

COURSE SYLLABUS

COURSE INFORMATION

Lecture Day: Mondays
Lecture Time: 3:35 pm – 6:15 pm
Lecture Room: Virtual – Zoom Link on CANVAS

INSTRUCTOR

Instructor: Dr. Mohamed ElZomor
Office: EC 2955
Email: melzomor@fiu.edu
Office Hours: By appointment (email to schedule an appointment)

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PROFESSOR'S BACKGROUND

Dr. ElZomor is an Assistant Professor at Florida International University. His work focuses on integrating energy efficiency measures into building design, construction and operational processes. Specifically, he is interested in novel design activities that financially and technically define projects' scope and any associated risks.

Dr. ElZomor, was an Assistant professor at State University of New York (SUNY); where he introduced innovative models of education and paved for student successes. During his time at SUNY, he led student teams in various international competitions and steered them to winning awards. Dr. ElZomor not only focuses on developing his students' technical skills, but also their professional skills. He strongly believes that these are the tools that help students strive in their careers.

Before embarking on his academic career, he spent approximately a decade gaining valuable local and international construction management experience while working in the construction industry for different capacities, both in the office and the field. Mohamed held different positions as a project manager, planner, estimator, and control engineer with contract, procurement and costing responsibilities in varied types of projects and with consulting contractors and owners. ElZomor worked as a Project Manager for several years and delivered several complex projects one of which was an iconic multi-million office park.

Dr. ElZomor has taught a variety of topics, ranging from construction management, sustainability, architecture, design and energy conservation, construction material, methods and equipment and urban infrastructure anatomy. He holds a Bachelor of Science in Construction Engineering, Master of Engineering in Construction, Master of Science in Design and Energy Conservation and a Ph.D. in Construction Management from Arizona State University. He is a licensed engineer, member of the American Society of Civil Engineers (ASCE), the American Society for Engineering Education (ASEE), and is Arizona's United States Green Building Council Ambassador.

COURSE LOG DESCRIPTION

This course presents a study of the concepts and techniques of sustainable construction. An in-depth review of sustainable materials and construction techniques will be covered.

This is a Discipline-specific **Global Learning course** that counts towards your FIU Global Learning graduation requirement. The Global Learning Course Outcomes are listed in the subsequent section.

GLOBAL LEARNING OUTCOMES AND ASSESSMENTS

Students will be assessed for the following Global Learning Outcomes with specific course outcomes:

Global Awareness – Students will be able to Develop awareness about the interrelationships between social, environmental and economic sustainability construction aspects of our local and global built environments.

- Demonstrate scientific information and key concepts pertaining to challenges/impacts of climate change that underlie the fundamentals to the sustainability of our built environment. This will provide local and global sustainability systems with an emphasis on engineering and construction disciplines.
- Understand the global fundamental knowledge and background used for sustainability systems.
- Ability to use scientific knowledge to engage in critical thinking about sustainability issues and challenges that arise from the globalization and intercultural trends.
- Assessments for Global Awareness will include twofold: (1) In-class assessments about international perspectives and challenges of sustainable construction and (2) Student Individual Presentations addressing their awareness and judgement of sustainable construction. Both assessments will be evaluated using the appropriate rubrics that will be provided to students.

Global Perspective – Students will be able to conduct a multi-perspective analysis about the benefits and challenges of sustainable construction and the built environment as well as analyze the different sustainable certifications and criteria in residential, commercial, and infrastructure construction projects across the world including green and low-energy building strategies.

- Understand the principles of green building certifications and low-energy building strategies in various zones, climates and regions that contribute to the sustainability of our built environment.
- Develop analytical thinking skills, knowledge and gain attitudes of professionals through analyzing sustainable construction cases studies.
- Through the global perspective of sustainability, students will recognize the different benefits and challenges of sustainable construction from multiple stakeholders' perspectives including owners, contractors, consultants, municipalities, individuals and the community, etc...
- Assessment for the Global Perspective will be through twofold: (1) in-class engagement and taking part in discussions with peers and experts about issues involving various aspects and applicability of sustainable construction and the built environment and (2) Student LEED Presentation, which requires integrating case studies and examples of their construction sustainability perspectives. Both assessments will be evaluated using the appropriate rubrics that will be provided to students.

Global Engagement – Students will demonstrate willingness to engage in enhancing the sustainability of construction practice and understanding of their own impact onto the built environment while considering the local, global and intercultural sustainable challenges.

