

Building Construction 5.
Course Code: PMRESNE041A
Semester: Spring 201/2019 2.

Course Syllabus
Schedule: Thursday, periods 9-12 (15:00-18:15)
Location: PTE PMMIK, 'A'-215

General Information:

Name of Course: **BUILDING CONSTRUCTION V.**
Course Code: PM-RESNE041A
Semester: 6th
Number of Credits: 7
Allotment of Hours per Week: 2 Practical Lessons and 2 Lectures / Week
Evaluation: Exam (with grade)
Prerequisites: Building Construction IV.

Instructors: **Dr Gergely SZTRANYÁK, assistant professor**
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E-mail: sztranyak.gergely@pmmik.pte.hu
Office Phone: +36 72 211 968

Introduction, Learning Outcomes:

The aim of the courses is that students learn the special structural methods of industrial halls and be able to make construction plan-like solutions for this type of building. Students need to work individually.

General Course Description and Main Content:

The course gives information about the foundation types, different floor systems, skeleton structures, outer walls, opening, separation walls, slabs, roofs and other specific structures of the long span buildings.

Methodology:

The course is based on individual architectural skills with regular consultations and presentations.

The practical use of the topics of the lectures are learned during the practical lessons by drawing. According to these students will be able to make their drawing tasks alone.

Studio Culture:

The course is based on through collaboration, participation and discussions through lessons. This is an interaction between Students and Faculty; used the teaching methods like 'Problem-based learning' and 'learning-by-doing'. The communication and work should be reflect a respect for fellow students and their desire to work with regard to noise levels, noxious fumes, etc. – from each site of participants.

Requirements of the 15 weeks:

Appearance:

Compulsary both at the lectures and the practical lessons (maximum 3 absences are affordable).

During the semester students need to design and make the plans of a skeleton structure long span:

- The functional program is based on the following:

Herzog & deMeuron: RICOLA Kräuterzentrum, Laufen (see attached semester project)

- Floor area: approximately 40 x 90 m factory
- The structures of the thermal envelope having increased thermal performance
- Primary load-bearing structure: timber/steel/reinforced concrete (cast-in-situ/precast)

Conceptual Plan (deadline: week 6 + 1 week) - 10p:

- 1-2 floor plans in scale 1:200
- 2 sections in scale 1:200
- 4 facades in scale 1:200
- 1 visualisation

The conceptual plan needs to be uploaded in pdf format to a given drive. Paper size is A/3. Deadline for uploading is week 6. One week of late is acceptable.

Final Plan (deadline: week 14 + 1 week) - 80p:

- 1-2 floor plans in scale 1:100
- 2 sections in scale 1:100
- 4 facades in scale 1:100
- 3 details in scale 1:5 – 1 plinth, 1 eave or parapeth (pitched or flat roof), 1 window
- 1 visualisation

The final plan needs to be uploaded in pdf format to a given drive. Paper size is A/2. Deadline for uploading is week 14. One week of late is acceptable .

Final Presentation - 10p:

Students need to make a 10 minute-long oral presentation of their final plan. Two presentations will be, each with **15** people. These take place on the **week 15 and 16**. These are also the deadlines for the final plan.

Schedule:

Week 1:	Introduction
Week 2-4:	Lectures / Consultation of Study
Week 6:	CONCEPTUAL PLAN - presentation
Week 7-9:	Lectures / Consultation of Project
Week 10:	SEMESTER BREAK
Week 11-14:	Lectures / Consultation of Project
Week 15:	FINAL PLAN - presentation

Optainable Points:

TASK	POINTS
Conceptual Plan - needed to be uploaded to a given drive in pdf.	10
minimum points:	5
Final Plan	80
minimum points:	45
Final Presentation - needed to be uploaded to a given drive in pdf.	10
minimum points:	5
ALL MAXIMUM POINTS:	100
MINIMUM POINTS NEEDED:	54

Evaluation and Grading:

According to the achieved points students can reach the following grades.

5: Outstanding work. Execution of work is thoroughly complete and demonstrates a superior level of achievement overall with a clear attention to detail in the production of drawings and other forms of presentation. The student is able to synthesize the course material with new concepts in a thoughtful manner, and communicate his/her ideas in an exemplary way.

4: High quality work. Student work demonstrates a high level of craft, consistency, and thoroughness throughout drawing and presentation work. The student demonstrates a level of thoughtfulness in addressing concepts and ideas, and participating in group discussions. Work may demonstrate excellence but less consistently than a '5' student.

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3: Satisfactory work. Student work demonstrates problem solution with few minor or major problems. Drawing and presentation work are complete and satisfactory, showing minor problems in detail.

2: Less than satisfactory work. Drawing and presentation work is substandard, incomplete in significant ways, showing insufficient attention to details.

1: Unsatisfactory work. Student work demonstrates several major problems in the basic knowledge needed to solve the tasks of the course. Drawing and presentation work is insufficient and weak.

Grading Scale:

Numeric Grade:	5	4	3	2	1
Evaluation in points:	88-100	77-87	66-76	55-65	0-54

Students with Special Needs:

Students with a disability and needs to request special accommodations, please, notify the Deans Office. Proper documentation of disability will be required. All attempts to provide an equal learning environment for all will be made.

