ARCH 351 | **COLLABORATION STUDIO** : **HURON, SD** | FALL 2014 | 4 CREDITS

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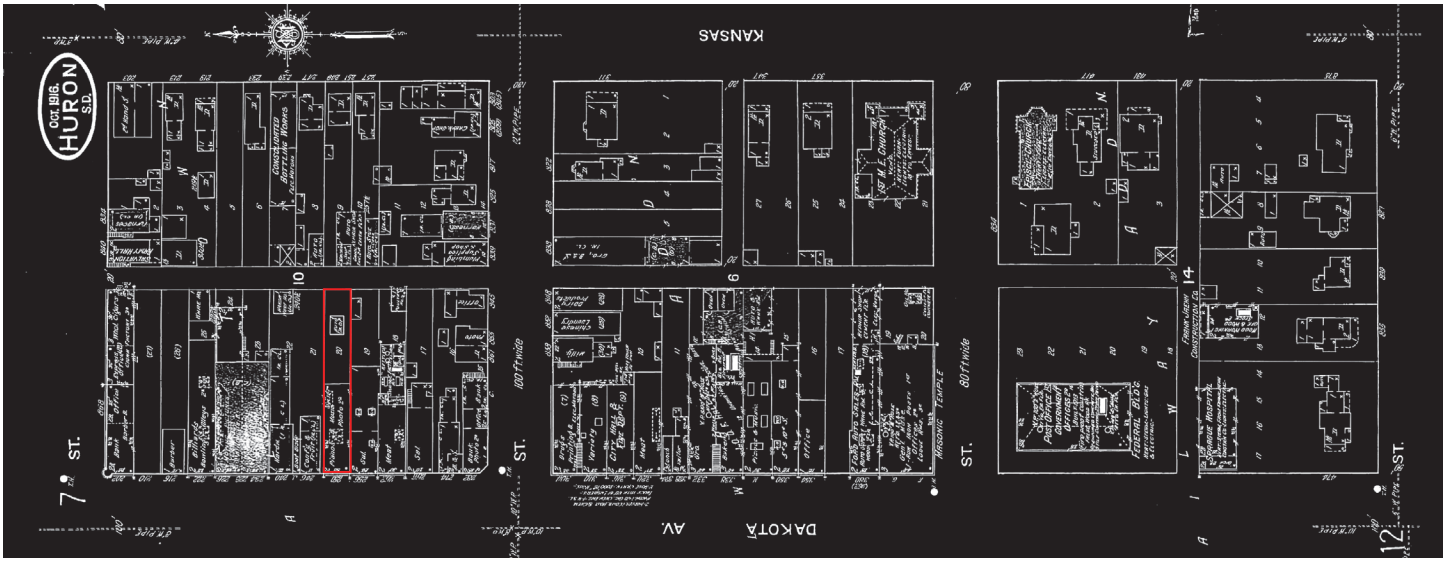

Sanborn Map | Huron, SD (1916)

COURSE INFORMATION

ARCH 351 | COLLABORATION STUDIO: HURON, SD | FALL 2014
Department of Architecture (DoArch) | South Dakota State University | 4 CREDITS
Tuesday & Thursday: 1:00 - 4:50pm | Depuy Military Hall 105

CONTACT INFORMATION

Federico Garcia Lammers, Assoc. AIA | Assistant Professor
Department of Architecture | South Dakota State University
Office: Harding Hall 316 | Monday & Wednesday 2:00-5:00pm (or by appointment)
Email: federico.garcia-lammers@sdstate.edu

All emails MUST include ARCH 351 as the subject of the email. Students MUST identify themselves in emails. Instructors will respond to emails within 48hrs, not including weekends.

Brian T. Rex | Department Head & Associate Professor
Department of Architecture | South Dakota State University
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COURSE DESCRIPTION

This design build studio is fundamentally organized around the use of collaborative design workflows as a method of exploring hands-on making processes. The work in this studio is funded in large part through a PCI (Pre-cast Concrete Institute) grant and with assistance from Gage Brothers Concrete. Students will design the fabrication methods through which to explore the material properties of pre-cast concrete. This exploration will be focused on "designing the construction" of a public space at a vacant lot, called the "Kansas Mall," at 246 Dakota Avenue South in Huron, SD.

ARCH 351: Students design a simple but comprehensive in-fill building project problematizing construction and spatial sequence while introducing foundational issues of place-making and city form in architectural production. Prerequisite: ARCH 252

This is the fifth in a line of five sequential pre-professional architectural design studios that constitute the backbone of the curriculum in architectural studies. In this course the focus is understanding and operating in design practice through the processes of material engagement and fabrication, a precursor to making buildings. The best way to learn architecture is never "practicing practice" but learning specific techniques and concepts through focused instruction. The course is rooted in teaching principles of guided inquiry and questioning through intensive hands-on making.

