

## Course Mapping Template

Course: SBE 221

### Course Objectives

1. *Differentiate* between the different factors that have influenced the built environment throughout history in hot and arid climates, hot and humid climates, and cold and arid climates.
2. *Explore* the different vernacular design solutions in buildings and cities in hot and arid climates, hot and humid climates, and cold and arid climates.
3. *Recognize* the different uses of landscapes and gardens in different geographic locations throughout history and cities in hot and arid climates, hot and humid climates, and cold and arid climates.
4. *Compare* and contrast the different solutions for the built environment according to climate, availability of resources, and socio-economic and political conditions.
5. *Use* iconic examples in the history of the built environment from selected ancient civilizations to extract sustainability lessons that we can use today in our cities.

Module	Module Outcomes (CO alignment)	Learning Materials	Activities	Assessments
Module 1: Cold & Humid Climates	<ul style="list-style-type: none"> <li>• 1.1. Identify the different factors that have influenced the foundation and evolution of cities over time.</li> <li>• 1.2. Explain the influence of geographic, socio-economic, religious, and political factors on the creation and evolution of</li> </ul>	<p>Lesson 1</p> <ul style="list-style-type: none"> <li>• Frankopan (2017). Chapter 1: The Creation of the Silk Road. In "The Silk Roads – A New History of the World." Vintage Books. New York. Pp. 3-27.</li> </ul> <p>Lesson 2</p> <ul style="list-style-type: none"> <li>• Kostof, S. 1991. Introduction - "The City as an Artifact": The City Shaped - Urban</li> </ul>	<p>Lesson 1</p> <ul style="list-style-type: none"> <li>• Review &amp; Participate in VoiceThread - Course Overview</li> </ul> <p>Lesson 2</p> <ul style="list-style-type: none"> <li>• Review &amp; Participate in VoiceThread - Historic Role of Cities Part 1</li> <li>• Review &amp; Participate in VoiceThread - Historic Role of Cities Part 2</li> </ul>	<ul style="list-style-type: none"> <li>• Lesson 1 Discussion Prompt</li> <li>• Lesson 2 Discussion Prompt</li> <li>• Lesson 3 Discussion Prompt</li> <li>• Lesson 4 Discussion Prompt</li> <li>• Lesson 2 Written Assignment</li> <li>• Lesson 3 Written Assignment</li> <li>• Lesson 4 Written Assignment</li> <li>• VoiceThread</li> <li>• Exam 1</li> </ul>