- Apply the basic principles of sustainable construction on their own buildings/units by (1) proposing bold solutions that advance sustainable building performance or (2) applying existing tools of sustainable strategies to their own buildings.
- Students will compare their suggestions and proposals in international contexts, to recognize the challenges facing local and global communities in their efforts to achieve a sustainable construction and built environment.
- Students will propose one sustainable activity that if adopted in their lives would support the built environment and will post it through Social media.
- Assessment for Global Engagement will be threefold: (1) creating written communications appropriate to the construction discipline by submitting an entry to an international competition that focuses on construction and sustainability; (2) develop biweekly homework submissions/discussions on Social Media or LMS course platform; and (3) make informed personal decisions about activities and actions that would reflect sustainable construction within commercial buildings through a final presentation. All assessments will be evaluated using the appropriate rubrics that will be provided to students.

COURSE LEARNING OUTCOMES

Upon completion of this course, students should be able to:

Course Learning Outcome (CLO)	SLO	Assessment
1. Understand the basic vocabulary for Sustainable Construction	18	Quiz, Midterm Exam
2. Identify the fundamental concepts of energy and science of climate that defines Sustainable Construction techniques	18	Quiz, Midterm Exam
3. Recognize the different certification tools in residential/commercial, and infrastructure construction projects	18	Quiz, Midterm Exam
4. Understand the principles of green building certifications (LEED) and low-energy building strategies	2, 18	Quiz, Student Individual Presentation
5. Develop analytical thinking skills, knowledge and gain attitudes of professionals through analyzing cases studies. Take part confidently in discussions with peers and experts about issues involving sustainable construction and the built environment.	2, 18	Team Project, Student Individual Presentation
6. Apply the basic principles of sustainable construction on buildings by (1) proposing bold solutions that advance sustainable building performance or (2) applying existing tools of sustainable strategies to buildings	2, 18	Final Project
7. Create (1) written communications appropriate to the construction discipline through Social Media and/or Report deliverables and (2) make informed personal decisions about activities and actions that would reflect sustainability of the built environment.		HM and Course-Project Deliverables

INSTRUCTIONAL METHODS

This is a three lecture hours per week class that requires active student participation. Students are encouraged and expected to read required materials ahead of class and engage in virtual/ classroom/online discussions, ask questions, and share relevant experiences with others. Throughout this course students will develop and prepare presentations, guide class discussions and will be assigned in-class and online activities to practice the covered materials. The instructor will use multiple means of communication and evaluations throughout the semester. Some examples for communication mediums are CANVAS emails and Online social media platforms (*Twitter, LinkedIn*); some examples of course evaluations are peer reviews, self-grading, Group members' grading their team and external guests. Students will be notified by the mean of grading for each deliverable.

TEXTBOOKS AND READING MATERIALS:

There will be two sources of readings for this course: (1) required textbook for this class, which will be used for Quizzes and Midterm and (2) journal readings to be used in discussions and for the presentations:

- Title: **Sustainable Construction: Green Building Design and Delivery (4th edition)**
Author: Charles Kibert - Publisher: Wiley, 2016 (ISBN: 9781119055174)

- An optional reading book for this class is: Title: *Sustainable Buildings and Infrastructure: Paths to the Future* (Author: Annie R. Pearce, Yong Han Ahn, HanmiGlobal Co, Ltd). A book with multiple international authors and international case studies covering buildings & Infrastructure sustainability.

All required reading materials will be available on CANVAS. The below are samples of the journal readings discussing sustainable construction with global perspectives. Those readings mainly focus on international sustainable issues and will be analyzed throughout the semester. Students will be required to search, identify and analyze similar journal readings and publications to support their discussions.

- Mundadi, A. D. U., Mikić, M., Kovačić, I., & Cekić, Z. (2014). Global perception of sustainable construction project risks. *Procedia-Social and Behavioral Sciences*, 119, 456-465.
- ELZomor, M., & Parrish, K. (2016). Investigating building construction process and developing a performance index. *Procedia Engineering*, 145, 211-218.
- Oke, A., Aghimien, D., Aigbavboa, C., & Musenga, C. (2019). Drivers of sustainable construction practices in the Zambian construction industry. *Energy Procedia*, 158, 3246-3252.
- Bamgbade, J. A., Kamaruddeen, A. M., Nawi, M. N. M., Yusoff, R. Z., & Bin, R. A. (2018). Does government support matter? Influence of organizational culture on sustainable construction among Malaysian contractors. *International Journal of Construction Management*, 18(2), 93-107.