COURSE GOALS

1) **work individually and collectively to develop clear and productive fabrication workflows.**
2) **complete the fabrication and assembly documents of the "Kansas Mall" project.**
3) **analyze & evaluate the implications of fabrication on the design process.**
4) **apply considerations of digital fabrication techniques to the design of a cladding system.**
5) **understand site design and accessibility requirements for an exterior urban infill project.**

EXPECTED LEARNING OUTCOMES

Being the final preparatory studio prior to the professional architectural design sequence, students are expected to apply design training from previous courses to the work in this course. Students completing the course successfully will have worked collaboratively to complete group fabrication and assembly, gained initial experience with digital design and fabrication tools, and made simple but fundamental explorations into specific fabrication techniques. They will start to be able to identify the consideration of fabrication techniques in the work of other designers and begin to apply the same in their own processes and workflows.

METHODS OF ASSESSMENT

Authoring and actively participating in "making" processes and/or designing workflows is a requisite for every student in this studio. Students will be assessed both individually and collectively as a part of a team. All students are expected to learn every tool (analog and digital) associated with the "making" processes and workflows they design. This will be collected in a digital binder (excel + links), which will document all shop drawings, mold making and process work. Each student is responsible for their own digital binder. Individual digital binders will be evaluated every two - three weeks. When teams are formed in relation to specific parts of the project, a team leader will be in charge of organizing and managing each team's digital binder.

GRADING CRITERIA

INDIVIDUAL (70%)
Making: Mold(s) + Models
Making: Graphic Experiments + Shop Drawings
Workflow: Digital Binder

COLLECTIVE (30%)
Making: Mold(s) + Models
Making: Shop Drawings
Workflow: Digital Binders + Diagrams

You can complete every assignment on-time, complete them correctly, and fail this course. Finishing is simply a basis for assessment. Demonstrating the issues of the course through your performance is how you pass the course. NO extra credit, make-ups, or late submissions will be accepted in this course.

A = Exceptional performance; strongly exceeding the requirements of the course, showing strong academic initiative and independent resourcefulness.

B = Performance above the norm; accurate, complete, and beyond the minimum requirements of the course; work demonstrates marked progress and initiative.

C = Satisfactory/adequate work; adequately meets minimum requirements and demonstrates satisfactory comprehension, communication skills, and effort; demonstrates little initiative to investigate the problem without substantial prodding of the instructor; work shows little improvement.

D = Unsatisfactory/ inferior work; unsatisfactorily meets minimum requirements and demonstrates minimum comprehension, communication skills, and effort, at an inferior level; initiative lacking; improvement not noticeable.

F = Does not meet minimum requirements; fails to adequately demonstrate comprehension or communication skills. No pluses or minuses will be given in this course.

KEY DATES This is a preliminary outline and is subject to change. Changes will be announced in class and posted online. All site visits and project briefs will be discussed in class and posted online. Students are responsible for checking the course website. The project schedule and workflow will be managed through *smartsheet*.

WEEK 1	tu: AUG. 26	**COURSE INTRODUCTION**
WEEK 2	th: SEPT. 2	**MOLD MAKING TESTS**
	SEPT. 4	*LAST DAY TO DROP AND/OR ADJUST FINAL FEES*
WEEK 3	th: SEPT. 11	**SITE VISIT (HURON) & PRESENTATION**
WEEK 5	th: SEPT. 23	**GAGE BROTHERS VISIT (SIOUX FALLS)**
WEEK 8	tu: OCT. 14	**SITE WORK: FOUNDATION** (CAST IN-PLACE CONCRETE)
	NOV. 7	*LAST DAY TO DROP COURSE*
WEEK 10	tu: OCT. 28	**INSTALLATION: ARMATURE** (STEEL FRAME)
WEEK 12	tu: NOV. 11	**CASTING + FABRICATION: SURFACES** (PRE-CAST CONCRETE + STEEL)
WEEK 14	th: NOV. 27	NO CLASS: THANKSGIVING BREAK
WEEK 15	tu: DEC. 2	**INSTALLATION: SURFACES (PRE-CAST + STEEL)**
WEEK 16	tu: DEC. 16	**INSTALLATION COMPLETE**
WEEK 17	TBD	**FINAL DOCUMENTATION**

COURSE MATERIALS Software and hardware tools will be used in this course. The Solberg and ME shops contain the majority of hardware tools, and will be very important spaces throughout the semester.
Use of a computer will be required. Below is a list of the minimum software required for this studio.

HARDWARE

Solberg & ME Shops

SOFTWARE

Adobe Suites (photoshop, illustrator, indesign) or similar image editing software.

Microsoft Office (excel)

Revit 2014 (www.autodesk.com/education/free-software/revit)

Rhino 5 (additional plugins can be included)

CLOTHING

Overalls/work clothes and proper footware is recommended for casting and shop work.

READING MATERIALS Suggested and required readings will be posted to the course website.

ADA STATEMENT Any student who feels s/he may need an accommodation based on the impact of a disability should contact Nancy Hartenhoff-Crooks, Coordinator of Disability Services (605-688-4504 or Fax, 605-688-4987) to privately discuss your specific needs. The Office of Disability Services is located in room 065, the Student Union.

STUDENT CONDUCT Students will conduct themselves in a manner that promotes learning. Disruptive behavior and disrespectful attitudes will not be tolerated.

