



I. INFORMACIÓN GENERAL

CURSO	:	Health And Wellbeing In The Built
CÓDIGO	:	AR373
CICLO	:	202301
CUERPO ACADÉMICO	:	Wong Lent, Luisa Cristina
CRÉDITOS	:	3
SEMANAS	:	16
HORAS	:	3 H (Teoría) Semanal
ÁREA O CARRERA	:	Arquitectura

II. MISIÓN Y VISIÓN DE LA UPC

Misión: Formar líderes íntegros e innovadores con visión global para que transformen el Perú.

Visión: Ser líder en la educación superior por su excelencia académica y su capacidad de innovación.

III. INTRODUCCIÓN

CATALOGUE DESCRIPTION

The practical application of theoretical learning within a group setting and involving an exchange of ideas and practical methods, skills, and principles. Students may take 497B/597B up to four times provided the topics are different.

COURSE DESCRIPTION

What we see, hear, and breathe affects our wellbeing. Consequently, designers have a profound impact on the people who inhabit their buildings. This course offers degree candidates experience in the scientific understanding needed to capitalize on advancements in design informed by research. Students who can not only understand, but translate existing research into practice will be more competitive in the market and have a larger impact on built environment outcomes. The course begins with a primer on scientific literacy in the context of design, followed by modules that dive into the physiology, psychology, and design implications related to our senses.

Students will learn how to find and critique research that connects wellbeing outcomes with the built environment through written paper critiques in each module (Visual, Haptic + Aural, Olfactory, and Biophilia). At the end of each module, students will prepare a design implication strategy informed by the required readings and additional research articles. Finally, each student will prepare a final course project that critiques a current studio project or an existing built space on campus and makes design recommendations. This final project may be presented in the form of a slide deck, tailored as per the student's individual goals and expertise.

FACULTY

Altaf Engineer, Ph.D., RA, LEED AP BD+C, Assistant Professor aengineer@email.arizona.edu
Smith House, 1195 E. Speedway Blvd., Bldg. 199A Office hours: By appointment

CRITERIA

FULFILLMENT

This course is a recommended elective for MS.Arch. students in the Health and the Built Environment (HBE) program and for master's level and upper level undergraduates interested in pursuing careers that integrate human health and wellbeing in the built environment.

ENROLLMENT

This course is limited to 35 students; undergraduates may take this course by permission of instructor.

CONTACT

COURSE TYPE

Seminar: 3-CU X 50 = 150 minutes/week

SCHEDULE

Live Online: Tue: 3pm - 5:30pm

WEB + D2L

This course will be supported over D2L.

COST

There are no anticipated costs other than expenses related to any computer equipment or software and internet connectivity required for any online synchronous class Zoom meetings, digital documentation of projects, and presentations.

TRAVEL

There is no anticipated travel for the class this semester.

IV. LOGRO (S) DEL CURSO

During this course students will:

1. Analyze and critique existing scientific research on health and wellbeing in the built environment.
2. Communicate scientific literature critiques effectively to other students through writing, speaking, and visuals.
3. Translate research findings, both from literature and course assignments, into design recommendations in their individual projects.

For the graduate course students will also:

1. Prepare a research report on their work completed in this course for a conference presentation, poster, or publication.

V. UNIDADES DE APRENDIZAJE

UNIDAD N°: 1 Health and Wellbeing in the Built Environment
LOGRO During this course students will: 1. Analyze and critique existing scientific research on health and wellbeing in the built environment.

2. Communicate scientific literature critiques effectively to other students through writing, speaking, and visuals.
3. Translate research findings, both from literature and course assignments, into design recommendations in their individual projects.

For the graduate course students will also:

1. Prepare a research report on their work completed in this course for a conference presentation, poster, or publication.

TEMARIO

This course meets once a week and is comprised of interactive lectures and student participation and presentations, both informal and formal. The course is broken into the following phases:

- Module 0: Introduction to the science of health and wellbeing in the context of design
- Module 1: Visual
- Module 2: Haptic and Aural
- Module 3: Olfactory
- Module 4: Biophilia
- Module 5: Synthesis: Final course project

There are regular reading assignments, and assigned tasks that involve finding and critiquing additional research articles not in the required reading list for each module. Students will also present design recommendations based off the readings for each module, and culminate with a final project that makes design recommendations for an existing space on campus or a current studio project.

