

UNIVERSIDAD AUTÓNOMA DE BAJA CALIFORNIA

COORDINACIÓN GENERAL DE FORMACIÓN PROFESIONAL

LEARNING MODULE

I. GENERAL INFORMATION

- 1. School:** Faculty of Architecture and Design, Mexicali
- 2. Major:** Architect
- 3. Study Program:** 2008-1
- 4. Learning Module Name:** Architecture and Health: Active Design
- 5. Number:** 40251
- 6. CH:** 02 **WH:** 01 **LH:** 00 **FPH:** 00 **CLH:** 00 **EH:** 02 **CR:** 05
- 7. Stage:** Terminal
- 8. Module Type:** Elective
- 9. Course Enrollment Requirements:** None

Learning Module Design Team

Sign

Approval of Assistant Dean (s)

Sign

Adriana Margarita Arias Vallejo
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Date: December 14, 2021

II. PURPOSE OF LEARNING MODULE

The course seeks to provide a general understanding of the built environment and health as part of the new paradigm thinking of future professionals in a constantly changing world. This course intends not only to enhance public health but also to reinforce the goals of environmental sustainability and accessibility. Students will acquire skills to integrate the knowledge of *Active Design* practices to their own design strategies, with a sustainable and universal design approach. This is an elective course which is part of the disciplinary and terminal stage for undergraduate students. It belongs to the Technology in Architecture field of knowledge. No prior requirements are needed to enroll in this class.

III. COMPETENCE OF THE LEARNING MODULE

Identify parameters of Architecture and Health through the assessment of Active Design case studies, written and verbal reports, to apply urban and architectural design strategies which comply with environmental awareness and public health criteria, with social commitment, responsibility, and creativity.

IV. EVIDENCES OF LEARNING/ACHIEVEMENT

- Essays and written reports and oral presentations.
- Final Project: Incorporate principles of architecture, urban design, environmental awareness, and public health under the guidelines of sustainable development in a case study.

V. UNIT DESCRIPTION
UNIT I. The Guidelines: Theory concepts

Competency:

Identify the different theories and concepts of urban design, architecture, and health, through assessment of national and international case studies, to comprehend the historical complexity of the impact the built environment has on public health, and its relation to the current environmental crisis, with responsibility, solidarity and social commitment.

Content:

Time Allotted: 6 hours

- 1.1. Public health problems: from XX century to the present
 - 1.1.1. Repercussions of public health and built environment from around the world to Mexico
- 1.2. The built environment, climate change and health
 - 1.2.1. Analysis of international and national case studies

UNIT II. Sustainability

Competency:

Analyze the evolution of sustainable development and sustainability in cities, architecture and public health, as well as the social impact of the built environment, through the study of international and national cases to identify best practices in design strategies; with critical thinking, creativity and social commitment.

Content:

Time Allotted: 6 hours

- 2.1. Origins and definition of Sustainable Development and Sustainability
 - 2.1.1. Understanding sustainability in urban planning and architectural design
- 2.2. Sustainable architecture strategies for public building design and its social impacts of built spaces
 - 2.2.1. Analysis of different cases of the primary elements to consider in sustainable urban and architectural projects as part of the built environment and public space

UNIT III. Global and Public Health

Competency:

Analyze the importance of public health and its effects through the research of healthy environments and disease prevention to apply design strategies which promote wellness and user comfort, as well as the optimization of resources in architecture, with leadership, discipline, and empathy.

Content:**Time Allotted:** 6 hours

- 3.1. Understanding public health and its importance
 - 3.1.1. Urban planning and public health: Missions and perspectives
 - 3.1.2. Promoting health through architecture and urban design

UNIT IV. Universal Accessibility and Environmental Ethics in Architectural and Urban Design

Competency:

Categorize issues of Accessibility and Environmental Ethics of Architectural and Urban Design, through the study of state, federal and international guidelines, to understand the scope of compliance with existing regulations, and detect areas of opportunity; with responsibility and social commitment.

Content:**Time Allotted:** 6 hours

- 4.1. Environmental concerns and urban design
 - 4.1.2. Environmental ethics in architecture and urban planning
- 4.2. Monitoring urban accessibility in smart cities
 - 4.2.1. State, Federal and International Accessibility guidelines

UNIT V. Case Study: Active Design

Competency:

Analyze concepts and guidelines of active design to assess specific buildings and urban designs through the evaluation of an international or national case study, to identify best practices and issues of concern in their application; with autonomy, responsibility and critical thinking.

