



Faculty of Civil Engineering
Warsaw University of Technology

Construction Engineering and Management

2026



Department of Building Materials Engineering
Department of Road Construction Technology

Construction Engineering and Management

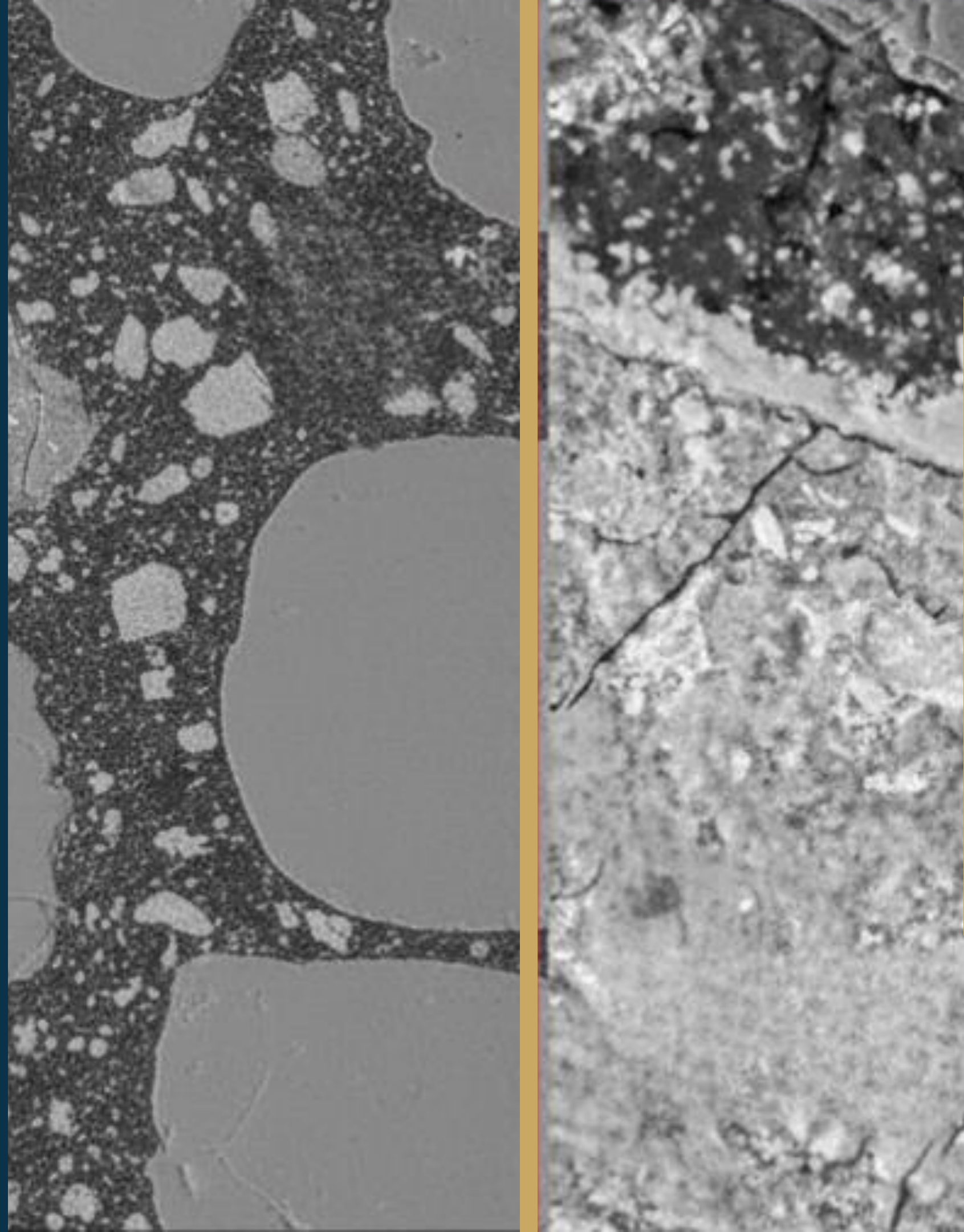
200 years of
Warsaw University
of Technology