EXAMINATION AND GRADING POLICY

The following criteria, weights, and grading scale will be used to calculate the Final Grade. The final grade for the course will be based on the student's understanding of the course material as evidenced by his/her performance on Participation/attendance, Quizzes, Midterm, Academic Article Analysis and Discussion in Class, Presentation/s, Term Project and assignments according to the following:

Deliverables	Qty	Weight	Grade	Scale
• Attendance, Discussion (GL), Activities and HM	20	20%	A	93 – 100%
• Reading Quizzes	5	15%	A-	90 – 92.9%
• Midterm	1	20%	B+	87 – 89.9%
• LEED Credit/s (<i>Presentation # 1</i>)	1	15%	B	83 – 86.9%
• Professional Development Presentation with Global Article Analysis - (GL) Deliverable (<i>In-class Pres. # 2</i>)	1	10%	B-	80 – 82.9%
• Final Project Sustainable Buildings Case Study (<i>Pres. # 3</i>)	1	20%	C+	77 – 79.9%
• <i>Extra Credit (Passing the LEED GA Exam)</i>	1	10%	D	70 – 76.9%
			E	60 – 69.9%

- Attendance, Participation and HM will be required during the semester. Every student is required to use social media (twitter) as a medium for communication in addition to CANVAS where students' participation and HM will be monitored and graded.
- These weights may be changed at the discretion of the instructor to reflect the emphasis placed on the material presented during the course. All examinations, homework, and other student work are the intellectual property of the student, but the instructor reserves the right to retain any and all student work for the purposes of record, exhibition, and instruction. Examination and homework assignment dates indicated in this syllabus are tentative and subject to change at the instructor's discretion according to class progress. It is the responsibility of the student to keep abreast of the class schedule. Absence from previously assigned meeting time is not accepted as a valid reason for missing any scheduled deliverable including Examination, Quiz, Presentation, Homework, etc.
- Quizzes usually start exactly at the beginning of the scheduled meeting time and lasts for approximately 10 minutes depending on the quiz. This is the only window to complete the quiz. Quizzes will have time limits and will include a deadline to complete them.
 - There will not be any makeups for the Quiz and it is part of your attendance.
 - Quizzes will be on CANVAS, please ensure having access to CANVAS through laptops, tablets, etc.
- Students will be required to actively participate in class discussions. Students will be advised to read articles and analyze them to be ready for in-class discussions. Those class discussions usually focus on correlating sustainable construction issues, challenges, advantages, across the globe thus supporting [GL](#).
- Students may be required to attend field trips either during class time or on weekends or on their own. The professor will inform the students ahead of those field trips so they may coordinate accordingly.
- Students are expected to work in groups or individuals for presentations. Presentations will be either presented virtually in-class or to be posted online before class time. Online submissions will have a deadline, and this will not be changed, please make sure to submit the presentation before meeting times.
- For the LEED presentation, an individual presentation is required. Each student will develop and present an assessment of a building in LEED V.4, which is to be presented for the rest of the class.
- For the [GL](#) Deliverable Professional Development Presentation, it will require selecting an article with an International/Global focus to be discussed and presented in class.

This class will provide sessions and training to develop your Professional Presentation Skills and so students will be required to demonstrate their progress in such skills during each presentation.
- Test and quiz dates are listed on the course schedule, all tests are comprehensive. Tests will cover all materials up to the corresponding date of the test. All tests and quizzes will be closed book unless otherwise indicated.
- Final Project | Sustainable Buildings Case Study will require students to conduct their own assessment of sustainability and integrate a SWOT (Strengths, Weaknesses, Opportunities, Threats) analyses that include an international/global comparison/s thus endorsing [GL](#).

ATTENDANCE POLICY and VIRTUAL CLASS ENVIRONMENT:

Class attendance is mandatory. Absence from class may result in the loss of attendance points. Much of the learning of concepts that occurs during this course happens during course hours. If you are absent, for whatever reason, you lose the benefit of collaborating with your colleagues and the faculty. It is recommended for students who are able to anticipate an absence to notify the instructor in advance. Absent students will be responsible for all material covered in class, and for completing any and all assigned work, regardless of whether the absence was excused or unexcused. It is the student's responsibility to do whatever is necessary to obtain material missed, to obtain and complete assigned work missed, and to keep informed as to when quizzes and exams will be administered.