Content:**Time Allotted:** 8 hours

- 5.1. Analyze and critique Architectural projects considering and promoting health ethics
- 5.2. Analyze and critique of Urban design projects considering and promoting health ethics
- 5.3. Evaluate and Apply all necessary elements to an architectural building or to an urban design project considering guidelines of active design and environmental ethics.

VI. STRUCTURE OF WORKSHOP PRACTICES (16 hrs)

No.	Practice Name	Procedure	Support resources	Time
UNIT I				
1	Repercussions of public health and built environment from around the world to Mexico	Read and analyze the readings provided and write a report, knowing that the student should have to prepare an oral presentation as a team or as individual as per professor determines.	References Additional Readings from professor Whiteboard Notebook and pen Laptop Video projector Power Point software or similar Internet access	2 hours
UNIT II				
2	Understanding sustainability in urban planning, architectural design and its social impacts of built spaces	Read and analyze the readings provided, and if necessary search on the internet for additional resources. The students should write a report, and prepare an oral presentation of examples in Mexico and internationally of how public health has been impacted by the built environment and urbanization process.	References Additional Readings from professor Whiteboard Notebook and pen Laptop Video projector Power Point software or similar Internet access	2 hours
UNIT III				
3	Promoting health through sustainable architecture and urban design	Read and analyze the readings provided, and if necessary search on the internet for additional resources. The students should write a report, and prepare an oral presentation denoting those elements that promote public health through sustainable architectural parameters and urban design.	References Additional Readings from professor Whiteboard Notebook and pen Laptop Video projector Power Point software or similar Internet access	2 hours

UNIT IV				
4	Environmental ethics in architecture and urban planning, monitoring urban accessibility in smart cities	Read and analyze the readings provided, and if necessary search on the internet for additional resources. The students should write a report, and prepare an oral presentation showing permanent considerations of the use of Universal Accessibility and environmental ethics in different architectural and urban design projects.	References Additional Readings from professor Whiteboard Notebook and pen Laptop Video projector Power Point software or similar Internet access	2 hours
UNIT V				
5	Analyze and critique Architectural projects considering and promoting health ethics	Read and analyze the readings provided, and if necessary search on the internet for additional resources. The students should write a report, and prepare an oral presentation where architectural building examples consider and promote health ethics.	Internet access Whiteboard Laptop Video projector Power Point software or similar	2 hours
6	Analyze and critique of Urban design projects considering and promoting health ethics	Read and analyze the readings provided, and if necessary search on the internet for additional resources. The students should write a report, and prepare an oral presentation where urban design considers and promotes health ethics.		2 hours
7	Evaluate and Apply all necessary elements to a case study. Architectural building and urban design project considering guidelines of active design and environmental ethics.	Prepare an oral presentation once the student has reviewed different literature and examples of those elements that can be incorporated into an architectural building and urban design project promoting public health considering guidelines of active design and environmental ethics.		4 hours

VII. METHODOLOGY AND STRATEGIES

Course framework: The first day of class the teacher must establish the form of work, evaluation criteria, quality of academic work, rights and obligations for teacher and students.

Teaching strategies (teacher):

The professor must clearly provide all the objectives at the beginning of the course, providing all the resources they will be utilized throughout the course. On the other hand, should encourage and promote small group teaching, demonstrating topics in practical classes and working on a problem based learning system through practical exercises. Directs, supervises and provides feedback on workshop practices.

Learning strategies (student):

The student must have an ethical and responsible attitude when participating in the activities scheduled for the course. They should provide an excellent atmosphere by working individually, as a team or as a group during their participation in class. Actively participate during class and their oral presentations. Organize and categorize tasks from workshop practices. Prepare and deliver activities in a timely manner.

VIII. EVALUATION CRITERIA

The evaluation will be carried out permanently during the development of the course as follows:

Accreditation criteria

To be entitled to ordinary and extraordinary exams, the student must meet the attendance percentages established in the current School Statute. Students shall attend 80% of the sessions in order to accredit the course.

Scaled from 0 to 100, with a minimum approval of 60.

