



CMG465: SUSTAINABLE DEVELOPMENT

Credit Hours: 3

Contact Hours: This is a 3-credit course, offered in accelerated format. This means that 16 weeks of material is covered in 8 weeks. The exact number of hours per week that you can expect to spend on each course will vary based upon the weekly coursework, as well as your study style and preferences. You should plan to spend 14-20 hours per week in each course reading material, interacting on the discussion boards, writing papers, completing projects, and doing research.

Faculty Information: Faculty contact information and office hours can be found on the faculty profile page.

COURSE DESCRIPTION AND OUTCOMES

Course Description:

This is an interdisciplinary course that provides students with an understanding of the main concepts of sustainability, sustainable-development principles, and key challenges and solutions to meet sustainable-development goals, including economic, social, and environmental initiatives.

Students in this course will gain an in-depth insight into the environmental issues, including climate change, natural resource consumption, and ecosystems issues resulting from industrial development. Students will also learn about the policies, standards, technologies, methodologies, and best practices that offer sustainability solutions to economic and social development problems.

Course Overview:

Construction industry is one of the major non-renewable natural material depleters and a key air pollution emitter. Therefore, the concept of sustainable construction has developed to address the environmental, social and economic challenges that the construction industry deals with. Sustainable construction is creating and operating a healthy built environment based on resource efficiency and ecological design. Seven principles have been identified by CIB (1994) for sustainable construction and should be considered in various phases of the construction process. This course not only introduces the topic of sustainable construction but also discusses the main principles of sustainable development, and key challenges and solutions to meet sustainable-development goals, including economic, social, and environmental initiatives.

Course Learning Outcomes:

1. Learn the concept of sustainable development and the principals of sustainability.
2. Understand the policies, standards, technologies, methodologies, and best practices that provide sustainability solution.
3. Define sustainability criteria and measures to evaluate alternatives in decision-making process.
4. Learn how demands can be met while preserving natural resources and ecosystems.
5. Learn to design sustainable solutions, such as those used in the area of sustainable construction.
6. Develop analytical and problem-solving skill-sets to support sustainable development.

7. Learn to perform professional work in such a way that suitability factors will be considered.

ADDITIONAL RESOURCES FOR CONSTRUCTION MANAGEMENT CAREERS

PMI-GAC Accreditation and PMP Certification

Please note that CSU-Global's Bachelor of Science in Project Management and Master of Project Management are accredited by Project Management Institute Global Accreditation Center for Project Management Education Programs (GAC). GAC accreditation ensures the quality of academic degree programs and their graduates to meet the standards of the rapidly growing field of project management. Among other requirements, Project Management Institute (PMI) requires those who aspire to take the PMP exam to have a minimum of 35 contact hours of documented training in the area of project management. Other PMI certificates have a similar requirement as well. Students may utilize the courses taken at CSU-Global to satisfy these requirements.

Careers

CSU-Global is focused on providing career-relevant degree programs that align with industry requirements and best practices. CSU-Global's project management degree programs as well as the construction management certificate and specialization are designed to provide students with the construction and project management skills necessary to succeed in an increasingly global economy and changing business environment. The program focuses on technology facilitated collaboration, innovation and entrepreneurship, systems thinking, ethical and socially responsible leadership, and the globalization of today's market.

Faculty members serve as peer cohort mentors and facilitators, career coaches, writing coaches, and résumé reviewers for students, and represent the university at various academic and professional conferences and events. Students who need additional academic support to answer questions about degree programs may request to speak with the Program Chair or can schedule a meeting with a faculty career coach via an online scheduling tool located in the student portal. The career center allows students the opportunity to talk to a career coach, search for jobs and have access to a variety of resources.

