Vocation: Clapper Chapter 1 discussion Meet with faculty advisor to review written report draft and PPT draft	Mar 18 Written Report draft #2 due Power Point draft #2 due	Mar 19 Reflections from Clapper Chapter 2
11	Mar 21 Vocation: Clapper Chapters 2 discussion Peer review of written report Mock interviews with OSV (tentative)	Mar 25	Mar 26 Easter Break – no reading
12	March 28 Easter – no class	Apr 1	Apr 2 Self-review with critical thinking rubric Self-review with written report rubric Self-review with last part of information literacy rubric

Week	Monday – Topic and assignment due	Friday – Assignments due in Canvas – these are due by 11:59 PM	Saturday – Reading Assignment due by 11 PM
13	April 4 4 students to Present	Apr 8 Final Written Report due no later than today – include self-review with rubrics	Apr 9 Reflections from Clapper Chapter 3
14	Apr 11 Vocation: Clapper Chapter 3 discussion 4 students present	Apr 15	Apr 16 Reflections from Clapper Chapter 4
15	Apr 18 Vocation: Clapper Chapter 4 discussion 4 students present	Apr 22	Apr 23 Reflections from Clapper Chapter 5
16	Apr 25 Vocation: Clapper Chapter 5 discussion 4 students present	Apr 29	Apr 30 Final Vocation Questions
17	May 6 Friday 3 Presentations + Dinner Summative Experience 4:30-7:00 – includes dinner *****		

MICS Oral Presentation Rubric Update

Criteria	Outstanding	High Satisfactory	Low Satisfactory	Unsatisfactory
Command of background material	<ul style="list-style-type: none"> <input type="checkbox"/> Clearly knows material and key facts by memory <input type="checkbox"/> Expands on PPT slides <input type="checkbox"/> Content appropriate for audience 	<ul style="list-style-type: none"> <input type="checkbox"/> Clearly knows key facts with a few memory slips <input type="checkbox"/> Some expansion on PPT slides <input type="checkbox"/> Partial audience adaptation of content 	<ul style="list-style-type: none"> <input type="checkbox"/> Reads some information; knows some facts from memory <input type="checkbox"/> No expansion of PPT slide content <input type="checkbox"/> Little audience adaptation of content 	<ul style="list-style-type: none"> <input type="checkbox"/> Reads sentences from slides <input type="checkbox"/> Dependent on notes <input type="checkbox"/> Lacks audience adaptation of content
Organization	<ul style="list-style-type: none"> <input type="checkbox"/> Clear and concise outline <input type="checkbox"/> Relevant graphics and key text items on slides <input type="checkbox"/> Presentation length is +/- 30 seconds of time limit 	<ul style="list-style-type: none"> <input type="checkbox"/> Clear outline <input type="checkbox"/> Too much information on slides (not concise) <input type="checkbox"/> +/- 1 minute of time limit 	<ul style="list-style-type: none"> <input type="checkbox"/> Some sense of outline <input type="checkbox"/> Too much detailed information on slides <input type="checkbox"/> +/- 1:30 of time limit 	<ul style="list-style-type: none"> <input type="checkbox"/> No clear outline <input type="checkbox"/> Slides are in paragraphed; too much detailed information on one slide <input type="checkbox"/> +/- 2 minutes of time limit
Oral Presentation skills	<ul style="list-style-type: none"> <input type="checkbox"/> Clearly has practiced several times; smooth transitions <input type="checkbox"/> Engages audience in content at least twice and engagement is well connected to talk (questions, examples, etc) <input type="checkbox"/> Free of disfluencies (ah, uhm) <input type="checkbox"/> Is clearly heard in the room and uses inflection for emphasis <input type="checkbox"/> Engaged audience through eye contact <input type="checkbox"/> Engaged audience through gestures 	<ul style="list-style-type: none"> <input type="checkbox"/> Has practiced but transitions are not smooth <input type="checkbox"/> Engages audience at least once in content (questions, examples, etc.) and engagement is well connected to the talk. <input type="checkbox"/> A few disfluencies (ah, umh, er) <input type="checkbox"/> Can be understood most of the time and uses some inflection <input type="checkbox"/> Some engagement of audience through eye contact <input type="checkbox"/> Some engagement of audience through gestures 	<ul style="list-style-type: none"> <input type="checkbox"/> Has practiced presentation but cannot verbally make transitions between slides <input type="checkbox"/> Audience engagement at least once with content (questions, examples, etc.) but it is not well connected to the talk. <input type="checkbox"/> Many disfluencies (ah, umh, er) <input type="checkbox"/> Can sometimes be understood and uses little inflection <input type="checkbox"/> Infrequent eye contact <input type="checkbox"/> Distracting gestures or mannerisms 	<ul style="list-style-type: none"> <input type="checkbox"/> Clearly did not practice presentation; Does not anticipate content of next slide <input type="checkbox"/> No audience involvement <input type="checkbox"/> Disfluencies (ah, umh, er) detract from presentation <input type="checkbox"/> Cannot be heard and/or speaks in a monotone <input type="checkbox"/> Little audience awareness or eye contact <input type="checkbox"/> Frequent distracting gestures or mannerisms
Use of Presentation Tools	<ul style="list-style-type: none"> <input type="checkbox"/> PPT background is matched to content, legible font, seamless transitions <input type="checkbox"/> Graphics imbedded and matched to topic, necessary hyperlinks work 	<ul style="list-style-type: none"> <input type="checkbox"/> Appropriate PPT slide backgrounds, transitions & font <input type="checkbox"/> Most graphics imbedded and matched to topic, most necessary hyperlinks work 	<ul style="list-style-type: none"> <input type="checkbox"/> Distracting PPT slide backgrounds and transitions, font hard to read <input type="checkbox"/> Some inappropriate graphics or use of PPT embellishments, necessary hyperlinks don't work 	<ul style="list-style-type: none"> <input type="checkbox"/> No attention given to PPT slide backgrounds and transitions, font illegible <input type="checkbox"/> Distracting use of embellishments, graphics not connected to topic