	<p>the built environment.</p> <ul style="list-style-type: none"> <li>1.3. Outline the different ways in which cities depend on landscapes for their natural resources.</li> <li>1.4. Differentiate the vernacular design solutions for buildings depending on the climate.</li> </ul>	<p>Patterns and Meanings through History (Pages 9-29).</p> <ul style="list-style-type: none"> <li>Marozzi, J. 2016. Story of Cities #3: The Birth of Baghdad was a Landmark for World Civilization.</li> <li>Mumford, L. 1961. Chapter 2: The Crystallization of the City.</li> </ul> <p>Lesson 3</p> <ul style="list-style-type: none"> <li>Kostof, S. 1991. "Introduction - The City in History". The City Shaped - Urban Patterns and Meanings through History. Hong Kong: Thames and Hudson Ltd. (Pages 29-41).</li> <li>Mumford, L. 1961. Chapter 4 - The Nature of the Ancient City.</li> <li>Ancient Mesopotamian Farming, Agriculture, Tools, Crops, Techniques, Water, Floods</li> <li>Wickham, L. 2012. Chapter 1: "Ancient Gardens as Political Expressions of Power". P. 9-23. In Gardens in History: A Political Perspective. (you can find this E-book in the UA Libraries)</li> </ul>	<ul style="list-style-type: none"> <li>Watch Video: The History of Urbanization</li> </ul> <p>Lesson 3</p> <ul style="list-style-type: none"> <li>Review &amp; Participate in VoiceThread - Socioeconomic Factors</li> <li>Video: The 25 Most Influential Cities that Shaped our Current World</li> <li>Review &amp; Participate in VoiceThread - Landscapes and Resources</li> <li>Watch Video: Mankind, The Story of All of Us: Birth of Farming   History</li> </ul> <p>Lesson 4</p> <p>Review &amp; Participate in VoiceThread - Climate and Buildings</p>	
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		<ul style="list-style-type: none"> <li>Article by Poschold and Braun (2016) on small natural features</li> </ul> <p>Lesson 4</p> <ul style="list-style-type: none"> <li>Sørensen, P &amp; Møller, W.F. 2010. "Place and Climate". In <i>Climate and Architecture</i> by Dahl, T. (ed.). The Royal Danish Academy of Fine Arts. School of Architecture Publishers. New York: Routledge. Pp. 13-21.</li> <li>Rotne, G and Alberg, N. 2008. "Traditional Climate-adapted Architecture". In <i>Climate and Architecture</i> by Dahl, T. (ed.). The Royal Danish Academy of Fine Arts. School of Architecture Publishers. New York: Routledge. Pp. 33-45.</li> <li>Manzano-Agugliaro et al. 2015. Bioclimatic Architecture Strategies. <i>Renewable and Sustainable Energy Reviews</i>, 49. pp. 736-755.</li> </ul>		
Module 2: Hot & Arid Climates	<ul style="list-style-type: none"> <li>2.1. Explain the influence of geographic and socio-economic factors on the design of the</li> </ul>	<p>Lesson 5</p> <ul style="list-style-type: none"> <li>Ancient Iraq (Mesopotamia) - Ancient Civilizations for Kids</li> </ul>	<p>Lesson 5</p> <ul style="list-style-type: none"> <li>Review &amp; Participate in VoiceThread - Mesopotamia</li> </ul>	<ul style="list-style-type: none"> <li>Lesson 5 Discussion Prompt</li> <li>Lesson 6 Discussion Prompt</li> <li>Lesson 7 Discussion Prompt</li> </ul>