A variety of job opportunities exist in various fields of practice in the construction industry. To maintain high standards of practice in this industry, construction practitioners need to pay adequate attention to education and training to ensure they obtain the skills they need to succeed. Obtaining well-known industry certificates is one of the ways that construction practitioners can choose to improve their skills, set themselves apart from competitors, and showcase their credentials. Here are some of the example certificates that project management practitioners may choose to pursue:

- Certificates offered by Project Management Institute (PMI): Certified Associate in Project Management (CAPM), Project Management Professional (PMP), and PMI Scheduling Professional (PMI-SP)®
- Construction project management certificates such as the Certified Construction Manager (CCM) by Management Association of America (CMAA), and certificates offered by the American Institute of Constructors such as Associate Constructor (AC) and Certified Professional Constructor (CPC).
- Certificates offered by the American Association of Cost Engineering (AACE International): Certified Cost Technician (CCT), Certified Scheduling Technician (CST), Certified Cost Professional (CCP), Certified Estimating Professional (CEP), and Planning & Scheduling Professional (PSP)
- Other example certificates include LEED AP and Green Globe Initiative's Green Globe Professional (GGP).

Project Management Institute (PMI) ® Student Membership

In keeping with its commitment to the academic and professional success of its students, CSU-Global encourages students enrolled in its Project Management programs to consider becoming members of the Project Management Institute (PMI) ® and AACE International (The Association for the Advancement of Cost Engineering).

Advantages of PMI membership include continuous online access to the PMBOK ® Guide, a variety of tools and templates, and many knowledge resources, including on-demand webinars and an online library of articles and books (PMI, 2018). Membership also conveys access to a number of professional communities and volunteer opportunities as well as access to career resources and professional development opportunities. (PMI, 2018). Additional information including membership application can be found on the PMI website: <https://www.pmi.org/>

PMI®, PMBOK ® Guide, Project Management Professional®, and PMP® are registered marks of the Project Management Institute, Inc.

Advantages of AACE International membership include access to digital editions of AACE's TCM Framework® (Total Cost Management Framework®: An Integrated Approach to Portfolio, Program, and Process Management, 2nd Ed.), the Recommended Practices (RPs) which are a series of documents that contain valuable reference information for practitioners, technical articles published in Cost Engineering journal or Source magazine, the Salary Surveys and other opportunities such as networking, professional development, and career resources (AACE International, 2018). Additional information including membership application can be found on the AACE website: <https://web.aacei.org/>

References:

PMI, (2018). Student Membership. Project Management Institute, Inc.
<https://www.pmi.org/membership/student>
AACE International, (2018). Student Membership.
<https://web.aacei.org/membership/memberships-offered/student-membership>

Ethics and Professional Conduct

CSU global is committed to preparing its graduates to approach every situation ethically and professionally. Students are encouraged to reflect upon course topics that focus on ethical and professional conduct issues in business. Students in the Project Management programs of study are encouraged to use the Code of Ethics and Professional Conduct published by the Project Management Institute (PMI)®. PMI codifies ethical principles for professionals in the field of project management which serve as the foundational principles for students in this program.

Reference: Project Management Institute. (n.d.) Code of Ethics and Professional Conduct. Newtown Square, Pa: Project Management Institute. Retrieved from <https://www.pmi.org/about/ethics/code>

PARTICIPATION & ATTENDANCE

Prompt and consistent attendance in your online courses is essential for your success at CSU-Global Campus. Failure to verify your attendance within the first 7 days of this course may result in your withdrawal. If for some reason you would like to drop a course, please contact your advisor.

Online classes have deadlines, assignments, and participation requirements just like on-campus classes. Budget your time carefully and keep an open line of communication with your instructor. If you are having technical problems, problems with your assignments, or other problems that are impeding your progress, let your instructor know as soon as possible.

COURSE MATERIALS

Required:

Kibert, Charles J. (2016). *Sustainable construction: Green building design and delivery* (4th Edition). Hoboken, NJ: Wiley Publishing.

Suggested:

N/A

NOTE: All non-textbook required readings and materials necessary to complete assignments, discussions, and/or supplemental or required exercises are provided within the course itself. Please read through each course module carefully.

COURSE SCHEDULE

Due Dates

The Academic Week at CSU-Global begins on Monday and ends the following Sunday.