HORA(S) / SEMANA(S)

Weeks 1 - 16

VI. METODOLOGÍA

COURSE COMPONENTS + CRITERIA OF EVALUATION

This course is designed to achieve the Learning Outcomes indicated. Because architecture is an art as well as a science, and because every student and student-group present new challenges in the teaching of design, instructors may add, alter, or modify assignments, criteria, or project weights in order to adapt to evolving circumstances that are inherent in the practice of Architecture, and also to evaluate students' abilities to make such adaptations. The Instructor will notify the students in advance of such changes; students for their part will notify the professor within one week of such notification if the proposed changes will cause undue hardship. Students acknowledge the dynamic nature of this course.

The graded components of this course and their criteria of evaluation are currently anticipated to be as follows, but are subject to change as set forth above:

.A SEMINAR DISCUSSION

Students will prepare for a discussion of course material from textbooks as directed by the Instructor.

CRITERIA:

Criteria of evaluation will be preparedness, engagement, and quality of contribution.

.B TEXTS | PAPER CRITIQUES

Students will submit written summaries and critiques of required readings. Instructor will provide, in advance, a list of requirements for each summary and critique. These summaries will be submitted on D2L and discussed with the class once per module and once during the course introduction weeks.

CRITERIA:

Criteria of evaluation will be preparedness, engagement, and quality of contribution.

.C DESIGN IMPLICATIONS

Students will present to the class, a design implication based off the required readings and their own additional research articles of choice for each module. These will be submitted in PDF slide format. Students may select an existing built environment as a case study or a current or former studio project for this exercise.

CRITERIA:

Criteria of evaluation will be preparedness, engagement, and quality of contribution.

.D SYNTHESIS

Students will synthesize their readings over the semester into a set of evaluative criteria that inform a final project that is a critique with design recommendations for an existing space on campus or a current studio project. The format will be a slide deck. Graduate students are required to prepare and submit an additional research report or poster that has potential for publication or conference presentation in consultation with the instructor.

CRITERIA:

Although the final project may be delivered in different formats, there are common criteria for evaluation:

- Appropriately cited readings and graphics
- Lack of grammatical errors
- Documentation of the existing space
- Annotated, original graphics regarding design recommendations for the existing space
- Explanation of potential benefits of the design recommendations
- Overall cohesiveness (each project needs to convey to the audience the process involved, from interpreting existing literature to its translation to design recommendations)

.E PARTICIPATION

Student participation is a large part of what makes this course successful. It includes but is not limited to in-class discussions, discussion posts on the course D2L site, in-progress assignment presentations, participation in guest lectures with questions and discussion, and peer critiques. Students are expected to engage in these activities regularly throughout the semester in addition to their own presentations. There are participation points to engage in these activities for every class in the semester; a total of 15 participation points for the entire course.

WEIGHT

The Course Components for undergraduate students are forecast to be:

SEMINAR DISCUSSION

Leading a seminar discussion 4

PAPER CRITIQUES

Visual 4

Haptic and Aural 4

Olfactory 4

Biophilia 4

16

DESIGN IMPLICATIONS

Visual 10
Haptic and Aural 10
Olfactory 10
Biophilia 10
40

SYNTHESIS 20

PARTICIPATION

Individual engagement in group assignments 6
D2L discussion posts + in-class participation 14
20

Total 100%

Graduate students are expected to engage in the research in this course at a more comprehensive level. To ensure this, each module's deliverables will be evaluated according to the use and interpretation of all readings listed for each section, whereas undergraduates are responsible for a subset of the listed readings. Graduate students will lead certain class discussions based on these readings and this activity will count towards their participation points. They are also required to submit an additional research report or poster as part of their final project in alignment with their individual interests and in consultation with the instructor.

The Course Components for graduate students are forecast to be:

SEMINAR DISCUSSION

Leading a seminar discussion 4
4

PAPER CRITIQUES

Visual 4
Haptic and Aural 4
Olfactory 4
Biophilia 4
16

DESIGN IMPLICATIONS

Visual 10
Haptic and Aural 10
Olfactory 10
Biophilia 10
40

SYNTHESIS 25

PARTICIPATION 15

Total 100%

SEMESTER SCHEDULE

A course calendar is attached to this syllabus.