	<p>built environment in hot and dry climates.</p> <ul style="list-style-type: none"> <li>• 2.2. Differentiate the vernacular design solutions for buildings, landscapes and cities located in hot and dry climates, as well as socio-economic conditions of the time and place.</li> <li>• 2.3. List the sustainability lessons that we can extract from the civilizations studied in this module (Sumerians, Egyptians, Persians, Puebloans) that can be applied to the present-day built environment.</li> <li>• 2.4. Outline the influence of scientific discoveries, technologies,</li> </ul>	<ul style="list-style-type: none"> <li>• Ancient Mesopotamian Farming, Agriculture, Tools, Crops, Techniques, Water, Floods</li> <li>• 9 things you may not know about the ancient Sumerians</li> <li>• Ching, F.D.K.; Jarzombek, M. &amp; Prakash, V. 2011. A Global History of Architecture. Second edition. John Wiley &amp; Sons, Inc.</li> <li>• “2500 BCE” p.25.</li> <li>• “Early lower Mesopotamia”, “Early Empires of Mesopotamia”, Ziggurat at Ur”. P. 32-35.</li> <li>• ”Domestic architecture” P 38.</li> </ul> <p>Lesson 6</p> <ul style="list-style-type: none"> <li>• Ancient Egypt - Ancient Civilizations for Kids</li> <li>• Ancient Egypt - Ancient History</li> <li>• The Rosetta Stone Story</li> <li>• Ching, F.D.K.; Jarzombek, M. &amp; Prakash, V. 2011. A Global History of Architecture. Second edition. John Wiley &amp; Sons, Inc. <ul style="list-style-type: none"> <li>○ “Egypt: The Old Kingdom” pp. 37-44.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Watch Video: Mesopotamia - The Sumerians</li> </ul> <p>Lesson 6</p> <ul style="list-style-type: none"> <li>• Review &amp; Participate in VoiceThread - Egypt - Part 1</li> <li>• Review &amp; Participate in VoiceThread - Egypt - Part 2</li> <li>• Watch Video: Step Pyramid at Saqqara</li> <li>• Watch Video: Construction of Pyramids</li> <li>• Watch Video: Ancient Windmills in Iran</li> </ul> <p>Lesson 7</p> <ul style="list-style-type: none"> <li>• Review &amp; Participate in VoiceThread - Persian Empire</li> <li>• Review &amp; Participate in VoiceThread - Persian Empire II</li> <li>• Watch Video: The Battle of Marathon (If video doesn't automatically run, please click the play button on the video tile.)</li> <li>• Watch Video: Lost Worlds: Forgotten Empire</li> </ul>	<ul style="list-style-type: none"> <li>• Lesson 8 Discussion Prompt</li> <li>• Lesson 5 Written Assignment</li> <li>• Lesson 6 Written Assignment</li> <li>• Lesson 7 Written Assignment</li> <li>• Lesson 8 Written Assignment</li> <li>• VoiceThread</li> <li>• Exam 2</li> </ul>
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	<p>and ideologies that emerged in the civilizations studied in this module on the built environment.</p>	<ul style="list-style-type: none"> <li>○ “Pyramids of Giza”, “Architecture and Food” p. 46.</li> <li>○ “Egypt: The New Kingdom”. Pp. 64.</li> <li>○ “Abu Simbel, Egyptian Columns, Egyptian Design Methods.” Pp. 72-74</li> </ul> <ul style="list-style-type: none"> <li>• Polyzoides, A.J. 2014. Chapter 6 - Alexandria The Great. In “Alexandria: City of Gifts and Sorrows: from Hellenistic Civilization to Multiethnic Metropolis.” Eastbourne: Sussex Academic Press.</li> <li>• Alkaff et al. 2016. A review of underground building toward thermal energy efficiency and sustainable development. <i>Renewable and Sustainable Energy Reviews</i>. 60, 692-713.</li> </ul> <p>Lesson 7</p> <ul style="list-style-type: none"> <li>• Daniel, E. L. 2001. Chapter 2: Ancient Iran. In "The History of Iran." Westport, CT: Greenwood Publishing Group</li> <li>• Mousavi, A. 2012. Chapter 1 - Persepolis: A survey of the site, its chronology and function. In "Persepolis:</li> </ul>	<ul style="list-style-type: none"> <li>• Watch Video: Xerxes I of Persia</li> </ul> <p>Lesson 8</p> <ul style="list-style-type: none"> <li>• Review &amp; Participate in VoiceThread - Southwestern US I</li> <li>• Review &amp; Participate in VoiceThread - Southwestern US II</li> <li>• Watch Video: Tour of Cliff Dwellings at Mesa Verde</li> <li>• Watch Video: Pueblo Bonito</li> <li>• Watch Video: The Hopi Path of Life</li> <li>• Watch Video: Paths of Life - American Indians of the Southwest</li> </ul>	
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Discovery and afterlife of a world wonder." De Gruyter, Inc. EBook ISBN: 9781614510284.

- Holland. 2005. Preface and Chapter 1. In "The Persian Fire." Doubleday: United States.
- Ching et a. 2017. The Achaemenid Empire. In "The Global History of Architecture." Second edition. John Wiley & Sons, Inc.

#### Lesson 8

- Noble, D.G. 2015. The Mesa Verde Region in Ancient Ruins and Rock Art of the Southwest. Fourth Edition. Taylor Trade Publishing, London UK.
- Cunningham, K. and Benoit, P. 2011 The Pueblo. Juvenile literature. Scholastic.
- Ching, F.D.K.; Jarzombek, M. & Prakash, V. 2011. A Global History of Architecture. Second edition. John Wiley & Sons, Inc.
- Ancestral Puebloans
- Liebowitz, R. 2008. The Million Dollar Play House: The Office of Indian Affairs