Readings and Reference Materials:

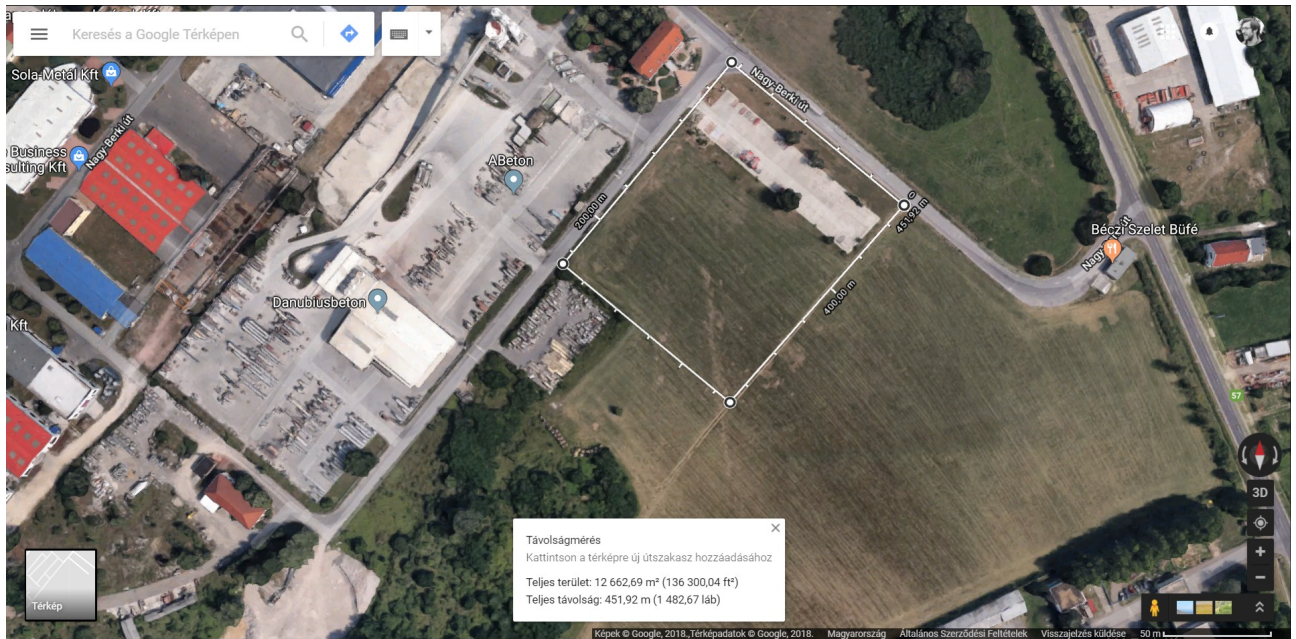
Andrea Deplazes: Constructing Architecture. Birkhäuser

Alexander Reichel; Kerstin Schultz: Support / Materialize. Columns. Walls. Floors. Birkhäuser

Francis D. K. Ching: Building Structures Illustrated, Fifth Edition. Wiley
Especially the following chapters:

- 2 Structural Patterns
- 5 Lateral Stability
- 6 Long-Span Structures

Semester Project



Site: Nagy-Berki út, next to A beton
122 m x 105 m (rectangular)

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According to - Herzog & deMeuron: RICOLA Kräuterzentrum, Laufen (see next page)

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- 2 sections in scale 1:200
- 4 facades in scale 1:200
- 1 visualisation

The conceptual plan needs to be uploaded in pdf format to a given drive. Paper size is A/2. Deadline for uploading is week 6. One week of late is acceptable.

Final Plan (deadline: week 14 + 1 week):

- 1-2 floor plans in scale 1:100
- 2 sections in scale 1:100
- 4 facades in scale 1:100
- 5 details in scale 1:5 – 1 plinth, 1 eave or parapeth (pitched or flat roof), 1 window / skylight (min 2 details)
- 1 visualisation