Faculty of Civil Engineering
Warsaw University of Technology

Course Units

- Asphalt Composites Technology (30 h)
- Mineral Composites Technology (45 h)
- Polymer Composites Technology (30 h)





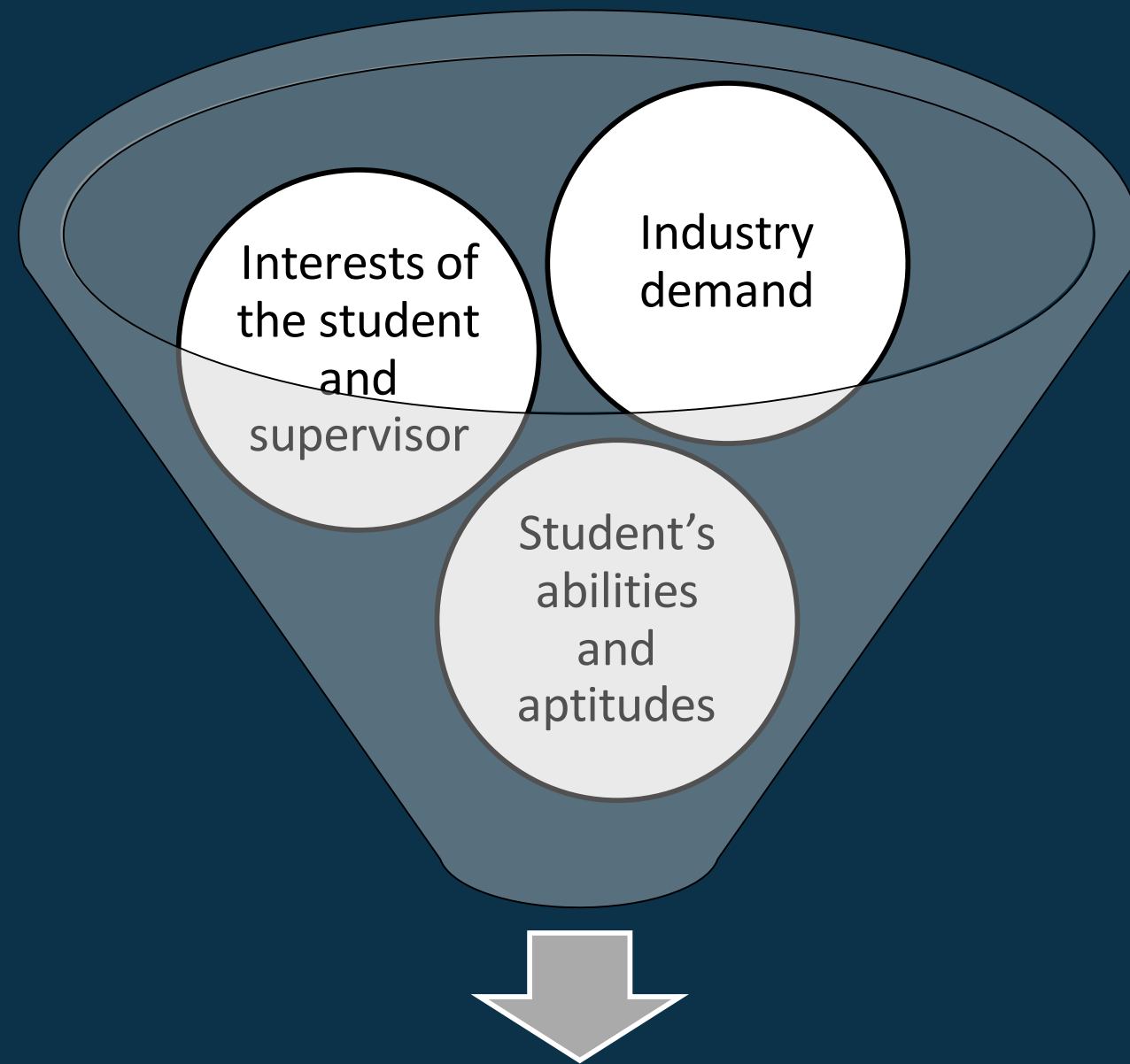