Ability to field questions	<input type="checkbox"/> Able to answer questions clearly and without hesitation and prepared material to answer anticipated questions	<input type="checkbox"/> Can answer all questions with some hesitation	<input type="checkbox"/> Able to answer half of the questions with hesitation	<input type="checkbox"/> Unable to answer any questions
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Written Report Rubric

Criteria	Outstanding	High Satisfactory	Low Satisfactory	Unsatisfactory
Bibliography and supporting documents	<input type="checkbox"/> Multiple references from distinct reputable sources <input type="checkbox"/> References cited in the body of the document	<input type="checkbox"/> Most references from distinct reputable sources <input type="checkbox"/> Some citation of references in the body of the document	<input type="checkbox"/> Some references from reputable sources <input type="checkbox"/> Limited citation of references in the body of the document	<input type="checkbox"/> No bibliography or all references from untrusted sites on the internet <input type="checkbox"/> No citation of references in the body of the document
Organization	<input type="checkbox"/> Conveys a central theme with all ideas connected, arrangement of ideas clearly related to topic <input type="checkbox"/> Clear introduction, body (with sections), and conclusion includes summary and closure <input type="checkbox"/> Includes both an abstract and table of contents	<input type="checkbox"/> Conveys a central idea or topic with some ideas connected to the topic <input type="checkbox"/> Includes introduction, body and conclusion <input type="checkbox"/> Includes abstract and table of contents (one partial and one complete)	<input type="checkbox"/> Attempts to focus on an idea or topic with many ideas not connected to the topic <input type="checkbox"/> Introduction, body, conclusion detectable but not clear <input type="checkbox"/> Includes partial abstract and partial table of contents	<input type="checkbox"/> Has little or no focus on central idea or topic <input type="checkbox"/> Introduction, body or conclusion absent <input type="checkbox"/> No abstract or table of contents
Grammar and spelling	<input type="checkbox"/> No use of first- person tense <input type="checkbox"/> No grammatical or spelling errors	<input type="checkbox"/> Few uses of the first-person tense <input type="checkbox"/> Few grammatical and spelling errors	<input type="checkbox"/> Several uses of the first- person tense <input type="checkbox"/> Some grammatical and spelling errors	<input type="checkbox"/> Written in first-person tense <input type="checkbox"/> Many grammatical and spelling errors
Depth of information	<input type="checkbox"/> Appropriately synthesizes information from multiple distinct sources <input type="checkbox"/> Draws conclusions and personal insights from synthesis <input type="checkbox"/> Has the minimum number of pages including penalty pages; subject coverage is excellent	<input type="checkbox"/> Synthesis of information from at least three distinct sources <input type="checkbox"/> At least two personal insights or conclusions stated <input type="checkbox"/> Has the minimum number of pages including penalty pages; subject coverage is good	<input type="checkbox"/> Synthesis of information from at least two distinct sources <input type="checkbox"/> At least one personal insight or conclusion stated <input type="checkbox"/> Has the minimum number of pages including penalty pages; subject coverage is adequate	<input type="checkbox"/> Summary reporting of information without synthesis <input type="checkbox"/> No personal insights <input type="checkbox"/> Does not have the minimum number of pages including penalty pages
Clarity of writing	<input type="checkbox"/> Sentences flow	<input type="checkbox"/> Good sentence structure	<input type="checkbox"/> Occasional poor sentence structure	<input type="checkbox"/> Frequent poor sentence structure

