Faculty: Section 004  Norman Lach, Assistant Professor - 414 Quigley
Office/Hours: Monday thru Thursday 12:00 – 1:00 pm & 5:00 to 5:30 pm
or by appointment
Phone/Email: 453-3734  nlach@siu.edu

Course Description: A project development course taught in Spring 2015 semester that
emphasizes the integration of the basic elements of building, structural, and
environmental technologies for a two or more story building. The first half
of the semester includes program development, site analysis, concept and
schematic design. The second half of the semester includes continued
design development and documentation of the same project. Studio:12
hours per week.

Goals and Objectives. 1. Broaden the experiences and knowledge gained in previous architectural
design and technology classes.

2. Simulate the typical office experience of first programming and
designing a building, then prepare the design development and
construction documents phases of the building project.

3. Impart the importance of the development of a design in a project.

4. Further develop the skills in the disciplines of schematic design and
design development and conveying the design intent.

Studio Meeting Times: All Sections: M-W-F 1:00 – 5:00 pm
Attendance Policy: Each section will work independently with their respective faculty,
however there will be times when all four sections will meet together,
work together on a specific task as teams, and/or present together.

Attendance is required during all studio meeting times. The opportunity to work together in a
studio setting on the same project only occurs during your architectural education. Once in an
office condition, each team is working on different projects and schedules. This spring is your
last opportunity in your pre-professional education to work together in the studio. In order for
the studio and your own experience be fully developed, each individual needs to be available and
working in the studio during schedule hours and at other times as well.

Student Conduct: Please review Chapter 7 Student Conduct Code in the SIU
UNDERGRADUATE CATALOG regarding University policy regarding
Acts of Academic Dishonesty. In particular to this course, students are to
do their own work. Do not trace or copy, including electronic copies, of
another student's work unless specifically cleared with your instructor. If
there is any question, do not hesitate to ask.
Special Concerns

If there is any problem or concern that you have which might impact your performance in the class, please inform the instructor the first week of class. To be registered for this class, you must satisfy the prerequisites for the class. If this is not the case or you are uncertain, you must see the instructor, advisor, or Director immediately.

Readings

Special reading and/or research assignments will be made from the reading list, suggested Web Sites, and relevant Code related references and placed on reserve in the Arch/I.D. Library or Morris Library.

Supplies/Equip.’s

To be specified by the faculty.

Grading Policy

Projects are due on the hour and date specified for submittal or presentation. Late projects will be considered for evaluation only with prior approval by the instructor.

Spring Project

See special handouts for the project and schedule. Each student will be working individually and shall be completely responsible for his or her own work. There will be team assignments periodically to achieve specific tasks needed by all students.

Task Outline

**ARC 452  PRE-DESIGN**

1. Master Plan Review including the following
   a. Land Use including built-form, open space, landscape and facility use
   b. Circulation including pedestrian, ADA, bicycle, automobile, light service, heavy service, deliveries, fire department, security, public bus, private bus, rail, staff, student, and visitor parking
   c. Research specific project plans
   d. Develop Master Plan Update
   e. Revise and update the study model for each area of the master plan.

2. Establish and Analyze Building Programs
   a. Discuss Owner and User requirements.
   b. Establish building program with owner
   c. Prepare relationship and flow diagrams
   d. Research the specific building types
   e. Visit similar faculties

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3. Complete a site and context analysis and select building site
   a. Complete site analysis to include climate, geology, hydrology, contours, soils, vegetation, and site survey.
   b. Complete the context analysis including the selected site’s existing and past uses, relationship to the project and the community.

**CONCEPT DESIGN**

4. Develop Concept Design Drawings and massing models
   a. Develop site and landscape concept
   b. Develop building concept
   c. Develop structural concept
   d. Develop passive heating & cooling systems, and mechanical & electrical systems concepts

5. Design Review

**MID-TERM PROCESS REPORT:**
Work up to this point will be weighed as 1/3 (33.333%) of total grade. Out of this mid-term progress grade, ‘Research’ will be considered 1/3 (33.333% of 33.333%) while ‘Concept Design’/Generation 2/3 (66.667% of 33.333%). The remaining work in the studio will fill the remaining 2/3 (66.667) of total grade and allocated as in sections as follows.