Laboratory

*Tell me and I forget.
Show me and I remember.
Involve me and I understand.*

Confucius



Engineering thesis topics

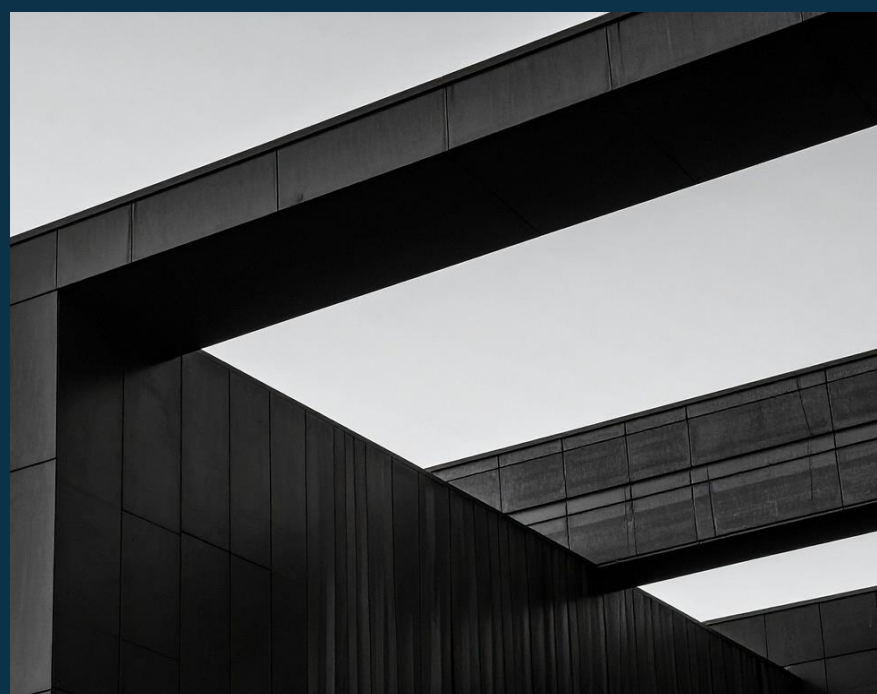
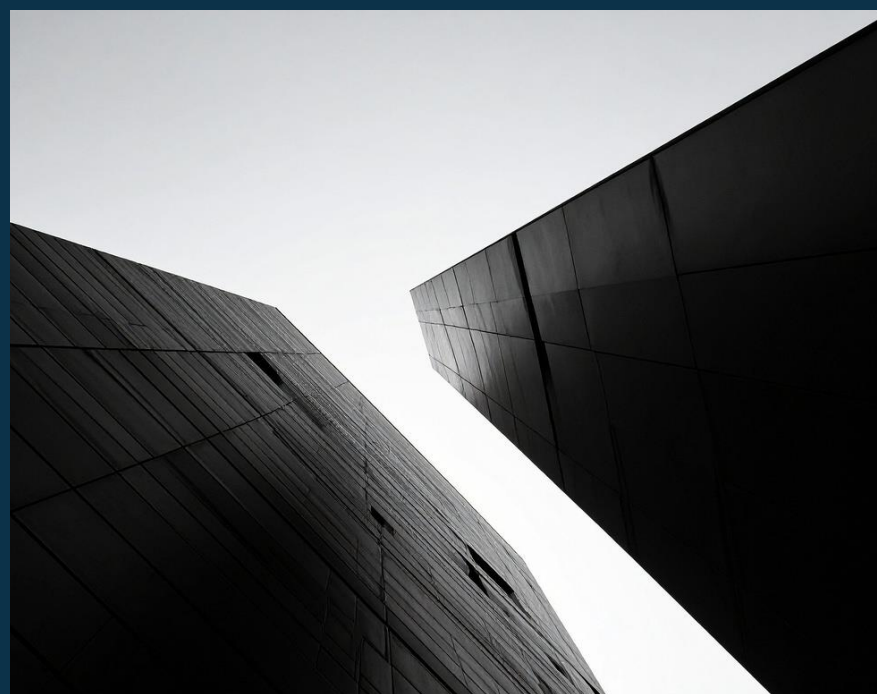