		and the Pueblo Revival in the Navajo Capital. <i>Buildings and Landscapes</i> , 15.		
Module 3: Hot & Humid Climates	<ul style="list-style-type: none"> <li>3.1. Explain the influence of geographic and socio-economic factors on the design of the built environment in hot and humid climates.</li> <li>3.2. Differentiate the vernacular design solutions for buildings, landscapes and cities located in hot and humid climates, as well as socio-economic conditions of the time and place.</li> <li>3.3. List the sustainability lessons that we can extract from</li> </ul>	<p>Lesson 9</p> <ul style="list-style-type: none"> <li>Percival Spear. 1965. <i>A History of India</i>. Volume 2. Penguin Books Ltd. Middlesex, England. <ul style="list-style-type: none"> <li>Introduction.</li> <li>Chapter 1 - The Coming of the Mughals.</li> <li>Chapter 2 - Akbar.</li> <li>Chapter 3 - The Great Mughals.</li> <li>Chapter 5 - Europeans and Mughal India.</li> </ul> </li> <li>Schulberg, L. 1968. <i>Historic India. Great Ages of Man - A History of the World's Culture</i>. Time-Life Books. New York.</li> <li>Deshkar, S.M. 2010. <i>Kautilya Arthashastra and its relevance to Urban Planning Studies</i>. Institute</li> </ul>	<p>Lesson 9</p> <ul style="list-style-type: none"> <li>Review &amp; Participate in VoiceThread - India I</li> <li>Review &amp; Participate in VoiceThread - India II</li> <li>Watch Video: Harappan Civilization</li> <li>Watch Video: The History of India</li> <li>Watch Video: Taj Mahal</li> </ul> <p>Lesson 10</p> <ul style="list-style-type: none"> <li>Review &amp; Participate in VoiceThread - Southeast Asia I</li> <li>Review &amp; Participate in VoiceThread - Southeast Asia II</li> <li>Watch Video: How is Angkor Wat Still Standing Today?</li> <li>Opening the eyes: Deciphering the history of the Khmer Empire. 2009. German United</li> </ul>	<ul style="list-style-type: none"> <li>Lesson 9 Discussion Prompt</li> <li>Lesson 10 Discussion Prompt</li> <li>Lesson 11 Discussion Prompt</li> <li>Lesson 9 Written Assignment</li> <li>Lesson 10 Written Assignment</li> <li>Lesson 11 Written Assignment</li> <li>VoiceThread</li> <li>Exam 3</li> </ul>

	<p>the civilizations studied in this module (Indus Valley and Mughal Empire, Khmer Empire, Mayans) that can be applied to the present-day built environment.</p> <ul style="list-style-type: none"> <li>3.4. Outline the influence of scientific discoveries, technologies, and ideologies that emerged in the civilizations studied in this module on the built environment.</li> </ul>	<p>of Town Planners, India Journal. 7-1. 87-95.</p> <ul style="list-style-type: none"> <li>Bafna 2000. On the idea of the mandala as a governing device in Indian Architectural tradition. Journal of the Society of Architectural Historians. 59 (1) 26-49.</li> <li>Ching, F.D.K.; Jarzombek, M. &amp; Prakash, V. 2011. A Global History of Architecture. Second edition. John Wiley &amp; Sons, Inc. <ul style="list-style-type: none"> <li>“Neolithic sites and the Indus Civilizations” “Mohenjo-Daro pp. 29-31.</li> <li>“Vastu-Shastras”. Pp. 332-333.</li> </ul> </li> <li>Vastu Purusha Mandala   Architecture Ideas</li> <li>Chauhan, E. 2018. Bringing India’s Ancient Water Management System to Life. Creative India – Bharat and beyond.</li> </ul> <p>Lesson 10</p> <ul style="list-style-type: none"> <li>Freeman, M. &amp; Jacques, C. 2003. Ancient Angkor. Book Guides. River Books, Ltd. Bangkok, Thailand.</li> </ul>	<p>Distribution. Optional. Documentary film. University of Arizona library.</p> <p>Lesson 11</p> <ul style="list-style-type: none"> <li>Review &amp; Participate in VoiceThread - Mesoamerica I</li> <li>Review &amp; Participate in VoiceThread - Mesoamerica II</li> <li>Watch Video: Mayan Astronomy</li> <li>Watch Video: El Castillo in Chichen Itza</li> </ul>	
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- Ching, F.D.K.; Jarzombek, M. & Prakash, V. 2011. A Global History of Architecture. Second edition. John Wiley & Sons, Inc.
  - “Vrah Vishnuluk (Angkor Wat).” Pp. 392-394.
- Angkor Wat
- Mystery of Angkor Wat Temple's Huge Stones
- Hawken, Scott. 2014. Design of kings and farmers: Landscape systems of the Greater Angkor Urban Complex.
- Chapman, W. 2013. A Southeast Asian Heritage - Background and Context. In "A Heritage of Ruins: The Ancient Sites of Southeast Asia and Their Conservation Account. University of Hawaii Press.
- Otis, D. 2014. Can too much infrastructure doom a city? The Future of Resilience.