- **Discussion Boards:** The original post must be completed by Thursday at 11:59 p.m. MT and peer responses posted by Sunday at 11:59 p.m. MT. Late posts may not be awarded points.
- **Opening Exercises:** Take the Opening Exercise before reading each week's content to see which areas you will need to focus on. You may take these exercises as many times as you need. The Opening Exercises will not affect your final grade.
- **Mastery Exercises:** Students may access and retake Mastery Exercises through the last day of class until they achieve the scores they desire.
- **Critical Thinking:** Assignments are due Sunday at 11:59 p.m. MT.

WEEKLY READING AND ASSIGNMENT DETAILS

Module 1

Readings

- Chapters 1 and 2 in *Sustainable Construction: Green Building Design and Delivery*
- Section 3.2.2 in Project Management Institute. (2016). *Construction extension to the PMBOK® guide*. Newtown Square, Pennsylvania: Project Management Institute.

- Visit the UNDP (UNDP for Beginners | United Nations Development Program) website and explore its goals at <http://www.undp.org/content/undp/en/home/sustainable-development-goals.html>
- Visit the World Business Council on Sustainable Development (WBCSD) website: <http://www.wbcsd.org> and explore the various projects and programs it introduces

Opening Exercise (0 points)

Discussion (25 points)

Mastery Exercise (10 points)

Critical Thinking (120 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option #1: Human Development Index

In a well-written, narrative paper, answer the following questions:

- What is the Human Development Index (HDI)?
- How is the HDI measured?
- Why is the HDI more precise than using a single indicator?

Your paper must meet the following requirements:

- Your written paper should be 2-3 pages in length, not counting the title and reference pages, which you must include.
- Be sure to properly organize your writing and include an introduction, headings/subheadings for the body of your work, analysis and recommendations, conclusion, and list of references. Consult the assignment template for a more complete list of requirements.
- Use terms, evidence, and concepts from class readings.
- You need to cite at least 3 credible sources for this assignment. Credible sources include peer-reviewed articles, books, or documents from the government or established professional organizations.
- The CSU-Global Library is a great place to find resources.
- Your paper must be formatted according to CSU-Global Guide to Writing and APA.
- If you need assistance with your writing style, start with the links under the Research Help and Writing Help tabs on the CSU-Global Library's homepage.

Review the grading rubric, which can be accessed from the **Course Information** page, to understand how you will be graded on this assignment. Reach out to your instructor if you have questions about the assignment.

Option #2: Sustainable Construction and Whole Building Design

In a two-page narrative, identify the principles of sustainable construction. Also, describe whole building design. Explain how the principles of sustainable construction relate to whole building design.

Here is a good article on Harvard Business you can read to formulate your ideas (this article cannot be among the references you cite in your paper):

Lockwood, C. (2006). Building the green way. *Harvard business review*, 84(6), 129-137. Retrieved from <https://hbr.org/2006/06/building-the-green-way>

Your paper must meet the following requirements:

- Your written paper should be 2-3 pages in length, not counting the title and reference pages, which you must include.
- Be sure to properly organize your writing and include an introduction, headings/subheadings for the body of your work, analysis and recommendations, conclusion, and list of references. Consult the assignment template for a more complete list of requirements.
- Use terms, evidence, and concepts from class readings.
- You need to cite at least 3 credible sources for this assignment. Credible sources include peer-reviewed articles, books, or documents from the government or established professional organizations.
- The CSU-Global Library is a great place to find resources.
- Your paper must be formatted according to CSU-Global Guide to Writing and APA.
- If you need assistance with your writing style, start with the links under the Research Help and Writing Help tabs on the CSU-Global Library's homepage.

Review the grading rubric, which can be accessed from the **Course Information** page, to understand how you will be graded on this assignment. Reach out to your instructor if you have questions about the assignment.

Portfolio Project Reminder (0 Points)

Find a LEED case study among the library resources or on the web concerning an in-progress or completed building project in which green building features were used. You can also choose a green building project with which you are familiar, you worked on, or you became familiar after community service or volunteer work. To have an opportunity for community engagement, you can also choose to reach out to an organization or community to find a project that satisfies the above requirement. You can also find a case study on the following webpages:

<https://www.usgbc.org/resources/grid/leed>

<https://www.thegbi.org/training/green-resource-library/>

You don't need to turn in a deliverable this week; however, read the case study, perform a search on the web to find out more about the building described in the case study and review the next Portfolio assignments or milestones to ensure your case study provides adequate information for you to complete your Portfolio assignments listed below. Please note that you have two options for each Portfolio assignment.