The instructor expects and insists that the class environment remain professional, businesslike, and conducive to learning. Behavior or actions that disrupt this environment are not acceptable and will subject the student to removal from the class by the University Public Safety Department. **Students will be requested to ensure their presence during the virtual meeting times on the online platform.** Use of other computers and any other smart and communication devices is not permitted during meeting times. Any student doing so will be asked to leave the class and not return during that particular class session. Repeated disruption of the class environment will subject a student to expulsion from the course solely at the instructor's discretion. Students must turn off or silence their smart phones and other devices that emit audible alarms immediately upon the beginning of the class.

RELIGIOUS HOLIDAYS

The School adheres to the University's policy concerning religious holidays as stated in the University catalog. Any student may request to be excused from a class to observe a religious holiday for their faith. Assignments due on that day will be due the day following the holiday. If a quiz falls on a religious holiday, an alternate date will be provided. Students are expected to inform the instructor ahead of time so that appropriate arrangements may be made.

ACADEMIC HONESTY AND INTEGRITY

All students are expected to conform to the University Code of Conduct, and to adhere to the principles of academic integrity as defined by the University Division of Student Affairs and the Division of Academic Affairs. Violations of the University Code of Conduct will be prosecuted to the fullest extent available.

STUDENT CODE OF STANDARDS

By attending this class, the student is required to comply with the Florida International University Student Code of Standards, including, but not limited to, references concerning classroom behavior, discrimination, sexual harassment and academic misconduct. A copy of the Code may be found in the University Student Handbook.

DISABLED STUDENTS

Students with disabilities who may need special accommodations should register with the Disability Resource Center for Students, telephone (305) 348-3532. In addition, they are encouraged to contact the instructor so that arrangements can be made to accommodate their needs.

INCLUSIVE EXCELLENCE STATEMENT

As an institution, we embrace inclusive excellence and the strengths of a diverse and inclusive community. During classroom discussions, we may be challenged by ideas different from our lived experiences and cultures. Understanding individual differences and broader social differences will deepen our understanding of each other and the world around us. In this course, all people (including but not limited to, people of all races, ethnicities, sexual orientation, gender, gender identity and expression, students undergoing transition, religions, ages, abilities, socioeconomic backgrounds, veteran status, regions and nationalities, intellectual perspectives and political persuasion) are strongly encouraged to respectfully share their unique perspectives and experiences. This statement is intended to help cultivate a respectful environment, and it should not be used in a way that limits expression or restricts academic freedom at FIU.

COURSE SCHEDULE:

Please refer to the Schedule of Classes file on CANVAS. This schedule is a living document which is updated regularly with all course lectures, activities and requirements.