#### Lesson 11

- Sharer, R.J. 1996. Daily Life in Maya Civilization. London: The Greenwood Press.

- Chapter 1: The Maya of today and yesterday. (pp. 1-8).
- Chapter 12: Arts and Crafts (pp. 195-201).
- Chapter 13: The meaning of Maya civilization (pp. 213-215).
- Coe, M.D. 1993. The Maya. Thames and Hudson, Inc. New York.
  - Introduction
  - Classic Splendor: The Late Period.
- Ching, F.D.K.; Jarzombek, M. & Prakash, V. 2011. A Global History of Architecture. Second edition. John Wiley & Sons, Inc.
  - “Maya of the Yucatan” Pp. 256-257.
  - “Chichen itza” Pp. 412-413.
- Dunning, N, Beach, T.P. & Luzzadder-Beach, S. 2012. Kax and kol: Collapse and Resilience in lowland Maya civilization. PNAS 109 (10): 3652-3657.
- Maya - Facts & Summary
- Chichen itza
- El Mirador

		<ul style="list-style-type: none"> <li>• Yucatan Roadways that evolved over the centuries</li> <li>• The Mayanist - El Mayista</li> </ul>		
Module 4 Cold & Arid Climates	<ul style="list-style-type: none"> <li>• 4.1. Explain the influence of geographic and socio-economic factors on the design of the built environment in cold and dry climates.</li> <li>• 4.2. Differentiate the vernacular design solutions for buildings, landscapes and cities located in cold and dry climates, as well as socio-economic conditions of the time and place.</li> <li>• 4.3. List the sustainability lessons that we can extract from the civilizations studied in this module (Inuit and Sami People, Vikings,</li> </ul>	<p>Lesson 12</p> <ul style="list-style-type: none"> <li>• Kaplan, S.A. (2012). "Chapter 1 - Labrador Inuit Ingenuity and Resourcefulness: Adapting to a Complex Environmental, Social, and Spiritual Environment." In Natcher, D.C., Felt, L. &amp; Procter, A. (eds.) Settlement, Subsistence, and Change among the Labrador Inuit. University of Manitoba Press: Winnipeg, Manitoba, Canada.</li> <li>• Arctic Indigenous Peoples - Arctic Centre</li> <li>• Inuit</li> <li>• Young, T. et al. (2008). Chapter 9: Sami In "Health Transitions in Arctic Populations. EBSCO. eBook.</li> <li>• Bjørklund, I. (2013). Chapter 5: The Mobile Sámi Dwelling. In "About the Hearth" edited by Anderson, D. et al. Berghahn Books. New York and Oxford.</li> </ul>	<p>Lesson 12</p> <ul style="list-style-type: none"> <li>• Review &amp; Participate in VoiceThread - Polar Cultures</li> <li>• Review &amp; Participate in VoiceThread - Polar Cultures Part II</li> <li>• Watch Video: Toggling Harpoon Head</li> <li>• Watch Video: How to Build an Igloo</li> <li>• Watch Video: Arctic Ancestral Survivalism</li> </ul> <p>Lesson 13</p> <ul style="list-style-type: none"> <li>• Review &amp; Participate in VoiceThread - Scandinavia I</li> <li>• Review &amp; Participate in VoiceThread - Scandinavia II</li> <li>• Watch Video: Viking Longships</li> <li>• Watch Video: Viking Women</li> <li>• Watch Video: the Town of Birka</li> <li>• Watch Video: English Castles</li> </ul>	<ul style="list-style-type: none"> <li>• Lesson 12 Discussion Prompt</li> <li>• Lesson 13 Discussion Prompt</li> <li>• Lesson 14 Discussion Prompt</li> <li>• Lesson 12 Written Assignment</li> <li>• Lesson 12 Written Assignment</li> <li>• Lesson 14 Written Assignment</li> <li>• VoiceThread</li> <li>• Exam 4</li> </ul>