Week 2:

A brief report on the case study

Week 3:

Option #1: High-performance (green building) features used in the building;

Option #2: Materials selection strategies

Week 4:

Option #1: Low-energy building strategies;

Option #2: Water management strategies

Week 8:

Option #1: Building Rating System (LEED or Green Globes);

Option #2: The Living Building Challenge

Module 2

Readings

- Chapters 3 and 12 in Sustainable Construction: Green Building Design and Delivery
- Valle, L. (2015). Ecological design. *Vermont Journal of Environmental Law*, 16(4), 575-585.
- Wiedmann, T., & Minx, J. (2008). A definition of 'carbon footprint'. *Ecological economics research trends*, 1, 1-11. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.467.6821&rep=rep1&type=pdf>

Opening Exercise (0 points)

Discussion (25 points)

Mastery Exercise (10 points)

Portfolio Milestone (60 points)

A Brief Report on the Case Study

This week's Portfolio Project milestone options are the same, whether you plan to submit a final Portfolio Project Option #1 or #2. By completing this week's Portfolio Project milestone, you share the case study you chose in Week 1 with your instructor. Review the requirements of the Portfolio Project Milestone in Week 1. Then prepare a maximum 2-page report in which you briefly identify the project team and describe the building identified in the case study, and its location, use/purpose, progress made, and the timeline of implementing green building features in the building.

Submit a well-written paper in which you accomplish the following:

- Identify the project team
- Describe the building identified in the case study
- Identify the building's location
- Describe the building's use or purpose
- Explain the progress made and the timeline of implementing of green building features in the building

Reference at least the case study and cite according to proper CSU-Global Guide to Writing and APA.

Module 3

Readings

- Chapter 1, from p. 14 through the end of the chapter, in *Sustainable Construction: Green Building Design and Delivery*
- Chang, R., Soebarto, V., Zhao, Z., & Zillante, G. (2016). Facilitating the transition to sustainable construction: China's policies. *Journal of Cleaner Production*, 131, 534-544.
- Visit The International Institute for a Sustainable Built Environment (iisBE) website at <http://www.iisbe.org>
- Torcellini, P. A., Deru, M., Griffith, B., Long, N., Pless, S., Judkoff, R., & Crawley, D. B. (August 2004). *Lessons learned from field evaluation of six high-performance buildings*. National Renewable Energy Laboratory. Retrieved from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.134.8399&rep=rep1&type=pdf>
- Visit the Whole Building Design Guide website: <http://www.wbdg.org>

Opening Exercise (0 points)

Discussion (25 points)

Mastery Exercise (10 points)

Portfolio Milestone (80 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option #1: High-performance (green building) features used in the building

This week, prepare a 3-page report on the high-performance (green building) features used in the building. Use Tables 3.1 and 3.3. of the textbook as guidelines to identify which of the strategies described in these tables have been implemented in your building. The case study may not have provided adequate information about all these strategies and whether they have been used in your building; nevertheless, identify some of the strategies that the project team used (or could use with a reasonable cost). Describe these features and evaluate them from the economic, social, and environmental perspectives.

Reference at least the case study and cite according to proper CSU-Global Guide to Writing and APA. Be sure to properly organize your writing and include an introduction, headings/subheadings for the body of your work, analysis and recommendations, conclusion, and list of references. Consult the assignment template for a more complete list of requirements.

Option #2: Material Selection Strategies

This week prepare a 3-page report to identify some of the materials selection strategies used in the building, or strategies that could be used in the building. Use the content of p. 373 of the textbook as a guideline to identify which of these strategies have been implemented in your building (although p. 373 is not among the reading assignment for this week, most of its content has been covered in the interactive lecture). Describe these features and evaluate them from the economic, social, and environmental perspectives.

Reference at least the case study and cite according to proper CSU-Global Guide to Writing and APA.