ATTENDANCE **Attendance is required for all sessions.** More than two (2) unexcused absences will result in a lowered final grade. Attendance is required at the beginning of each class meeting and a sign-in sheet will circulate during each class session. Attendance is extremely important for this class. In-class discussion about the topic at hand is essential to understanding the course material. After four (4) unexcused absences, the student may fail the course. Late arrivals and early departures will be treated as absences.

"Excused" absences include the following:

Requests for excused absences must be submitted one week prior to the trip or event. Students must present the completed approved trip absence card to the instructor prior to the trip or event in order to receive an official excused absence. Faculty members are not required to honor incomplete or late cards.

1- Absence due to religious observance - The University Catalog states that a student may be excused from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused for this purpose may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused.

2- Absence due to officially approved trips – Absence due to approved university sponsored/recognized trips: Faculty and administration will honor officially approved absences where individuals are absent in the interest of officially representing the University. Appropriate sanctioned activities include:

- Collegiate club sports and competitions
- Conferences and workshops recognized by the University not related to academics
- Commitments on behalf of the University (Students' Association, Band, Choir, etc.)
- Intercollegiate athletics
- Professional activities recognized by the University related to academics

ACADEMIC HONESTY POLICY The University has a clear expectation for academic integrity and does not tolerate academic dishonesty. University Policy 2.4 sets forth the definitions of academic dishonesty, which includes but is not limited to, cheating, plagiarism, fabrication, facilitating academic dishonesty, misrepresentation, and other forms of dishonesty relating to academics. The Policy and its Procedures also set forth how charges of academic dishonesty are handled at the University. Academic Dishonesty is strictly proscribed and if found may result in student discipline up to and including dismissal from the University.

Plagiarizing is submitting uncited materials as your own work, which was in fact produced by others. Examples include uncited work from journals, books, work of other students, or electronic sources (i.e. world wide web (www), CD Rom, video and audio, graphic materials, etc.). In addition, the penalty for academic dishonesty may be one or more of the following, at the discretion of the instructor, and based on the seriousness of the situation:

- A grade of zero on the test, quiz, homework, problem, or other assignment for the student(s) involved.
- A grade of F for the course.
- Referral of the matter to the student conduct committee or the graduate school for disciplinary action.
- Students have the right to appeal an academic dishonesty charge. Procedures for this process are available in department offices and the dean's office. No final course grades will be given until all avenues of appeal have been completed or the case resolved. If repeated offenses occur in either a specific class or in 2 more different classes, the matter will be automatically referred to the student conduct committee/graduate school.

FREEDOM IN LEARNING STATEMENT Freedom in Learning. Students are responsible for learning the content of any course of study in which they are enrolled. Under Board of Regents and University policy, student academic performance shall be evaluated solely on an academic basis and students should be free to take reasoned exception to the data or views offered in any courses of study. Students who believe that an academic evaluation is unrelated to academic standards but is related instead to judgment of their personal opinion or conduct should first contact the instructor of the course. If the student remains unsatisfied, the student may contact the department head and/or dean of the college which offers the class to initiate a review of the evaluation.

NAAB CRITERIA

The Department of Architecture (DoArch) must demonstrate that each graduate possesses the knowledge and skills defined by the criteria set out below. The knowledge and skills are the minimum for meeting the demands of an internship leading to registration for practice. The school must provide evidence that its graduates have satisfied each criterion through required coursework.

The 2009 NAAB Conditions for Accreditation, including a full description of Student Performance Criteria, can be found at http://www.naab.org/

The criteria encompass two levels of accomplishment:

- **Understanding:** The capacity to classify, compare, summarize, explain and/or interpret information.
- **Ability:** Proficiency in using specific information to accomplish a task, correctly selecting the appropriate information, and accurately applying it to the solution of a specific problem, while also distinguishing the effects of its implementation.

Student Performance Criteria are organized into realms to more easily understand the relationships between individual criteria.

Realm A: Critical Thinking and Representation: Architects must have the ability to build abstract relationships and understand the impact of ideas based on research and analysis of multiple theoretical, social, political, economic, cultural and environmental contexts. This ability includes facility with the wider range of media used to think about architecture including writing, investigative skills, speaking, drawing and model making.

Realm B: Integrated Building Practices, Technical Skills and Knowledge: Architects are called upon to comprehend the technical aspects of design, systems and materials, and be able to apply that comprehension to their services. Additionally they must appreciate their role in the implementation of design decisions, and the impact of such decisions on the environment.

Realm C: Leadership and Practice: Architects need to manage, advocate, and act legally, ethically and critically for the good of the client, society and the public. This includes collaboration, business, and leadership skills.

NAAB STUDENT PERFORMANCE CRITERIA

For ARCH 351: Collaboration Studio, the following NAAB criteria will be introduced in this course and satisfied fully in a future course within the major. Each of these will be explained in class and student work will be evaluated in part by demonstrating an increased understanding of these criteria.

INTRODUCES

A.02 : Ability in Design Thinking

A.03 : Ability in Visual Communication Skills

B.02 : Ability in Accessibility

C.01 : Ability to Collaborate