	<p>Mongols) that can be applied to the present-day built environment.</p> <ul style="list-style-type: none"> <li>4.5. Outline the influence of scientific discoveries, technologies, and ideologies that emerged in the civilizations studied in this module on the built environment.</li> </ul>	<ul style="list-style-type: none"> <li>Beach, H. (2013). Chapter 6: The Devitalization and Revitalization of Sámi Dwellings in Sweden. In "About the Hearth" edited by Anderson, D. et al. Berghahn Books. New York and Oxford.</li> <li>Talmor, S. 1993. A Forgotten People, History of European Ideas, 17:6. 775-784.</li> </ul> <p>Lesson 13</p> <ul style="list-style-type: none"> <li>Andersson, G. (2016). Chapters in "We Call Them Vikings" edited by Andersson, G. Publication produced for the exhibition "We Call Them Vikings" at the Swedish History Museum. Halmstad, Sweden. <ul style="list-style-type: none"> <li>Meet the Vikings.</li> <li>Family and Community</li> <li>Homes - Colorful and Bustling</li> </ul> </li> <li>Clarke, H. &amp; Ambrosiani, B. (1991). Introduction. Towns in the Viking Age. London and New York: Leicester University Press.</li> <li>Ching, F.D.K.; Jarzombek, M. &amp; Prakash, V. 2011. A</li> </ul>	<p>Lesson 14</p> <ul style="list-style-type: none"> <li>Review &amp; Participate in VoiceThread - North &amp; Central Asia I</li> <li>Review &amp; Participate in VoiceThread - North &amp; Central Asia II</li> <li>Watch Video: Rise and Fall of Mongol Empire</li> <li>Watch Video: Mongol Invasions</li> <li>Watch Video: Karakorum</li> </ul> <p>Lesson 15</p> <ul style="list-style-type: none"> <li>Watch and participate in the Wrap up lecture on VoiceThread.</li> <li>Upload your slide (click on the "pages" icon on the lower right side of the VoiceThread), present (using a video comment) &amp; participate in Case Study VoiceThread.</li> </ul>	
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Global History of Architecture. Second edition. John Wiley & Sons, Inc. "The Normans" p. 370, "Dover Castle" p.375. (You can find this E-Book in the UA Libraries website).

- Lindisfarne
- Vikings – Exploration
- Viking Age
- Hurstwic: Towns and Trading in the Viking Age

#### Lesson 14

- Weatherford, J. 2004. Introduction - The Missing Conqueror. In "Genghis Khan and the making of the modern world." Three Rivers Press. New York, pp. xv-xxxv.
- Weatherford, J. 2004. Chapter 1 - The Blood Clot in "Genghis Khan and the making of the modern world." Three Rivers Press. New York, pp. 3-30.
- Ching, F.D.K.; Jarzombek, M. & Prakash, V. 2011. A Global History of Architecture. Second edition. John Wiley & Sons, Inc. "The Mongol Empire" p. 402.

		<ul style="list-style-type: none"><li>• Genghis Khan - Facts &amp; Summary</li><li>• Mongol Empire</li><li>• Mongolian Gers: Perfect Dwellings for People on the Move</li><li>• History of Yurts - Original Mongolian Yurts</li></ul>		
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