

Technical Systems Management (TSM) 371 – Residential Housing Design

The purpose of this course is to introduce students to the complexities of designing a house. After taking the course, the student should be able to;

- ⇒ Read House plans & know basic design concepts
- ⇒ Understand fundamentals of residential electrical, water, sewer and HVAC design
- ⇒ Learn basic housing cost estimating methods
- ⇒ Learn alternative designs and alternative energy sources for houses

Instructor

Matt Robert

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Email: mrobert1@uiuc.edu

Office Hours: Thursday 10 am-12pm or upon request

Website: <http://age-web.age.uiuc.edu/classes/tsm371/tsm371.asp>

Textbooks required for class: Can be bought in main office (340) of AESB.

- ⇒ The House Handbook. MidWest Plan Service (MWPS) – 16. \$35.

Class Background

Class every Monday and Wednesday @ 11am in room 204 AESB.

Lab every Wednesday from 3 to 5 pm in room 208 AESB.

Class – 60%

Lab – 40%

Class Breakdown

Homework – 15%

Hour Exams (3 total) – 10% each

Final – 15%

Grading Scale

100-95	A	79-77	C+
94-90	A-	76-74	C
89- 87	B+	73-70	C-
86-84	B	69-67	D+
83-80	B-	66-64	D
		63-60	D-
		>60	F

Exams

- Can be made up with an excuse from an emergency dean or dean of college.
- A calculator and straight edge will be needed for all tests.

- Tests will include short answer, multiple choice and long answer problems. Instructor has the right to give any type of problem deemed necessary.

Homework

Homework is due by the end of the day they are due. Late homework will be deducted 10 points for every day turned in late.

All homework will require the following;

- easily legible
- Homework that requires multiple pages should be bound (paper clip, staple, etc.).
- Drawings should be done with a computer aided drafting program or hand drawn with a straight edge and on engineering paper. All drawings will be required to be drawn **TO SCALE**.
- The following at the top of **EACH** page.

Name	Homework Assignment #	Due Date	Page/total pages
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Cheating/Plagiarism

Cheating/plagiarism will not be tolerated on any of the homework, tests or final. Students caught cheating will be given a failing grade for the course and sent to the Senate Committee on Student Discipline for possible further punishment. Please see the University of Illinois Student Code Part 4 for further information on possible infractions and penalties on student academic misconduct.

www.admin.uiuc.edu/policy/code/

Disability policy

This course will assist any person with physical, mental or learning disability. Proper notification from the dean or Division of Disability Resources and Educational Services (DRES) is needed for instructor to consider and comply with any request.

TSM 371 Syllabus**Classes**

Topic	Extra information
Introduction to Class	Outline of class & class project
Calculating square footage, Site location & Universal Design	p18-20, 23-34
Nomenclature for Housing Construction	handout
Floor plans & elevation design	Class notes
Room planning – social areas & kitchen	p35-42, p49-62
Room planning – bathroom & bedrooms	p63-75, p77-86
Extra rooms – garages, office & laundry	p87-95, 97-106, p109-114
Foundations	P135-152
Extra housing options – stairs, windows, doors, etc.	P115-124, P43-44
Storage areas	P125-133
Building codes	Guest Speaker – Corey Ireland
Exterior house plan	P194-197, P43
Utilities -HVAC	P155-170
Utilities - plumbing	P170
Utilities – electrical service panels, etc.	P171-172
Utilities – electrical lights & outlets	P172-176, end of each chapter
Sanitary needs	Class notes
Housing costs – financing	Guest speaker - Pat Hildebrand
Housing costs – appraisals	Guest speaker – Scott Dalbey
Housing costs	Class notes
Alternative energy systems	Guest speaker – Ted Funk & Jay Solomon
Air quality	Guest speaker – Ted Funk & Jay Solomon
Remodeling	P201-212
Alternative methods of construction - Manufactured homes, SIPs	P176-179
Final Exam	May 3, 8am – 11am

Labs

Topic	Extra information
room planning	basic layout & design aspects
CAD drawing	basic CAD design
CAD drawing	basic CAD design
Utilities	Field trip to skeleton house
Open lab	Question & answer for design project
Project due date	Floor plans & basic design
Open lab	Work on adding utilities to drawing
Project due date	Utilities plan due
House costs	
Project due date	House costs due
Manufactured housing & alternative housing design	Field trip to Riley Manufactured Houses & geothermal house
Open lab	Question & answer for design project
Project Due	Final design and presentation

TSM 371 –TA Office Hours

Who?

Beni Brem, email: bbrem@uiuc.edu, office phone: 244-6316

When?

Mondays 3:30 – 4:30 PM, or by appointment

Where?

AESB Room 244 (indoor air quality lab)

What?

Grading related questions, HW questions, ... Lecture/ Lab questions please refer to Matt