Be sure to properly organize your writing and include an introduction, headings/subheadings for the body of your work, analysis and recommendations, conclusion, and list of references. Consult the assignment template for a more complete list of requirements.

Module 4

Readings

- Chapters 8, 9, and 10 in Sustainable Construction: Green Building Design and Delivery
- Visit the website of BuildingGreen, Inc.: <http://www.buildinggreen.com> and explore the Knowledge Base section of the website.
- Du Plessis, C. (2012). Towards a regenerative paradigm for the built environment. *Building Research & Information*, 40(1), 7-22.
- Joustra, C., & Yeh, D. (2015). Framework for net-zero and net-positive building water cycle management. *Building Research & Information*, 43(1), 121-132.

Opening Exercise (0 points)

Discussion (25 points)

Mastery Exercise (10 points)

Portfolio Milestone (80 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option #1: Low-energy building strategies

This week prepare a 3-page report on the low-energy building strategies used in the building. Use Chapter 9 of the textbook and the content of p. 274 specifically as guidelines to identify which of low-energy building strategies have been implemented in your building. The case study may not have provided adequate information about all these strategies and whether they have been implemented in your building; nevertheless, identify some of the strategies that the project team used (or could use with a reasonable cost). Describe these features and describe their benefits.

Reference at least the case study and cite according to proper CSU-Global Guide to Writing and APA.

Be sure to properly organize your writing and include an introduction, headings/subheadings for the body of your work, analysis and recommendations, conclusion, and list of references. Consult the assignment template for a more complete list of requirements.

Option #2: Water management strategies

This week prepare a 3-page report on the water management strategies used in the building. Use Chapter 10 of the textbook and the content of pp. 334 and 335 specifically as guidelines to identify which of water management strategies have been implemented in your building. The case study may not have provided adequate information about all these strategies and whether they have been implemented in your building; nevertheless, identify some of the strategies that the project team used (or could use with a reasonable cost). Describe these features and describe their benefits.

Reference at least the case study and cite according to proper CSU-Global Guide to Writing and APA.

Be sure to properly organize your writing and include an introduction, headings/subheadings for the body of your work, analysis and recommendations, conclusion, and list of references. Consult the assignment template for a more complete list of requirements.

Module 5

Readings

- Chapters 11 and 13 in *Sustainable Construction: Green Building Design and Delivery*
- Coombs, K., Chew, G., Schaffer, C., Ryan, P., Brokamp, C., Grinshpun, S., Adamkiewicz, G., Chillrud, S., Hedman, C., Colton, M., Ross, J., & Reponen, T. (2016). Indoor air quality in green-renovated vs. non-green low-income homes of children living in a temperate region of US (Ohio). *Science of the Total Environment*, 554-555 (178-185). Retrieved from <https://www.sciencedirect-com.csuglobal.idm.oclc.org/science/article/pii/S0048969716303473>
- Kylili, A., & Fokaides, P. (2017). Policy trends for the sustainability assessment of construction materials: A review. *Sustainable Cities and Society*, 35, 280-288. Retrieved from <https://www.sciencedirect-com.csuglobal.idm.oclc.org/science/article/pii/S2210670717303773>

Opening Exercise (0 points)

Discussion (25 points)

Mastery Exercise (10 points)

Critical Thinking (120 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option #1: Closing Materials Loops

Assume you are a consultant who provides consulting services focused on sustainable construction. Further assume that you were assigned as a materials loop closing consultant during the design phase of a project (you can assume you are working on the project referenced in the case study you chose in Week 1) and were supposed to provide advice on the materials closing strategies that could be implemented in the project. Prepare an expert report that contains the following sections:

1. Your methodology in closing the materials loops to the extent practically feasible
2. Factors you consider as the challenging factors that increase the difficulty of closing the materials loop in the project
3. Your suggested strategies to close the materials loop with as they relate to the following materials:
 - a. wood
 - b. concrete
 - c. metals

Your paper must meet the following requirements:

- Your written paper should be 4 pages in length not counting the title page, which you must include.
- Be sure to properly organize your writing and include an introduction, headings/subheadings for the body of your work, analysis and recommendations, conclusion, and list of references. Consult the assignment template for a more complete list of requirements.
- Use terms, evidence, and concepts from class readings.
- Your paper must be formatted according to CSU-Global Guide to Writing and APA.
- If you need assistance with your writing style, start with the links under the Research Help and Writing Help tabs on the CSU-Global Library's homepage.