**SCHEMATIC DESIGN (15%)**

6. Schematic Design drawings and models
   a. Complete Schematic Design
   b. Complete Schematic Design presentation
   c. Prepare outline specifications checklist

7. Schematic Presentation

**DESIGN DEVELOPMENT (30%)**

8. Design Development Drawings and models
   a. Prepare design development drawings and study models

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b. Complete architectural models suitable for presenting the project at both the overall building scale and part models of the key elements of the design at a larger scale to be determined.

c. Determine the number of sheets and sheet composition for a complete set of working drawings.

d. Determine what working drawings will be needed for the course.

e. Submit Design Development drawings and models

**CONTRACT DOCUMENTS (50%)**

9. Contract Documents
   a. Prepare selective working drawings of the key elements of the design
   b. Prepare selective technical specifications of the key elements of the design
   c. Prepare a cover sheet

10. Prepare an Interior Design Sample Board

11. Prepare two copies of an 11” x 17” Project Report including the development of the design and selective drawings and photographs to fully convey the design intent. The instructor will retain one copy.

12. Prepare 11” x 17” Project Report sheets display together with the overall and detail models of each design.

13. Presentation of final project.

**PROJECT MANAGEMENT/PROFESSIONAL DEVELOPMENT (5%)**

14. Professional Development
   a. Establish and follow schedule for entire project
   b. Prepare professional presentations formats
   c. Prepare Intern Development Program (IDP) application.
Grading Scale:

A  Above the expected.  Only the very top process and product 
93% +  -- Clear and working understanding of all course 
concepts as demonstrated through discussion, critique and work. 
Do you know what integration issues are relevant and did you use them? Meeting ALL the individual, team, and 
class work requirements and completing them at the top 
level of the class.

B  Best and more than required.  Clearly well above the average work 
84% - 92% -- Shows clear understanding of integration 
concepts as demonstrated through discussion, critique and work. Meeting ALL the individual, team, and work 
requirements and completing them near the top level of the 
class.

C  Center of the pack / average.  Meets average acceptable standards 
75% - 83% -- average understanding of course concepts as 
demonstrated through discussion, critique and work. 
Meeting ALL the individual, team, and class work requirements 
And completing them at a level that meets average standards. 
Shows understanding of course concepts as demonstrated.

D  Minimal Understanding.  Minimum standards of the department and course 
65% - 74% -- minimum understanding of course concepts as 
demonstrated through discussion, critique and work. 
Not meeting ALL the individual, team, and class work 
requirements OR completing them at a minimum 
standard. Exhibit minimum skills needed to be a potential 
professional.

F.  Failing  Complete lack of understanding of concepts and required class 
work. Less than 65%

INC  Incomplete  Will be used only in exceptional circumstances 
beyond the control of the student. The student must be passing 
the course at the time.

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Studio – QUIGLEY 204 your studio, your responsibility, your opportunity:
Always be prepared to work during the studio. Bring ALL work To ALL classes. Be prepared to present your work formally or informally during any class session. Don’t miss class for non-emergencies – School policy says 3 misses and your grade is to be lowered a letter. No smoking in the studio at any time. The use of spray adhesive or spray paint is not allowed in the studios or the building. No cutting of material is allowed on desktops covered with Borco(drafting material).

Indicators of Student Performance Related to Objectives

Assessment will be based on the senior design project completed in ARC 452; Architectural Design and Construction Documentation. The students culminate their educational process with a comprehensive design, documentation and presentation of the project.