Selection of the thesis topic



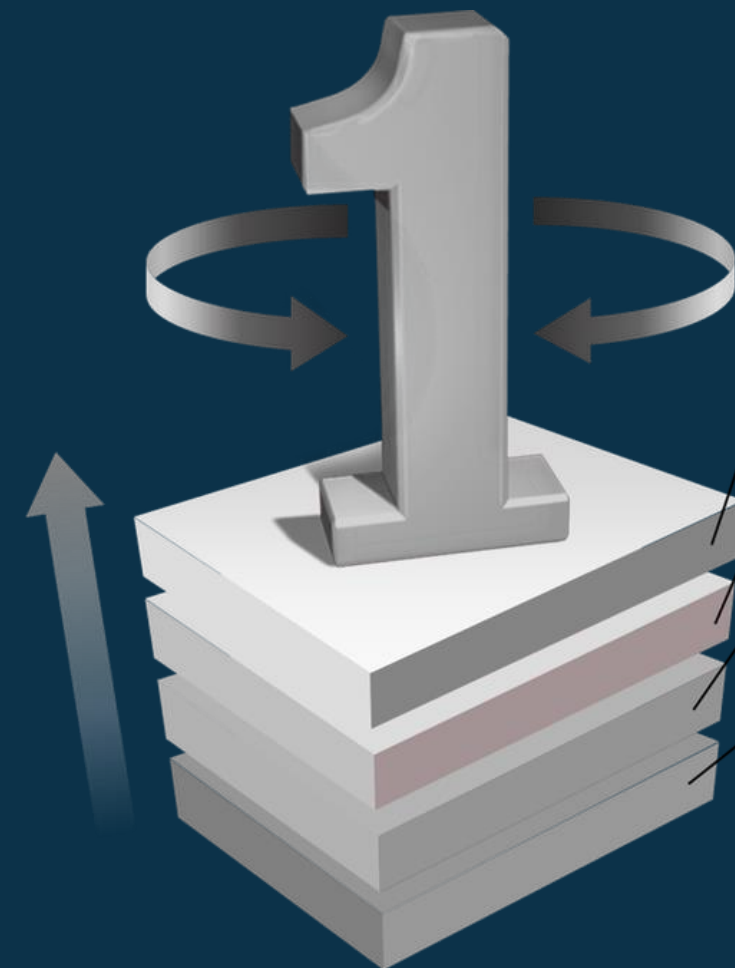


Structure of a Thesis





Additional Student Development Opportunities in the Specialization



- Internships and placements in partner companies
- Opportunities for international trips
- Participation in interesting training courses and workshops
- Access to research groups and scientific clubs