Review the grading rubric, which can be accessed from the **Course Information** page, to understand how you will be graded on this assignment. Reach out to your instructor if you have questions about the assignment.

Option #2: Indoor Environmental Quality (IEQ)

For this assignment complete the following:

- Assume you are a consultant who provides consulting services focused on sustainable construction.
- Further assume that you were assigned as an indoor air quality consultant during the design phase of the project (you can assume you are working on the project referenced in the case study you chose in Week 1) and were supposed to provide advice on the indoor air quality strategies that could be implemented in the project.
- Prepare an expert report that contains the following sections:
 1. The list of building components that, based on your knowledge of the project, would impact the indoor air quality the most
 2. Your approach in integrated IEQ design

3. Considerations for the HVAC system design
4. Considerations for minimizing emissions from building materials

Your paper must meet the following requirements:

- Your written paper should be 4 pages in length not counting the title page, which you must include.
- Be sure to properly organize your writing and include an introduction, headings/subheadings for the body of your work, analysis and recommendations, conclusion, and list of references. Consult the assignment template for a more complete list of requirements.
- Use terms, evidence, and concepts from class readings.
- Your paper must be formatted according to CSU-Global Guide to Writing and APA.
- If you need assistance with your writing style, start with the links under the Research Help and Writing Help tabs on the CSU-Global Library's homepage.

Review the grading rubric, which can be accessed from the Course Information page, to understand how you will be graded on this assignment. Reach out to your instructor if you have questions about the assignment.

Module 6

Readings

- Chapters 14 and 15 in Sustainable Construction: Green Building Design and Delivery
- Mills, E. (2011). Building commissioning: A golden opportunity for reducing energy costs and greenhouse gas emissions in the United States. *Energy Efficiency*, 4(2), 145-173.
- Montgomery, R., & Lenzi, W. (2016). Commissioning and design for 2016 Olympics. *ASHRAE Journal*, 58(7), 14-16,18-19.
- Zhang, L., Wu, J., & Liu, H. (2018). Turning green into gold: A review on the economics of green buildings. *Journal of Cleaner Production*, 172, 2234-2245. Retrieved from <https://www-sciencedirect-com.csuglobal.idm.oclc.org/science/article/pii/S0959652617328615>

Opening Exercise (0 points)

Discussion (25 points)

Mastery Exercise (10 points)

Critical Thinking (130 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option #1: High-Performance Green Buildings Report

Assume a construction contractor has hired you as a consultant and you are supposed to provide advice on ways to administer construction operations in a fashion that clearly communicates the unique aspects and requirements of high-performance green buildings to all the subcontractors and suppliers involved. Prepare an expert report by incorporating site protection measures that you propose the contractor put in place to ensure that disturbances to the site ecology and soils are minimized during construction operations.

Your paper must meet the following requirements:

- Your written paper should be 4 pages in length not counting the title page, which you must include.
- Be sure to properly organize your writing and include an introduction, headings/subheadings for the body of your work, analysis and recommendations, conclusion, and list of references. Consult the assignment template for a more complete list of requirements.
- Use terms, evidence, and concepts from class readings.
- You need to cite at least 3 credible sources for this assignment. Credible sources include peer-reviewed articles, books, or documents from the government or established professional organizations.
- The CSU-Global Library is a great place to find resources.
- Your paper must be formatted according to CSU-Global Guide to Writing and APA.

If you need assistance with your writing style, start with the links under the Research Help and Writing Help tabs on the CSU-Global Library's homepage.

Review the grading rubric, which can be accessed from the **Course Information** page, to understand how you will be graded on this assignment. Reach out to your instructor if you have questions about the assignment.