REFERENCES

REQUIRED TEXTBOOKS:

1. Sternberg, Esther M. *Healing Spaces the Science of Place and Well-being*. Cambridge, Mass.: Belknap Press of Harvard University Press, 2009.
2. Pallasmaa, Juhani. *The Eyes of the Skin Architecture and the Senses*. 3rd ed. Chichester: Wiley, 2012.

Both textbooks are available online via the UA Library. All other required readings for this course listed below are posted on the D2L site in PDF or electronic link format, and are subject to change based on developments in relevant research.

MODULE 1: VISUAL

1. Youngstedt, Shawn D., and Daniel F. Kripke. "Does Bright Light Have an Anxiolytic Effect? - an Open Trial." *BMC Psychiatry* 7 (2007): 62.
2. Partonen, Timo, and Jouko Lönnqvist. "Bright Light Improves Vitality and Alleviates Distress in Healthy People." *Journal of Affective Disorders* 57, no. 1-3 (2000): 55-61.
3. Stevens, Richard G., George C. Brainard, David E. Blask, Steven W. Lockley, and Mario E. Motta. "Breast cancer and circadian disruption from electric lighting in the modern world." *CA: a cancer journal for clinicians* 64, no. 3 (2014): 207-218.
4. Figueiro, Mariana G., Barbara A. Plitnick, Anna Lok, Geoffrey E. Jones, Patricia Higgins, Thomas R. Hornick, and Mark S. Rea. "Tailored lighting intervention improves measures of sleep, depression, and agitation in persons with Alzheimer's disease and related dementia living in long-term care facilities." *Clinical interventions in aging* 9, (2014): 1527.
5. Figueiro, M., & Overington, D. Self-luminous devices and melatonin suppression in adolescents. *Lighting Research & Technology* 48, no. 8 (2016), 966-975.
6. Shin, Ju Young, Geun Young Yun, and Jeong Tai Kim. "View types and luminance effects on discomfort glare assessment from windows." *Energy and Buildings* 46, (2012): 139-145.
7. Hwang, Taeyon, and Jeong Tai Kim. "Effects of indoor lighting on occupants' visual comfort and eye health in a green building." *Indoor and Built Environment* 20, no. 1 (2011): 75-90.
8. Leather, Phil, Mike Pyrgas, Di Beale, and Claire Lawrence. "Windows in the Workplace: Sunlight, View, and Occupational Stress." *Environment and Behavior* 30, no. 6 (1998): 739-62.
9. Benedetti, Francesco, Cristina Colombo, Barbara Barbini, Euridice Campori, and Enrico Smeraldi. "Morning Sunlight Reduces Length of Hospitalization in Bipolar Depression." *Journal of Affective Disorders* 62, no. 3 (2001): 221-23.
10. Walch, Jeffrey M., Bruce S. Rabin, Richard N. Day, Jessica D. Williams, Krissy Choi, and James Kang. "The Effect of Sunlight on Postoperative Analgesic Medication Use: A Prospective Study of Patients Undergoing Spinal Surgery." *Psychosomatic Medicine* 67, no. 1 (2005): 156-63.
11. Thayer, Julian F, Bart Verkuil, Jos F Brosschot, Kevin Kampschroer, Anthony West, Carolyn Sterling, Israel C Christie, Darrell R Abernethy, John J Sollers, Giovanni Cizza, Andrea H Marques, and Esther M Sternberg. "Effects of the Physical Work Environment on Physiological Measures of Stress." *European Journal of Cardiovascular Prevention and Rehabilitation: Official Journal of the European Society of Cardiology, Working Groups on Epidemiology & Prevention and Cardiac Rehabilitation and Exercise Physiology* 17, no. 4 (2010): 431-439.