Building Materials Engineering Student Research Group

Academic Supervisor: Dr. Eng. Maciej Kalinowski



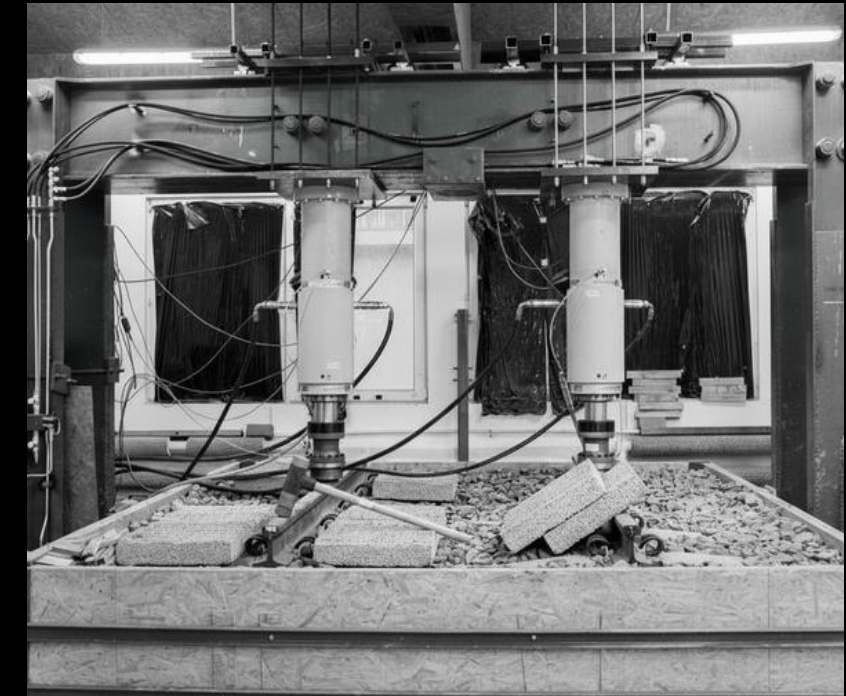
Involvement in competitions

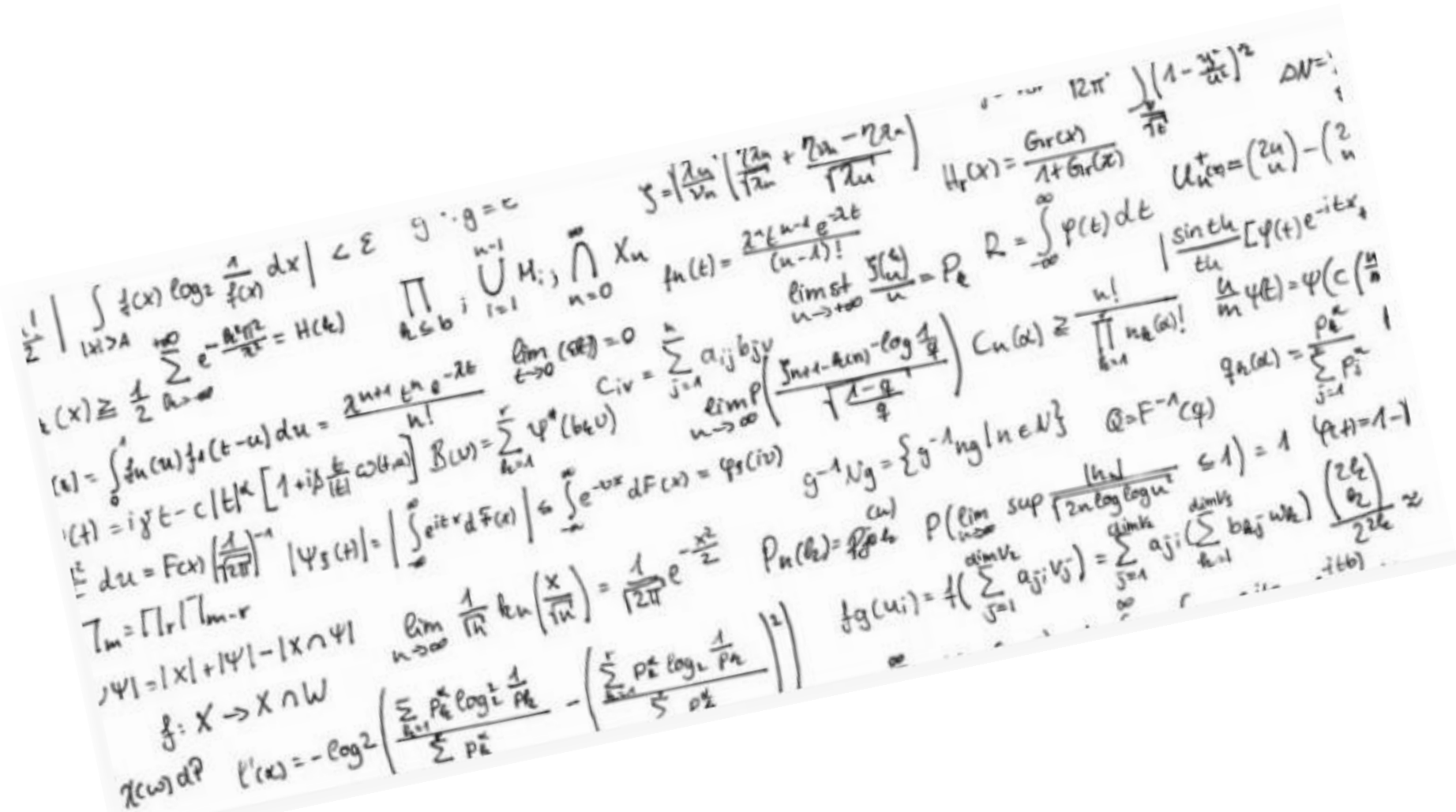


Research Projects



SEE YOU IN THE LAB!





UNFORTUNATELY, THE **TOPICS MENTIONED ABOVE WILL MOSTLY NOT BE COVERED** WITHIN THE CEM „MANAGEMENT PART” SPECIALIZATION, INSTEAD, THE CONTENT PRESENTED ON THE FOLLOWING SLIDES WILL BE DELIVERED.

That is – the scope of courses within the CEM specialization taught by tutors of the Division of Construction Engineering and Management.

Presented by:

200

lat
Politechniki
Warszawskiej

Paweł Nowak, dr inż. / PhD. Eng., PSMB, FCI0B, AEEBC, IACEE, IPMA, PZliTB

Wydział Inżynierii Lądowej / Faculty of Civil Engineering

Politechnika Warszawska / Warsaw University of Technology

Al. Armii Ludowej 16, 00-637 Warszawa / Warsaw, PL

tel: +48 22 234 5361