Module	Date	Day	Class	Class Activity	Assigned Task	Task Due
Module 1: Sustainability and Certifications	24-Aug	Monday	1	Welcome and Course: Introduction Motivation: Why is sustainable Construction important? Defining Sustainability, discussion on global issues (GL Criteria) while leveraging Environmental Resources and Concerns	Prepare Resume Set-up your Twitter Account Reading Ch. 1 & 2 (Quiz #1)	
	31-Aug	Monday	2	Built Environment and Codes, Regulations and Certifications & Energy Basics, Renewable and Energy Efficiency Auditing - Discussions about (GL Criteria) pertaining to Certifications, and Energy forms and availabilities	Reading Ch. 8 & Ch. 9 (Quiz #2)	Update your Resume Activate your Twitter & LinkedIn Account Reading Quiz #1
Module 2: Energy, Solar, Light and Climate	7-Sep	Monday	3	Labor Day Holiday (No Classes)		
	14-Sep	Monday	4	Energy Fundamentals, Internal Loads and External Loads & Shading, Lighting, Daylight, and Electric Lighting - Understanding vernacular Sustainable Construction and Energy Fundamentals across the world (GL Criteria)	Reading Ch. 4, 5 and 6 Reading Ch. 10, 12 and 13	Reading Quiz #2 Tweet #1
	21-Sep	Monday	5	Climate, Microclimate, Thermal Comfort, Urban Heat Island and Evaporative Cooling + Energy Efficiency Measures (Passive Vs. Active Strategies) - Demonstrating with examples how active and passive sustainable strategies differ from one climate, region to another (GL Criteria)	Reading Ch. 3 and Ch. 7 Reading Ch. 14	Reading Quiz #3 Tweet #2
Module 3: Sustainable Building Rating Systems	28-Sep	Monday	6	Overview of LEED Certification	Reading Ch. 11 and Ch. 15	Reading Quiz #4 Tweet #3
	5-Oct	Monday	7	"Sustainable Project Decisions and Life Cycle Assessment Special and International Certification (GL Criteria): LBC, Net Zero, Energy star and HERS". Water Strategy, Site, Construction Materials (Recycle/Reuse) and Indoor Environmental Quality	Prepare for LEED Presentations #2	Reading Quiz #6
	12-Oct	Monday	8	MIDTERM		
	12-16 Oct.	Week		Virtual Career Fair		
	19-Oct	Monday	9	Student Presentations #1 - LEED Credits ALL students to submit their presentation on CANVAS by noon	Midterm	LEED Presentations #2
26-Oct	Monday	10	Planning to Sit for the GA Exam Practicing and review for the GA Exam	Draft Homework #1	In-Class (Virtual) Presentation #2 No need to Prepare for Presentation #2	
Module 4: Synergies to Sustainable Construction and Professional Learning Experience	2-Nov	Monday	11	Professional Development Presentation with Global Article Analysis Discussion in Classroom Session (GL Criteria)	Student Prepare for Final Presentation/Project	Homework #1 (draft the Coins International Challenge Submission)
	9-Nov	Monday	12	Field Trip / Students are required to visit a Building or Construction Site Final Project Presentation		Tweet #4
	16-Nov	Monday	13	Special Certifications: BREEAM, CASBEE, Green Star (International Sustainable Building Certifications - GL Criteria) &		Homework #2 (HM Compile & Submit your Tweets on CANVAS)
	23-Nov	Monday	14	Lean and Biomimicry, Commissioning and Effective Construction & Difference between Sustainability and Resilience - Discussions about (GL Criteria) pertaining to Lean and Biomimicry, as well as International Resilience strategies	Complete All Course Surveys	Homework #1 Final Submission Coins International Challenge
	30-Nov	Monday	15	Final Project Presentation (@ 3:35 - 6:15)		
	7-Dec	Monday	16	Exam Week - Course Development and Professional Assessment Open Discussions and Students' Selected Topics		

SAMPLE OF RUBRICS:

This course adopts various assessments to the activities and the evaluations will include rubrics that will be shared on CANVAS prior to each deliverable.

1. Criteria for Success for in Class discussions and Presentation, which requires integrating case studies and examples of their construction sustainability perspectives.

Attribute	Unsatisfactory (C-level, 0-5)	Developing (B-level, 6-10)	Excellent (A-level, 11-15)	Comments
Content (75 Points)				
Do you introduce yourself and provide a quick background about your topic which can support your decisions latter? (15 Pts)	No	Speaker introduces herself/himself, but not the interest to this topic	Speaker fulfills requirement	
Do you provide an Abstract/Introduction? (15 Pts)	No introduction is provided	Introduction is provided and then ignored	The audience knows what to expect throughout the presentation	
Did you clearly articulate the Problem Statement (GL Criteria)? (15 Pts)	Problem Statement is not mentioned nor its relationship to topic	Problem Statement is clear, but its relationship to the topic developed is less clear	Problem Statement and their relationship to the topic presented, are clear	
Was there a clear methodology to address the topic? (15 Pts)	No methodology used	A methodology is used, but does not seem correct	Methodology is used and explained well to the audience. Values seem reasonable	
Was there a clear Result / Lesson Learned? (15 Pts)	No Results or Lessons Learned	There were some results, but lessons learned didn't connect with the topic	Results were very clear and the lessons learned tied to the topic	
Presentation Skills (15 Points)				
Can we hear you? And is your tone appropriate? (5 Pts)	Speaker can barely be heard. Speaker responds to questions with a hostile tone or "blows down" the talk to the audience	Speaker is clear, but voice fades periodically. Speaker is monotone, but not offensive or defensive	Speaker projects voice so all audience can hear. Speakers tone is appropriate for the presentation throughout	
Are you making eye contact? (5 Pts)	Speaker stares at the floor or the screen	Speakers' eyes occasionally shift from screen to audience	Speaker glances at slides occasionally, but focuses on audience	
Are you sticking to your time limits? (5 Pts)	Time seems to be of no concern to speaker	Speaker abruptly stops when time is up	Speaker clearly covers everything in time	
Audience Engagement (Discussion) (10 Points)				
Did the Presenters include: Open Discussion, Case studies, Debates or Group Projects (5 Pts)	No	Engage the audience, but was not successful in delivering the topic	Engaged the audience and was successful in delivering the topic	
Does your presentation and discussions with Audience flow clearly? (5 Pts)	Audience is confused by flow of presentation	Flow is clear, but not logical	Presentation flows logically	
Bonus Points (10 Points)				
Have you created or presented something beyond what is required?	N/A	N/A	Speaker(s) have innovative presentation components or style	