MODULE 2: HAPTIC AND AURAL

1. Schust, M. "Effects of Low Frequency Noise up to 100 Hz." *Noise and Health* 6, no. 23 (2004): 73- 85.
2. Folscher, Lindy-Lee, Lara Nicole Goldstein, Mike Wells, and David Rees. "Emergency department noise:

- mental activation or mental stress?." *Emerg Med J* 32, no. 6 (2015): 468-473.
3. Evans, Gary W., and Dana Johnson. "Stress and Open-Office Noise." *Journal of Applied Psychology* 85, no. 5 (2000): 779-83.
 4. Waye, Kerstin Persson, Johanna Bengtsson, Ragnar Rylander, Frank Hucklebridge, Phil Evans, and Angela Clow. "Low Frequency Noise Enhances Cortisol among Noise Sensitive Subjects during Work Performance." *Life Sciences* 70, no. 7 (2002): 745-58.
 5. Kaarlela-Tuomaala, A., R. Helenius, E. Keskinen, and V. Hongisto. "Effects of Acoustic Environment on Work in Private Office Rooms and Open-plan Offices - Longitudinal Study during Relocation." *Ergonomics* 52, no. 11 (2009): 1423-444.
 6. O'Neill, Máire Eithne. "Corporeal experience: A haptic way of knowing." *Journal of Architectural Education* 55, no. 1 (2001): 3-12.
 7. Herssens, Jasmien, Ann Heylighen, Richard L. Hayes, and Virginia Ebbert. "Haptic design research: A blind sense of space." *The Place of Research, The Research of Place* (2012).
 8. Herssens, Jasmien, and Ann Heylighen. "Challenging architects to include haptics in design: Sensory paradox between content and representation." *Designing Together; CAAD Futures* (2011).

MODULE 3: OLFACTORY

1. Mitchell, Clifford S., Zhang, Junfeng, Sigsgaard, Torben, Jantunen, Matti, Liroy, Paul J., Samson, Robert, and Karol, Meryl H. "Current State of the Science: Health Effects and Indoor Environmental Quality. (Mini-Monograph)." *Environmental Health Perspectives* 115, no. 6 (2007): 958-964.
2. Ilyas, Salman, Emery, Ashley, Heerwagen, Judith, and Heerwagen, Dean. "Occupant Perceptions of an Indoor Thermal Environment in a Naturally Ventilated Building." *ASHRAE Transactions* 118 (2012): 114-21.
3. Allen, Joseph G., Piers MacNaughton, Jose Guillermo Cedeno Laurent, Skye S. Flanigan, Erika Sita Eitland, and John D. Spengler. "Green Buildings and Health." *Current Environmental Health Reports* 2, no. 3 (2015): 250-258.
4. Allen, Joseph G., Piers MacNaughton, Usha Satish, Suresh Santanam, Jose Vallarino, and John D. Spengler. "Associations of Cognitive Function Scores with Carbon Dioxide, Ventilation, and Volatile Organic Compound Exposures in Office Workers: A Controlled Exposure Study of Green and Conventional Office Environments." *Environmental Health Perspectives* 124, no. 6 (2015): 805-80512.
5. Clements-Croome, D.J, H.B Awbi, Zs Bakó-Biró, N. Kochhar, and M. Williams. "Ventilation Rates in Schools." *Building and Environment* 43, no. 3 (2008): 362-67.
6. Milton, Donald K., P. Mark Glencross, and Michael D. Walters. "Risk of Sick Leave Associated with Outdoor Air Supply Rate, Humidification, and Occupant Complaints." *Indoor Air* 10, no. 4 (2000): 212-21.
7. Melikov, Skwarczynski, Kaczmarczyk, and Zabecky. "Use of Personalized Ventilation for Improving Health, Comfort, and Performance at High Room Temperature and Humidity." *Indoor Air* 23, no. 3 (2013): 250-63.
8. Ghahramani, Ali, Jovan Pantelic, Matthew Vannucci, Lorenza Pistore, Shichao Liu, Brian Gilligan, Soheila Alyasin, Edward Arens, Kevin Kampshire, and Esther Sternberg. "Personal CO2 Bubble: Context-dependent Variations and Wearable Sensors Usability." *Journal of Building Engineering* 22, (2019): 295-304.
9. Razjouyan, Javad, Hyoki Lee, Brian Gilligan, Casey Lindberg, Hung Nguyen, Kelli Canada, Alex Burton, Amir Sharafkhaneh, Karthik Srinivasan, Faiz Currim, Sudha Ram, Matthias R. Mehl, Nicole Goebel, Melisa Lunden, Seema Bhangar, Judith Heerwagen, Kevin Kampschroer, Esther M. Sternberg, and Bijan Najafi. "Wellbuilt for Wellbeing: Controlling Relative Humidity in the Workplace Matters for Our Health." *Indoor Air* 30, no. 1 (2020): 167-79.