NOTE – AFTER COMPLETING THE CEM SPECIALIZATION AND PASSING THE EXAM ORGANIZED BY THE POLISH CHAMBER OF CIVIL ENGINEERS (PIIB), GRADUATES OBTAIN FULL PROFESSIONAL CONSTRUCTION LICENSES, BOTH FOR EXECUTION AND DESIGN, WITHOUT LIMITATIONS.

Construction Engineering and Management Diploma Specialization (CEM)					
Architecture and Urban Planning (CES, CEM, SB)	45	3	15		30
Computer Methods in Management	45	3	15	30	
Selected Technologies of Building Works	15	1	15		
Costs and Effectiveness of Investment	30	2	15	15	
Asphalt Composites Technology	30	2	10		20
Mineral Composites Technology	45	3	15		30
Polymer Composites Technology	30	2	10	10	10
Production Processes	30	2	15		15
Elective Courses (2 Courses 30/2 Each)	60	4			

Mandatory courses:

Computer Methods in Management – PhD Eng. J. Rosłon (sem. 8, 30 h.)

Selected Technologies of Building Works – PhD Eng. P. Nowak (sem. 7, 20 h.)

Costs and Effectiveness of Investment – PhD Eng. M. Książek-Nowak (sem 7, 20 h.)

Production Processes – PhD Eng. A. Nicał (sem. 8, 20 h.)