Assessment criteria

- Class Participation and involvement.....15%
- Oral presentations20%
- Written reports.....25%
- Final Project (case study).....40%
- Total.....100%**

IX. Bibliography

Required	Suggested
<p>Azzopardi-Muscat, N., Brambilla, A., Caracci, F. y Capolongo, S. (2020). Synergies in design and health. The role of architects and urban health planners in tackling key contemporary public health challenges. <i>Acta Biomed</i>, 91 (3), pp. 9-20. eyu</p> <p>Barker Associates. (2020). <i>Sustainable architecture: What is it and how do we achieve it?</i> https://www.barkerassociates.co.uk/service/architecture/what-is-sustainable-architecture</p> <p>Cielo 24. (2021, june). <i>2021-2022 State and Federal Accessibility Guidelines</i>. https://cielo24.com/state-federal-accessibility-guidelinesty/?submissionGuid=cf6b3854-5ce1-4284-974a-3b09be6419b7</p> <p>Conserve Energy Future. (2021). <i>What are environmental Concerns?</i> https://www.conserve-energy-future.com/top-25-environmental-concerns.php https://www.conserve-energy-future.com/environmental-ethics.php</p> <p>Diep, V. T. (2021). Nature, self, and being in the world. Revealing a flourishing ethics in landscape architecture through poignant landscape experiences. Doctoral Thesis in Environmental Studies. Toronto. http://130.63.180.190/xmlui/bitstream/handle/10315/38431/Diep_VanThi_2021_PhD.pdf?sequence=2&isAllowed=y</p> <p>Hu, M. y Roberts, J. D. (2020). Connections and divergence between Public Health and Built Environment. A scoping review. <i>Urban science</i>, 4 (12), https://www.mdpi.com/2413-8851/4/1/12</p> <p>Institute of Building Biology + Sustainability. (2021). <i>25 Guiding Principles of Building Biology</i>. https://buildingbiology.com/principles-of-building-biology/</p> <p>Mueller, N., Rojas-Rueda, D., Khreis, H., Cirach, M., Andrés,</p>	<p>Baker, N. & Steemers. Koen (2019). <i>Healthy homes. Designing with light and air for sustainability and wellbeing</i>. RIBA Publishing. ISBN 9781859467138.</p> <p>Bell, S., Kuhlmann, F., White, M. P., Nieuwenhuijsen, M. J., Grellier, J., Fleming, L. E. (2021). <i>Urban Blue Spaces. Planning and Design for Water, Health and Wellbeing</i>. Routledge. ISBN 9780367173180.</p> <p>Lau, S. S. Y., Li, J., Hao, S., Lu, S. (2021) <i>Design and Technological Applications in Sustainable Architecture. The perspective of China, Japan, Singapore and Thailand</i>. Springer. ISBN 978-3-030-80033-8</p> <p>Menezes, K., Oliveira-Smith, P., Woodworth, A. V. (2021). <i>Programming for Health and Wellbeing in Architecture</i>. Routledge. ISBN 9780367758868</p> <p>Rassia, S. T. (2017). <i>Workplace Environmental Design in Architecture for Public Health. Impacts on Occupant Space Use and Physical Activity</i>. Springer. ISBN 978-3-319-53444-2</p> <p>Rinaldi, B., & Yonk Tan, P. (2019). <i>Urban Landscapes in High-Density Cities: Parks, Streetscapes, Ecosystems</i>. Basel: Birkhauser.</p> <p>Wolfe, C. R. (2017). <i>Seeing the better city: How to explore, observe and improve urban space</i>. Covelo: Island Press.</p>

D., Ballester, J., Bartoll, X., Daher, C., Deluca, A., Echave, C., Milá, C., Márquez, S., Palou, J., Pérez, K., Tone, C., Stevenson, M., Rueda, S. y Nieuwenhuijsen, M. (2020). *Changing the urban design of cities for health: The superblock model*. Environment International, 134, <https://reader.elsevier.com/reader/sd/pii/S0160412019315223?token=2C16570505E4E327F1919C186B6F48CA2617C42F434136C7A4DA9F80F70A1FF90C91458C8F98266404CC13F320602094&originRegion=us-east-1&originCreation=20211130193334>

Volz, D. (january 21, 2020). Understanding public health and its importance. NWPH. <https://www.nwph.net/nwpho/publications/SuicideintheNW.pdf>

X. TEACHER PROFILE

The professor of this course should have an architectural bachelor's degree as a minimum requirement, in case of graduate studies the professor should have a graduate degree in architecture, urban studies, sustainable development planning or similar. Must show a commitment to professional ethics, and higher standards of practice and care for advanced degrees.