MODULE 4: BIOPHILIA

1. Chawla, Louise, and Jack L Nasar. "Benefits of Nature Contact for Children." *Journal of Planning Literature*

30, no. 4 (2015): 433-52.

2. Ulrich, Roger S. "View through a Window May Influence Recovery from Surgery." *Science* 224 (1984): 420.
3. Taylor, Andrea Faber, Frances E Kuo, and William C Sullivan. "Views of Nature and Self-discipline: Evidence from Inner City Children." *Journal of Environmental Psychology* 22, no. 1-2 (2002): 49-63.
4. Omid Kardan, Peter Gozdyra, Bratislav Misic, Faisal Moola, Lyle J. Palmer, Tomáç Paus, and Marc G. Berman. "Neighborhood Greenspace and Health in a Large Urban Center." *Scientific Reports* 5, no. 1 (2015): 11610.
5. Kaplan, Stephen. "The Restorative Benefits of Nature: Toward an Integrative Framework." *Journal of Environmental Psychology* 15, no. 3 (1995): 169-82.
6. Berman, Marc G, John Jonides, and Stephen Kaplan. "The Cognitive Benefits of Interacting With Nature." *Psychological Science* 19, no. 12 (2008): 1207-212.
7. Gamble, Katherine R, Howard, James H, and Howard, Darlene V. "Not Just Scenery: Viewing Nature Pictures Improves Executive Attention in Older Adults." *Experimental Aging Research* 40, no. 5 (2014): 513-30.
8. Faber Taylor, Andrea, and Frances E. Kuo. "Children with attention deficits concentrate better after walk in the park." *Journal of attention disorders* 12, no. 5 (2009): 402-409.
9. Gregory N. Bratman, J. Paul Hamilton, Kevin S. Hahn, Gretchen C. Daily, and James J. Gross. "Nature Experience Reduces Rumination and Subgenual Prefrontal Cortex Activation." *Proceedings of the National Academy of Sciences* 112, no. 28 (2015): 8567-8572.
10. Jansson, Mårit, Hanna Fors, Therese Lindgren, and Björn Wiström. "Perceived Personal Safety in Relation to Urban Woodland Vegetation ; A Review." *Urban Forestry & Urban Greening* 12, no. 2 (2013): 127-33.
11. Li, Qing, Otsuka, Toshiaki, Kobayashi, Maiko, Wakayama, Yoko, Inagaki, Hirofumi, Katsumata, Masao, Hirata, Yukiyo, Li, Yingji, Hirata, Kimiko, Shimizu, Takako, Suzuki, Hiroko, Kawada, Tomoyuki, and Kagawa, Takahide. "Acute Effects of Walking in Forest Environments on Cardiovascular and Metabolic Parameters." *European Journal of Applied Physiology* 111, no. 11 (2011): 2845-853.
12. Ward Thompson, Catharine, Jenny Roe, Peter Aspinall, Richard Mitchell, Angela Clow, and David Miller. "More Green Space Is Linked to Less Stress in Deprived Communities: Evidence from Salivary Cortisol Patterns." *Landscape and Urban Planning* 105, no. 3 (2012): 221-29.
13. Detweiler, Mark B., Sharma, Taral, Detweiler, Jonna G., Murphy, Pamela F., Lane, Sandra, Carman, Jack, Chudhary, Amara S., Halling, Mary H., and Kim, Kye Y. "What Is the Evidence to Support the Use of Therapeutic Gardens for the Elderly?" *Psychiatry Investigation* 9, no. 2 (2012): 100-10.