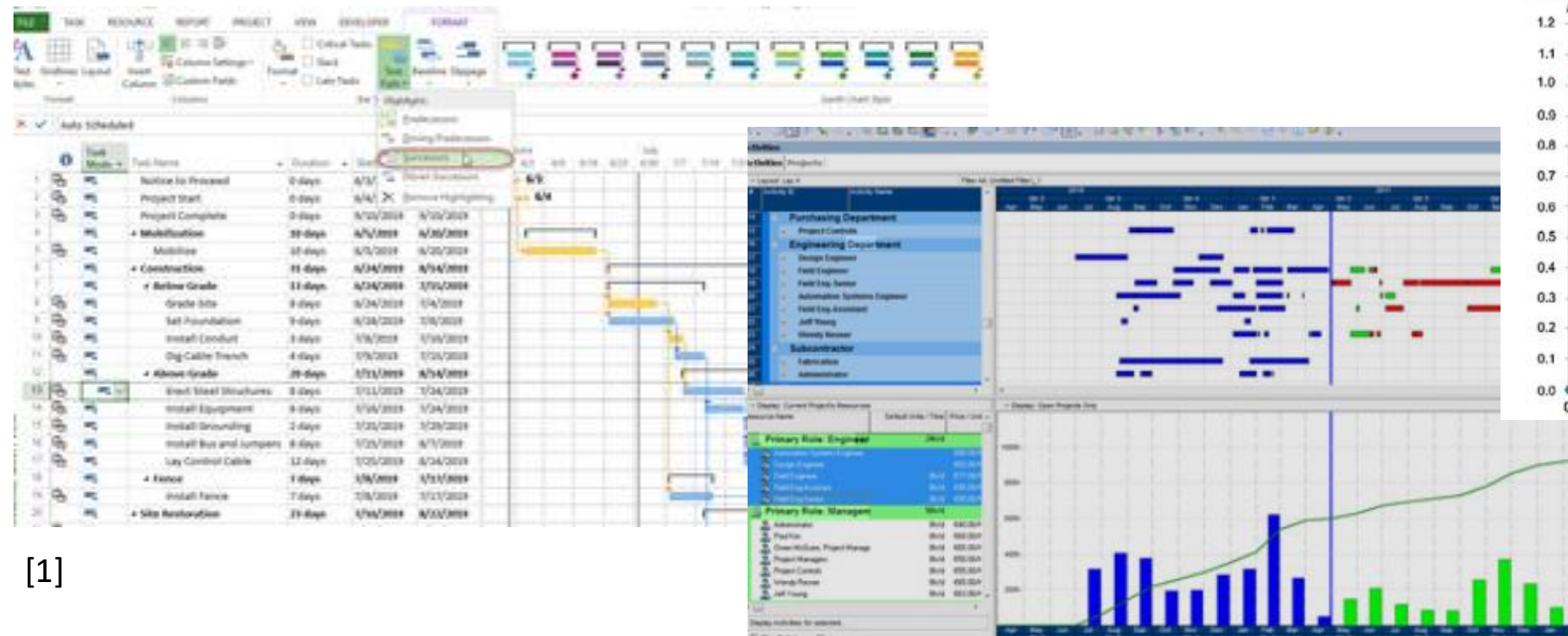
Elective course:

Organization of Investment Process – PhD Eng. H Anysz / PhD Eng. A. Foremny (sem. 7, 30 h.)

Mandatory courses (repeated/extended):

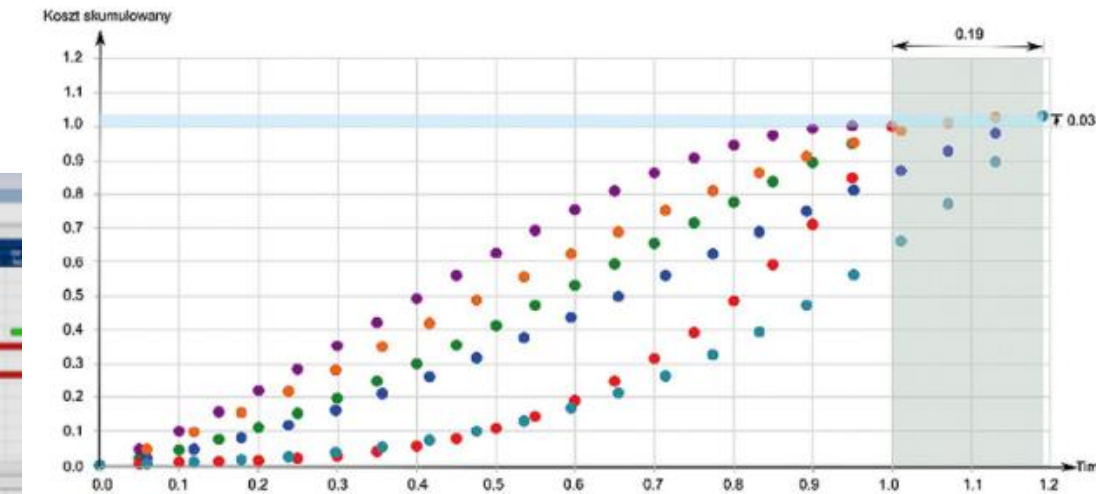
Computer Methods in Organization – PhD Eng. J. Rosłon

Costs and Investment Efficiency – PhD Eng. M. Książek-Nowak



[1]

[2]



[3]

Optimization of management elements:

Agile, Lean, **COST**, quality, **TIME**, resource consumption, technologies, organization, safety, Value Management, Construction Management, Earned Value Method (EVM),

and many more.