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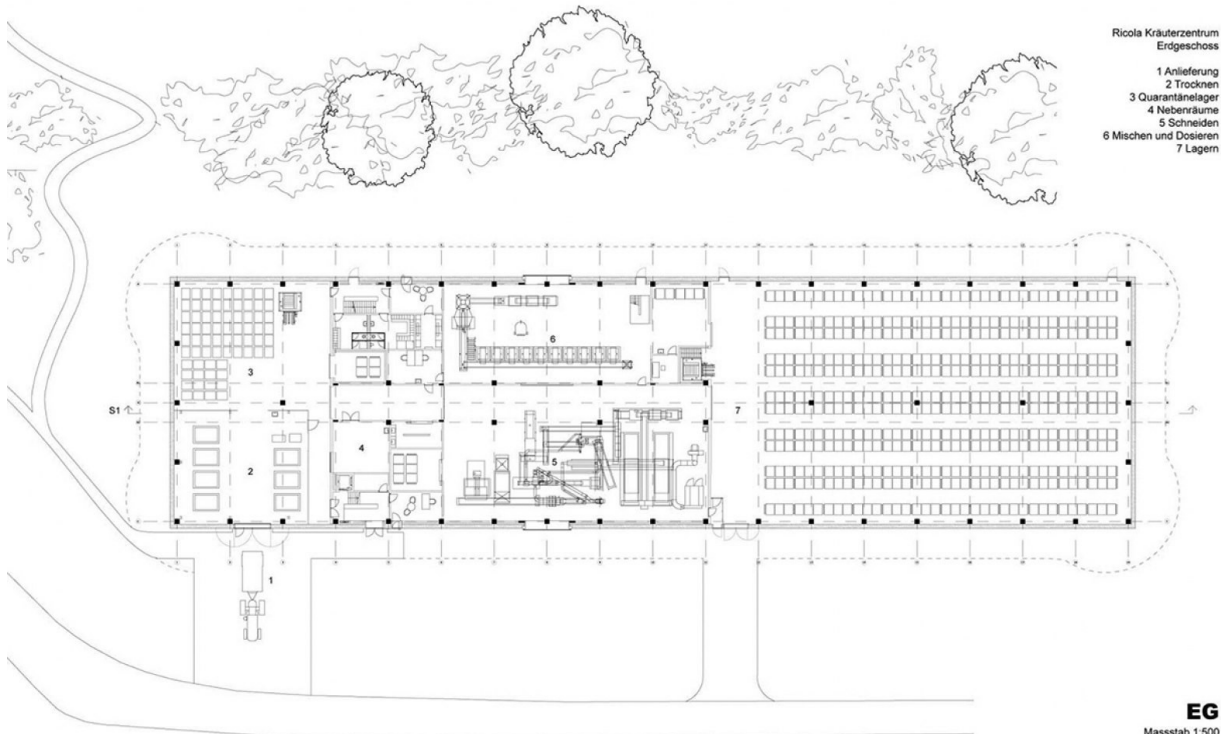
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Herzog & deMeuron: RICOLA Kräuterzentrum, Laufen

Ground Floor



Ricola Kräuterzentrum
Erdgeschoss
1 Anlieferung
2 Trocknen
3 Quarantänelager
4 Nebenräume
5 Schneiden
6 Mischen und Dosieren
7 Lagern

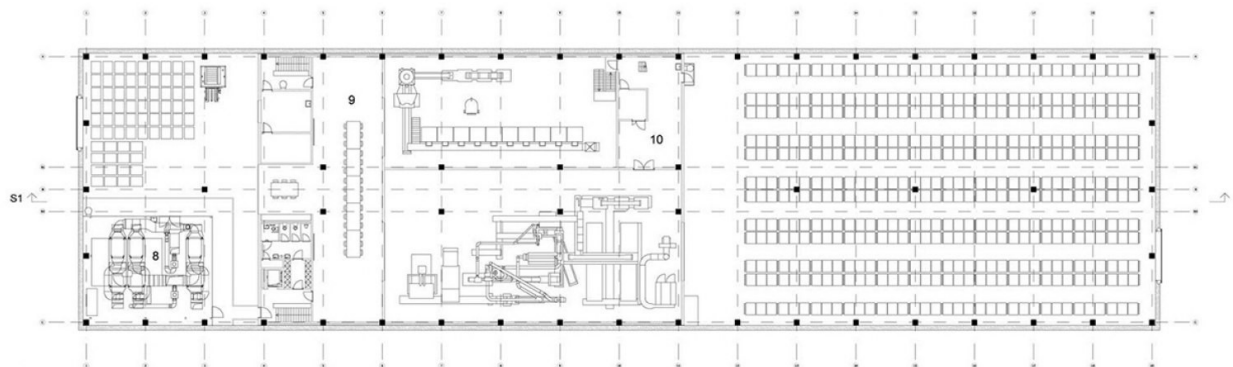
EG

Massstab 1:500



Ricola Kräuterzentrum
1. Obergeschoss

8 Technik Trocknen
9 Forum
10 Technik



OG

Massstab 1:500



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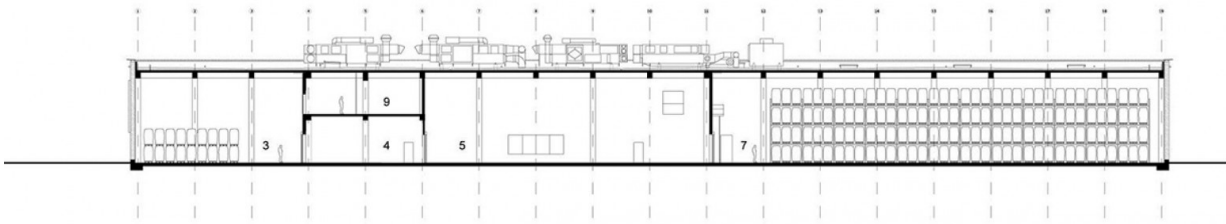
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First Floor

Section

Ricola Kräuterzentrum
Schnitt

3 Quarantänelager
4 Nebenräume
5 Schneiden
7 Lagern
9 Forum



SCHNITT S1
Massstab 1:500