GENERAL

1. Kopec, David Alan, and Susan S. Szenasy. *Health and Well-being for Interior Architecture*. New York, NY: Routledge, 2017.
2. Domin, Christopher, and Kathryn McGuire. *Powerhouse : The Life and Work of Judith Chafee*. New York, NY.: Princeton Architectural Press, 2019.
3. Gruchalla, Rebecca S, Jacqueline Pongratic, Marshall Plaut, Richard Evans, Cynthia M Visness, Michelle Walter, Ellen F Crain, Meyer Kattan, Wayne J Morgan, Suzanne Steinbach, James Stout, George Malindzak, Ernestine Smartt, and Herman Mitchell. "Inner City Asthma Study: Relationships among Sensitivity, Allergen Exposure, and Asthma Morbidity." *The Journal of Allergy and Clinical Immunology* 115, no. 3 (2005): 478-85.
4. Freedman, D M, M. Dosemeci, and K. Mcglynn. "Sunlight and Mortality from Breast, Ovarian, Colon, Prostate, and Non-melanoma Skin Cancer: A Composite Death Certificate Based Case- control Study." *Occupational and Environmental Medicine* 59, no. 4 (2002): 257-262.
5. Appleman, Kenneth, Figueiro, Mariana G., and Rea, Mark S. "Controlling Light-dark Exposure Patterns Rather than Sleep Schedules Determines Circadian Phase." *Sleep Medicine* 14, no. 5 (2013): 456-61.
6. Ming Ekuo. "How Might Contact with Nature Promote Human Health? Exploring Promising Mechanisms

- and a Possible Central Pathway." *Frontiers in Psychology* 6 (2015): 1093.
7. Wilson, Edward O. *Biophilia*. Cambridge, MA: Harvard University Press, 1984.
 8. Kellert, Stephen R., Judith Heerwagen, and Martin Mador. *Biophilic Design : The Theory, Science, and Practice of Bringing Buildings to Life*. Hoboken, N.J.: Wiley, 2008.
 9. Heerwagen, Judith. "Biophilia, health, and well-being." In *Restorative commons: creating health and well-being through urban landscapes*, edited by Lindsay K. Campbell and Anne Wiesen, 38-57. New York, NY: U.S. Department of Agriculture, Forest Service, Northern Research Station, 2009.
 10. Fjørtoft, Ingunn "Landscape as Playscape: The Effects of Natural Environments on Children's Play and Motor Development." *Children Youth and Environments* 14, no. 2 (2004): 21-44.
 11. Ohtsuka, Y., Noriyuki Yabunaka, and Shigeru Takayama. "Shinrin-yoku (forest-air Bathing and Walking) Effectively Decreases Blood Glucose Levels in Diabetic Patients." *International Journal of Biometeorology* 41, no. 3 (1998): 125-27.
 12. Lindberg, Casey M, Karthik Srinivasan, Brian Gilligan, Javad Razjouyan, Hyoki Lee, Bijan Najafi, Kelli J. Canada, Matthias R. Mehl, Faiz Currim, Sudha Ram, Melissa M. Lunden, Judith H. Heerwagen, Kevin Kampschroer, and Esther M. Sternberg. "Effects of Office Workstation Type on Physical Activity and Stress." *Occupational and Environmental Medicine* 75, no. 10 (2018): 689-695.

POLICIES + STATEMENTS

COVID-19 MEASURES + COURSE MODALITY

The University will change the Stage of operations to address changing pandemic conditions. Impacts to this course will be made by D2L Announcement and email. University updates on COVID-19 measures that may override this section can be found at: <https://covid19.arizona.edu/updates>

FLEX IN-PERSON MODALITY

This class will be taught in the FLEX IN-PERSON modality.

.A MEETINGS

This class will meet IN-PERSON and remotely via Zoom. Consult section 0 for planned meeting times and modes.

.B FACE COVERINGS

Face coverings may be required or strongly encouraged when on campus, whether in a building or outdoors. Observe local signage and follow directions of the instructor.

.a Disability Resource Center (DRC)

The DRC will explore face coverings and accessibility considerations for those who may have a disability or medical condition that precludes use of a face covering. The DRC will explore the range of potential options as well as remote course offerings. Should DRC determine an accommodation is reasonable, it will communicate with the instructor.

.C SOCIAL DISTANCING

During IN-PERSON sessions, Center for Disease Control (CDC) guidelines will be followed, including observance of physical distancing and maximum occupancy guidelines.