<input type="checkbox"/> Smooth transitions between paragraphs	<input type="checkbox"/> Adequate transitions between paragraphs	<input type="checkbox"/> Transitions between paragraphs unclear	<input type="checkbox"/> Lacked transitions between paragraphs
<input type="checkbox"/> Any and all terms and acronyms are defined	<input type="checkbox"/> Most terms and acronyms are defined	<input type="checkbox"/> Some terms and acronyms are defined	<input type="checkbox"/> Many terms and acronyms are undefined
<input type="checkbox"/> Provides evidence to support points	<input type="checkbox"/> Lacks support for some points	<input type="checkbox"/> Provides minimal support for points	<input type="checkbox"/> Ideas not supported

MICS Information Literacy Rubric
Adapted from the AAC&U Value Rubric

	Capstone - 4	Milestone - 3	Milestone - 2	Benchmark - 1
Determine the Extent of Information Needed	Effectively defines the scope of the research question or thesis. Effectively determines key concepts. Types of information (sources) selected directly relate to concepts or answer research question.	Defines the scope of the research question or thesis completely. Can determine key concepts. Types of information (sources) selected relate to concepts or answer research question.	Defines the scope of the research question or thesis incompletely (parts are missing, remains too broad or too narrow, etc.). Can determine key concepts. Types of information (sources) selected partially relate to concepts or answer research question.	Has difficulty defining the scope of the research question or thesis. Has difficulty determining key concepts. Types of information (sources) selected do not relate to concepts or answer research question.
Access the Needed Information	Accesses information using effective search strategies and most appropriate information sources.	Accesses information using variety of search strategies and some relevant information sources.	Accesses information using simple search strategies, retrieves information from limited and similar sources.	Accesses information randomly, retrieves information that lacks relevance and quality.
Evaluate Information and its Sources Critically	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Use Information Effectively to Accomplish a Specific Purpose	Communicates, organizes and synthesizes information from sources. Supports all points in the paper.	Communicates, organizes and synthesizes information from sources. Supports most points in the paper.	Communicates and organizes information from sources. The information is not yet synthesized and/or supports only a few points.	Communicates information from sources. The information is fragmented and/or used inappropriately (misquoted, taken out of context, or incorrectly paraphrased, etc.).
Access and Use Information Ethically and Legally	Students use correctly all of the following information use strategies: <ul style="list-style-type: none"> • use of citations and references; • use of paraphrasing, summary, or quoting; • use of information in ways that are true to original 	Students use correctly three of the following information use strategies: <ul style="list-style-type: none"> • use of citations and references; • use of paraphrasing, summary, or quoting; • use of information in ways that are true to original 	Students use correctly two of the following information use strategies: <ul style="list-style-type: none"> • use of citations and references; • use of paraphrasing, summary, or quoting; • use of information in ways that are true to original 	Students use correctly one of the following information use strategies: <ul style="list-style-type: none"> • use of citations and references; • use of paraphrasing, summary, or quoting; • use of information in ways that are true to original

	<p>context;</p> <ul style="list-style-type: none">• distinguishes between common knowledge and ideas requiring attribution• and (where appropriate) demonstrates a full understanding of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.	<p>context;</p> <ul style="list-style-type: none">• distinguishes between common knowledge and ideas requiring attribution• and (where appropriate) demonstrates a full understanding of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.	<p>context;</p> <ul style="list-style-type: none">• distinguishes between common knowledge and ideas requiring attribution• and (where appropriate) demonstrates a full understanding of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.	<p>context;</p> <ul style="list-style-type: none">• distinguishes between common knowledge and ideas requiring attribution• and (where appropriate) demonstrates a full understanding of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.
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MICS Critical Thinking Rubric (2/6/13)

Adapted from the AAC&U Value Rubric

	Capstone – 4	Milestone -3	Milestone - 2	Benchmark -1
Explanation of issues	Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.	Issue/problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/evaluation. Viewpoints of experts are taken as fact, without question.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.