Option #2: Construction Management of Materials Report

Assume a construction contractor has hired you as a consultant and you are supposed to provide advice on ways to manage construction materials. Prepare an expert report by incorporating construction materials management strategies that you propose the contractor use to reduce solid waste, prevent damage to products, and save the cost of replacement and disposal of damaged products.

Your paper must meet the following requirements:

- Your written paper should be 4 pages in length not counting the title page, which you must include.
- Be sure to properly organize your writing and include an introduction, headings/subheadings for the body of your work, analysis and recommendations, conclusion, and list of references. Consult the assignment template for a more complete list of requirements.
- Use terms, evidence, and concepts from class readings.
- You need to cite at least 3 credible sources for this assignment. Credible sources include peer-reviewed articles, books, or documents from the government or established professional organizations.
- The CSU-Global Library is a great place to find resources.
- Your paper must be formatted according to CSU-Global Guide to Writing and APA.

If you need assistance with your writing style, start with the links under the Research Help and Writing Help tabs on the CSU-Global Library's homepage.

Review the grading rubric, which can be accessed from the **Course Information** page, to understand how you will be graded on this assignment. Reach out to your instructor if you have questions about the assignment.

Module 7

Readings

- Chapters 4, 5, and 6 in *Sustainable Construction: Green Building Design and Delivery*
- Suzer, O. (2015). A comparative review of environmental concern prioritization: LEED vs other major certification systems. *Journal of Environmental Management*, 154(C), 266-283.
- The Council of North America [TCNA] (2015). Green Globes®: Differences from LEED® and how tile fits in. Retrieved from https://www.thegbi.org/content/misc/TCNA-Spotlight_TILE_May-June_EPD-GreenGlobes_B.Griese.pdf
- Visit *The Green Buildings Initiative* <http://www.thegbi.org> and explore Green Resource Library and other resources available on the website
- Visit the U.S. Green Building Council website: <http://www.usgbc.org>, and the LEED portion of the USGBC website: http://www.usgbc.org/leed/leed_main.asp
- Reading 1
- Reading 2

Opening Exercise (0 points)

Discussion (25 points)

Mastery Exercise (10 points)

Portfolio Project Reminder (0 points)

This week, you don't need to submit anything. However, reach out to at least one of your classmates and virtually discuss the issues of importance on the projects you've chosen. In the final Portfolio submission, you will need to include the name(s) of the other student(s) with whom you collaborated. (Your collaborating colleague does not need to choose the same portfolio project option as you).

Module 8

Readings

- Chapters 7 and 16 in *Sustainable Construction: Green Building Design and Delivery*
- Section 3.2.1.4 in *Construction Extension to the PMBOK® Guide*
- Pizarro, R. (2015). Challenges of implementing sustainable urban design plans through community–university partnerships: Lessons from Colombia, China, and Germany. *Current Opinion in Environmental Sustainability*, 17, 48-56. Retrieved from <https://www.sciencedirect-com.csuglobal.idm.oclc.org/science/article/pii/S1877343515001402>
- Ruparathna, R., & Hewage, K. (2015). Sustainable procurement in the Canadian construction industry: Challenges and benefits. *Canadian Journal of Civil Engineering*, 42(6), 417-426.

Opening Exercise (0 points)

Discussion (25 points)

Mastery Exercise (10 points)

Portfolio Project (130 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Be sure to review the Portfolio Project Description and Portfolio Project Rubric in the Module 8 folder for details.

Option #1: The Building Rating System (LEED or Green Globes)

For your final submission, integrate all the Portfolio milestones you previously submitted in one single electronic file and submit after addressing the comments that your instructor provided after grading each of these milestones.

The last three pages of your final submission will be a new section about the Building Rating System (LEED or Green Globes). In this new section, complete the following:

- Specify the building rating system certification level the building has achieved or intends to achieve.
- Identify some of the areas in which the building achieved or lost points, and document some of the lessons learned.
- Explain what problems can result from using LEED or Green Globes as the only criterion to define green building.
- Include the name(s) of the other student(s) with whom you collaborated per the Portfolio Milestone #7 and a short summary of your discussion.

Write your paper according to proper CSU-Global Guide to Writing and APA.