.D ATTENDANCE

Students who feel sick or believe they may have had contact with someone who is infectious should notify the instructor with copy to the Dean of Students (DOS-deanofstudents@email.arizona.edu), stay home, and, except for seeking medical care, avoid contact with others. Non-attendance does not guarantee an extension of due date or rescheduling of examinations.

Students who miss more than one week are required to provide a doctor's note of explanation to the Dean of Students, who will communicate its implications (with expected return date) to the relevant instructors.

Students remain responsible for completing work missed due to illness or the need to quarantine as well as for

communicating with the instructor via the means established by that instructor.

.a Campus Health

Campus Health ((520) 621-9202) will test for COVID-19.

.E LIFE CHALLENGES

Students experiencing barriers to success should consult with the instructor, their advisor, the School Director or Associate Dean, or the Dean of Students Office (520-621-2057, DOS- deanofstudents@email.arizona.edu).

Students facing physical or mental health challenges should consult Campus Health: 520-621-9202; After Hours: (520) 570-7898.

Counseling & Psych Services 24/7 hotline: (520) 621-3334.

.F HARDWARE + SOFTWARE

Students will need a laptop or web-enabled device with webcam and microphone, reliable internet, standard software (web browser, office productivity suite, zoom app).

CAPLA computing resources (also located at <https://capla.arizona.edu/re-entry>):

<https://arizona.app.box.com/v/CAPLStudentFAQs> <https://arizona.box.com/v/RemoteLabAccess>

UA computing resources:

VCAT at <http://vcat.arizona.edu/>

resources for internet: <https://student.it.arizona.edu/resources>

.G RECORDINGS

Lecture recordings will be available only through D2L. Students may not modify or re-use content for any purpose other than personal education. Recordings are subject to government and University regulations and persons accessing unauthorized recordings or using recordings in a manner inconsistent with UArizona values and educational policies are subject to suspension or civil action.

Students may opt out of Zoom recordings by simply turning OFF the participant video. Turning video ON indicates an agreement to be recorded.

GRADING

Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate. Evaluations will be based primarily on student's work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely endeavor to do so.

CHANGE

By its very nature, the practice of architecture requires an ability to adapt to change, both by responding to unforeseen events in the delivery of services and in the revision of the work. Because an ability to adapt and embrace change is an essential skill in our profession, it may be considered in evaluations for this course.

LATE WORK

Work submitted after the deadline will be graded one or more letter grades below what would have been awarded had the work been submitted on time, appropriate to the length of delay and the importance of the assignment, at the Instructor's discretion.

INCOMPLETE WORK

Work submitted that is incomplete will be graded one or more letter grades below what would have been awarded had the work been complete, appropriate to the extent of incompleteness and the importance of the assignment, at the Instructor's discretion.

GRADING SCALE

A (90- 100)

B (80 to <90)

C (70 to <80)

D (60 to <70)

E (0 to <60)

Incomplete

VII. EVALUACIÓN

FÓRMULA

100% (TF1)

TIPO DE NOTA	PESO %
TF - TRABAJO FINAL	100

VIII. CRONOGRAMA

TIPO DE PRUEBA	DESCRIPCIÓN NOTA	NÚM. DE PRUEBA	FECHA	OBSERVACIÓN	RECUPERABLE
TF	TRABAJO FINAL	1	Semana 16	100% (Seminar Discussion 4% + Paper Critiques 16% + Design Implications 40% + Synthesis 25% + Participation 15%)	NO

IX. BIBLIOGRAFÍA DEL CURSO

https://upc.alma.exlibrisgroup.com/leganto/readinglist/lists/9509233460003391?institute=51UPC_INST&auth=LOCAL

ANEXO

En este anexo, se encuentran los reglamentos que todo alumno está obligado a leer y a cumplir en su rol de estudiante universitario en la UPC.

REGLAMENTO DE DISCIPLINA DE ALUMNOS :

<https://sica.upc.edu.pe/categoria/reglamentos-upc/sica-reg-26-reglamento-de-disciplina-de-alumnos>

REGLAMENTO PARA LA PREVENCIÓN E INTERVENCIÓN EN CASOS DE HOSTIGAMIENTO SEXUAL- UPC:

<https://sica.upc.edu.pe/categoria/normalizacion/sica-reg-31-reglamento-para-la-prevencion-e-intervencion-en-casos-de-hostiga>