2. Criteria for Success for Student LEED Presentation and written communication, which requires integrating case studies of their sustainable perspectives.

Communication (Presentation and Written)					
	Accomplished (5)	Above Average (4)	Satisfactory (3)	Developing (2)	Underdeveloped/ Missing (1)
C1. Content and Purpose for Writing and Communication	Demonstrates a thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the article.	Demonstrates adequate consideration of context, audience, and purpose and a clear focus on the assigned task(s).	Demonstrates awareness of context, audience, purpose, and to the assigned tasks(s). Awareness of business writing but lacking execution.	Demonstrates minimal awareness of context, audience, purpose, and to the assigned tasks(s). Poor writing skills for a student.	Demonstrates a complete lack of technical writing skills. It is unintelligible.
C2. Sources and Evidence integrated into Communication	Demonstrates skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate for the discipline and genre of the writing	Demonstrates consistent use of credible, relevant sources to support ideas that are situated within the discipline and genre of the writing.	Demonstrates an attempt to use relevant sources to support ideas that are appropriate for the discipline and genre of the writing.	Demonstrates an attempt to use sources to support ideas in the writing.	Does not attempt to support ideas with relevant sources.
C3. Content Development	Uses appropriate, relevant, and compelling content to illustrate mastery of the article, and shaping the whole section.	Uses appropriate, relevant, and compelling content to explore ideas within the context of the discipline and shape the whole section.	Uses appropriate and relevant content to develop and explore ideas through most of the section.	Uses appropriate and relevant content to develop simple ideas in some parts of the section.	Did not provide appropriate content to explore, develop, or illustrate ideas.
C4. Control of Syntax and Mechanics	Uses graceful language that skillfully communicates meaning to readers with clarity and fluency and is error-free.	Uses straightforward language that generally conveys meaning to readers, but with very few errors.	Uses language that generally conveys meaning to readers. Clarity, writing may include some errors	Uses language that sometimes impedes meaning because of errors in usage.	Uses language that makes the work nearly incomprehensible.
Contribution and Critical Thinking					
	Accomplished (5)	Above Average (4)	Satisfactory (3)	Developing (2)	Underdeveloped/ Missing (1)
CT1. Explanation of issue/problem/challenge	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 omissions which prevents full understanding.	Issue/problem to be considered critically is stated but description leaves some serious omissions which prevents a clear understanding.	Issue/problem to be considered critically is stated without clarification or description.
CT2. Contribution to Knowledge	Information is taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of article are thoroughly analyzed.	Information is taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. Viewpoints of article are somewhat analyzed.	Information is taken from source(s) with minor interpretation/evaluation, but not enough to develop a coherent synthesis. Viewpoints of article are partially analyzed.	Information is taken from source(s) without any interpretation/evaluation. Viewpoints of article are taken as fact, without analyses.	No evidence is presented or used for support.
CT3. Using own interpretation to analyze the article sections read	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies 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. Begins to identify some contexts when presenting a position.	No discussion of context of the situation is presented.
CT5. Solution and related outcomes	Solution and related outcomes are logical and reflect student's informed evaluation and perspectives discussed in priority order.	Solution is logically tied to a range of information, including opposing viewpoints; related outcomes are identified clearly.	Solution is logically tied to article and fits the desired conclusion; some related outcomes are identified clearly.	Solution is inconsistently tied to some of the information discussed; related outcomes are oversimplified.	Solution is stated, but not supported. Outcomes are not discussed.
CT4. Integrating Case Studies and Global Examples	Global International Case Studies are presented with thorough justification and evidence that support the presenter's perspective.	Global International Case Studies are presented with minor justification and weak correlation to the presenter's perspective.	Global International Case Studies are presented without any justification and evidence that support the presenter's perspective.	Case Studies are poorly presented and There is no attempt at justifications.	No case studies or examples presented.