Be sure to properly organize your writing and include an introduction, headings/subheadings for the body of your work, analysis and recommendations, conclusion, and list of references. Consult the assignment template for a more complete list of requirements.

Review the grading rubric, which can be accessed from the **Course Information** page, to understand how you will be graded on this assignment. Reach out to your instructor if you have questions about the assignment.

Upload your written report to the Week 8 Assignment for the Portfolio Project.

Option #2: The Living Building Challenge

For your final submission, integrate all the Portfolio milestones you previously submitted in one single electronic file and submit after addressing the comments that your instructor provided after grading each of these milestones. The last three pages of your final submission will be a new section about the Living Building Challenge.

Review the latest version of the Living Building Challenge (LBC) [Look for the LIVING BUILDING CHALLENGE GUIDANCE HANDBOOK at <https://living-future.org/lbc/resources>] and assess each of the Petals and Imperatives for their feasibility for the project at hand (the same project referenced in the case study you chose in Week 1). To do so, complete the following:

- Categorize the imperatives into the three groups of relatively doable, doable with some difficulty, and very difficult to do.
- Provide your reasoning for each category.
- Include the name(s) of the other student(s) with whom you collaborated per the Portfolio Milestone #7 and a short summary of your discussion.

Write your paper according to proper CSU-Global Guide to Writing and APA.

Be sure to properly organize your writing and include an introduction, headings/subheadings for the body of your work, analysis and recommendations, conclusion, and list of references. Consult the assignment template for a more complete list of requirements.

Review the grading rubric, which can be accessed from the **Course Information** page, to understand how you will be graded on this assignment. Reach out to your instructor if you have questions about the assignment.

Upload your written report to the Week 8 Assignment for the Portfolio Project.

COURSE POLICIES

Grading Scale	
A	95.0 – 100
A-	90.0 – 94.9
B+	86.7 – 89.9
B	83.3 – 86.6
B-	80.0 – 83.2
C+	75.0 – 79.9
C	70.0 – 74.9
D	60.0 – 69.9
F	59.9 or below

Course Grading

20% Discussion Participation
0% Opening Exercises
8% Mastery Exercises
37% Critical Thinking Assignments
35% Final Portfolio Project

IN-CLASSROOM POLICIES

For information on late work and incomplete grade policies, please refer to our [In-Classroom Student Policies and Guidelines](#) or the Academic Catalog for comprehensive documentation of CSU-Global institutional policies.

Academic Integrity

Students must assume responsibility for maintaining honesty in all work submitted for credit and in any other work designated by the instructor of the course. Academic dishonesty includes cheating, fabrication, facilitating academic dishonesty, plagiarism, reusing /repurposing your own work (see CSU-Global Guide to Writing & APA for percentage of repurposed work that can be used in an assignment), unauthorized possession of academic materials, and unauthorized collaboration. The CSU-Global Library provides information on how students can avoid plagiarism by understanding what it is and how to use the Library and internet resources.

Citing Sources with APA Style

All students are expected to follow the CSU-Global Guide to Writing & APA when citing in APA (based on the most recent APA style manual) for all assignments. A link to this guide should also be provided within most assignment descriptions in your course.

Disability Services Statement

CSU-Global is committed to providing reasonable accommodations for all persons with disabilities. Any student with a documented disability requesting academic accommodations should contact the Disability Resource Coordinator at 720-279-0650 and/or email ada@CSUGlobal.edu for additional information to coordinate reasonable accommodations for students with documented disabilities.

Netiquette

Respect the diversity of opinions among the instructor and classmates and engage with them in a courteous, respectful, and professional manner. All posts and classroom communication must be conducted in accordance with the student code of conduct. Think before you push the Send button. Did you say just what you meant? How will the person on the other end read the words?

Maintain an environment free of harassment, stalking, threats, abuse, insults, or humiliation toward the instructor and classmates. This includes, but is not limited to, demeaning written or oral comments of an ethnic, religious, age, disability, sexist (or sexual orientation), or racist nature; and the unwanted sexual advances or intimidations by email, or on discussion boards and other postings within or connected to the online classroom. If you have concerns about something that has been said, please let your instructor know.