Rating Criteria (Each merited 5 pts):

1. **Critical Thinking Skills:** Ability to apply basic comprehensive analysis and evaluation of a building, building complex, or urban space. (NAAB 2)

2. **Fundamental Design Skills:** Ability to apply basic organizational, spatial, structural, and constructional principals to the conception and development of interior and exterior spaces. (NAAB 6 and NAAB 5, Formal Ordering Systems)

3. **Environmental Conservation:** Understanding of the basic principles of ecology and architects’ responsibilities with respect to environmental and resource conservation in architecture and urban design. (now NAAB 15 - Sustainability / also LEEDS checklist)

4. **Accessibility:** Ability to design both site and building to accommodate individuals with varying physical abilities. (NAAB 14)

5. **Site Conditions:** Ability to respond to natural and built site characteristics in the development of a program and design of a project. (NAAB 17)

6. **Structural Systems:** Understanding of the principles of structural behavior in withstanding gravity and lateral forces, and the evolution, range, and appropriate applications of contemporary structural systems. (NAAB 18)

7. **Environmental Systems:** Understanding of the basic principles that inform the design of environmental systems, including acoustics, lighting and climate modification systems, and energy use. (NAAB 19)

8. **Life-Safety Systems:** Understanding of the basic principles that inform the design and selection of life-safety systems in buildings and their subsystems. (NAAB 20, Egress)
9. Building Envelope Systems: Understanding of the basic principles that inform the design of building envelope systems. (NAAB 21)

10. Building Service Systems: Understanding of the basic principles that inform the design of building service systems, including plumbing, electrical, vertical transportation, communication, security, and fire protection systems. (NAAB 22)

11. Building Systems Integration: Ability to assess, select, and integrate structural systems, environmental systems, life-safety systems, building envelope systems, and building service systems into building design. (NAAB 23)

12. Building Code Compliance: Understanding the codes, regulations, and standards applicable to a given site and building design, including occupancy classifications, allowable building heights. (NAAB ?, old criteria, intrinsic to others)

13. Building Materials and Assemblies: Understanding the principles, conventions, standards, applications, and restrictions pertaining to the manufacture and use of construction materials, components, and assemblies. (NAAB 24)

14. Detailed Design Development: Ability to assess, select, configure, and detail as an integral part of the design, appropriate combination of building materials, components, and assemblies to satisfy the requirement of building programs. (NAAB ?, old criteria)

15. Technical Documentation: Ability to make technical precise descriptions and documentation of a proposed design for the purposes of review and construction. (NAAB 3, Graphic Skills & NAAB 26)

16. Comprehensive Design: Ability to produce an architecture project informed by a comprehensive program, from schematic design through the detailed development of programmatic spaces, structural and environmental systems, life-safety provisions, wall sections, and building assemblies, as may be appropriate; and to assess the completed project with respect to the program’s design criteria. (NAAB 28)

GRADE SHEET

NAME:

SITE: Parking layout, access / location on site, relationship to building and building entry, bus access / exit to site, service requirements, solar orientation, wind orientation, noise orientation, pedestrian access to entry from parking, concept / formative idea reflected in site development. Approach, entry sequence.

BUILDING DESIGN:

CONCEPT: Supports building typology, formative idea supports concepts, building forms reflect concept and formative ideas.
CONTEXT: Response to climatic, vehicular transportation, pedestrian, urban neighborhood.

FUNCTION: All program areas included, logical functional relationship, entry clearly defined, cover at entry for loading / unloading, shape of spaces/use, circulation clear

AESTHETICS: Balance, proportion, mass / void, material selection.

DESIGN COMMUNICATION:

DRAWINGS: Site plan

Floor plan(s)

Elevation(s)

Site / building section(s)

Interior perspective

Exterior perspective in context

MODELS: Site model

Building model
IMPORTANT DATES *
Semester Class Begins: ........................................... 01/20/2015
Last day to add a class (without instructor permission): ............ 01/25/2015
Last day to drop a class (without instructor permission): .......... 02/01/2015
Last day to drop a class using SalukiNet: ............................ 04/05/2015
Last day to file diploma application (for name to appear in Commencement program): ................................. 03/13/2015
Final examinations: .............................................. 05/11–05/15/2015

Note: For outreach, internet, and short course drop/add dates, visit Registrar’s Academic webpage http://registrar.siu.edu/

SPRING SEMESTER HOLIDAYS
Martin Luther King, Jr.’s Birthday 01/19/2015
Spring Vacation 03/07–03/13/2015

WITHDRAWAL POLICY – Undergraduate only
Students who officially register for a session may not withdraw merely by the stopping of attendance. An official withdrawal form needs to be initiated by the student and processed by the University. For the proper procedures to follow when dropping courses and when withdrawing from the University, please visit http://registrar.siu.edu/pdf/ugradcatalog1314.pdf

INCOMPLETE POLICY – Undergraduate only
An INC is assigned when, for reasons beyond their control, students engaged in passing work are unable to complete all class assignments. An INC must be changed to a completed grade within one semester following the term in which the course was taken, or graduation, whichever occurs first. Should the student fail to complete the course within the time period designated, that is, no later than the end of the semester following the term in which the course was taken, or graduation, whichever occurs first, the incomplete will be converted to a grade of F and the grade will be computed in the student’s grade point average. For more information please visit: http://registrar.siu.edu/grades/incomplete.html

REPEAT POLICY
An undergraduate student may, for the purpose of raising a grade, enroll in a course for credit no more than two times (two total enrollments) unless otherwise noted in the course description. For students receiving a letter grade of A,B,C,D, or F, the course repetition must occur at Southern Illinois University Carbondale. Only the most recent (last) grade will be calculated in the overall GPA and count toward hours earned. See full policy at http://registrar.siu.edu/pdf/ugradcatalog1314.pdf

GRADUATE POLICIES
Graduate policies often vary from Undergraduate policies. To view the applicable policies for graduate students, please visit http://gradschool.siu.edu/about-us/grad-catalog/index.html

DISABILITY POLICY
Disability Support Services provides the required academic and programmatic support services to students with permanent and temporary disabilities. DSS provides centralized coordination and referral services. To utilize DSS services, students must come to the DSS to open cases. The process involves interviews, reviews of student-supplied documentation, and completion of Disability Accommodation Agreements. http://disabilityservices.siu.edu/

PLAGIARISM CODE

MORRIS LIBRARY HOURS
http://www.lib.siu.edu/about

SAFETY AWARENESS FACTS AND EDUCATION
Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here: http://safe.siu.edu

SALUKI CARES
The purpose of Saluki Cares is to develop, facilitate and coordinate a university-wide program of care and support for students in any type of distress—physical, emotional, financial, or personal. By working closely with faculty, staff, students and their families, SIU will continue to display a culture of care and demonstrate to our students and their families that they are an important part of the community. For Information on Saluki Cares: (618) 453-5714, or suicares@siu.edu, http://salukicares.siu.edu/index.html

EMERGENCY PROCEDURES
Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. We ask that you become familiar with the SIU Emergency Response Plan and Building Emergency Response Team (BERT) programs. Please reference the Building Emergency Response Protocols for Syllabus attachments on the following pages. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency.

INCLUSIVE EXCELLENCE
SIU contains people from all walks of life, from many different cultures and subcultures, and representing all strata of society, nationalities, ethnicities, lifestyles and affiliations. Learning from and working with people who differ is an important part of education as well an essential preparation for any career. For more information please visit: http://www.inclusiveexcellence.siu.edu/

LEARNING AND SUPPORT SERVICES
Help is within reach. Learning support services offers free tutoring on campus and math labs. To find more information please visit the Center for Learning and Support Services website:
Tutoring: http://tutoring.siu.edu/
Math Labs http://tutoring.siu.edu/math_tutoring/index.html

WRITING CENTER
The Writing Center offers free tutoring services to all SIU students and faculty. To find a Center or Schedule an appointment please visit http://write.siu.edu/

AFFIRMATIVE ACTION & EQUAL OPPORTUNITY
Our office’s main focus is to ensure that the university complies with federal and state equity policies and handles reporting and investigating of discrimination cases. For more information visit: http://diversity.siu.edu/

Additional Resources Available:
SALUKINET: https://salukinet.siu.edu/cp/home/displaylogin
ADVISEMNT: http://advisement.siu.edu/
SIU ONLINE: http://online.siu.edu/

Spring 2015 R.O’Rourke
Building Emergency Response Protocols for Syllabus:

University’s Emergency Procedure Clause:

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on BERT’s website at www.bert.siu.edu, Department of Public Safety’s website www.dps.siu.edu (disaster drop down) and in the Emergency Response Guideline pamphlet. Know how to respond to each type of emergency.

Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. **It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency.** The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.

Students With a Disability:

Instructors and students in the class will work together as a team to assist students with a disability safely out of the building. Students with a disability will stay with the instructor and communicate with the instructor what is the safest way to assist them.

Tornado:

During the spring semester we have a **Storm Drill.**

Pick up your belongings and your instructor will lead you to a safe area of the basement. No one will be allowed to stay upstairs. Stay away from windows. The drill should not last more than 10 minutes. You must stay with your instructor so he/she can take roll. Students need to be quiet in the basement as the BERT members are listening to emergency instructions on handheld radios and cannot hear well in the basement.

Fire:

During the fall semester we have a **Fire Drill.**

Pick up your belongings and your instructor will lead you to either the North or South parking lot depending on what part of the building your class is in. You must stay with your instructor so he/she can take roll. As soon as the building is all clear, you will be allowed to return to class.

**These drills are to train instructors and the Building Emergency Response Team to get everyone to a safe place during an emergency.**

Bomb Threat:

If someone calls in a bomb threat, class will be suspended and students will be asked to pick up their belongings, evacuate the building and leave the premises. Do not leave anything that is yours behind. We will not allow anyone back into the building until the police and bomb squad give us an all clear. **DO NOT USE YOUR CELL PHONES.** Some bombs are triggered by a cell phone signal.
Shooter in the Building:

If it is safe to leave, move to a safe area far from the building away from where the shooter is located. If anyone has any information about the shooter, please contact the police after they have gone someplace safe.

If it is not safe to leave, go into a room, lock the door and turn out the lights. Everyone should spread out and not huddle together as a group. Don’t stand in front of the door or in line of fire with the door. Students’ chairs and desks should be piled in front of the glass and door as a barricade and the teacher’s desk, podium and anything movable can be pushed against the door. This is intended to slow down any attempts to enter the classroom. If it looks like the shooter is persistent and able to enter, make a lot of noise and have the students use everything in their backpacks to throw at the shooter to distract him.

Silence all cell phones after one person in the room calls the police and informs them of their location and how many people are in the room. Be quiet and wait for the police to arrive. The police are looking for one or more shooters, and they have no way of knowing if the shooter is in the room people are hiding in. For this reason, when the police enter the room, no one should have anything in his/her hands and each person MUST raise his/her hands above his/her head.

Earthquake:

In the event of an earthquake, you are advised to take cover quickly under heavy furniture or crouch near an interior wall or corner and cover your head to avoid falling debris. Outside the building are trees and power lines and debris from the building itself that you will need to stay away from. In the building, large open areas like auditoriums are the most dangerous. Do not try to escape on a stairway or elevator. Do not hide under a stairway. We do not recommend that you stand in a doorway because the door could shut from the vibrations and crush your fingers trapping you there.

Rave Mobile Safety Alert System:

We recommend that you sign up for the Rave Mobile Safety Alert System. It is a new system that replaces the WENS system to alert you through emergency text messages on your cell phone and emails for emergencies on campus, weather reports and emergency school closures. You have to sign up. If you were signed up for WENS it does not roll over. You have to sign up for Rave Mobile Safety Alert System. Go to hrss.siu.edu (Human Resources Self-Services System), login with your regular SIU login username and password, click on Personal Information, fill out the information or update the information and save it. For more information, visit dps.siu.edu, contact SalukiTech at 453-5155 or salukitech@siu.edu.

CPR/First Aid Classes:

If you would be interested in getting your name on a list for a free four hr. CPR or First Aid class contact LaVon Donley-Cornett at lavong@siu.edu.

Women's Self Defense Classes are offered to female students faculty and staff by the Department of SIU Public Safety. For more information, contact Officer Russell Thomas russellt@dps.siu.edu.