Sources:

1. www.microsoft.com
2. www.oracle.com
3. https://www.przegladbudowlany.pl/images/archiwum/2023/11-12/2023_11-12_Szostak_Konior_PB171-175.pdf
4. Own photo



[4]

Selected Construction Technologies – PhD Eng. P. Nowak

Production Processes – PhD Eng. A. Nicał



[5]



[6]



[7]

Unusual technologies such as deep excavations, tall reinforced concrete structures, trenches, green roofs, TBM, robotics, drones...

Prefabrication production, modular and timber-frame houses, prestressed concrete in prefabrication...

and many more.

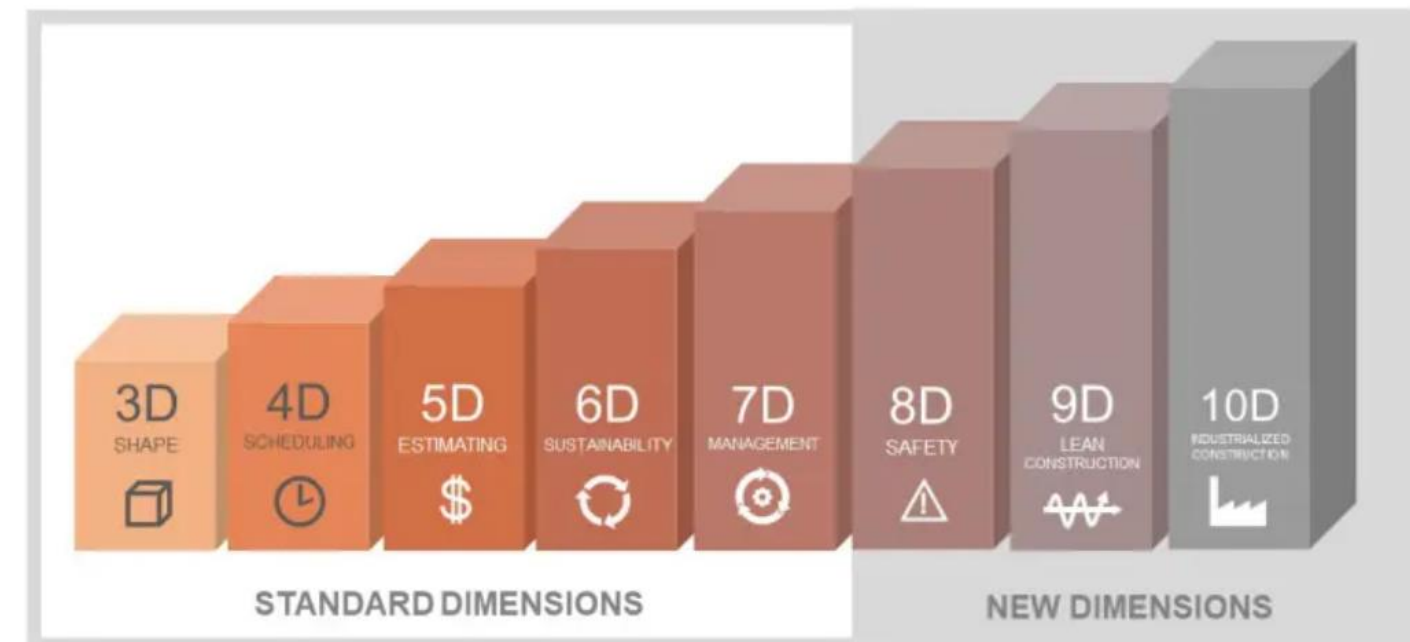
Sources:

5. www.microsoft.com

6. www.pekabex.pl

7. www.planradar.pl

8. www.biblus.accasoftware.com

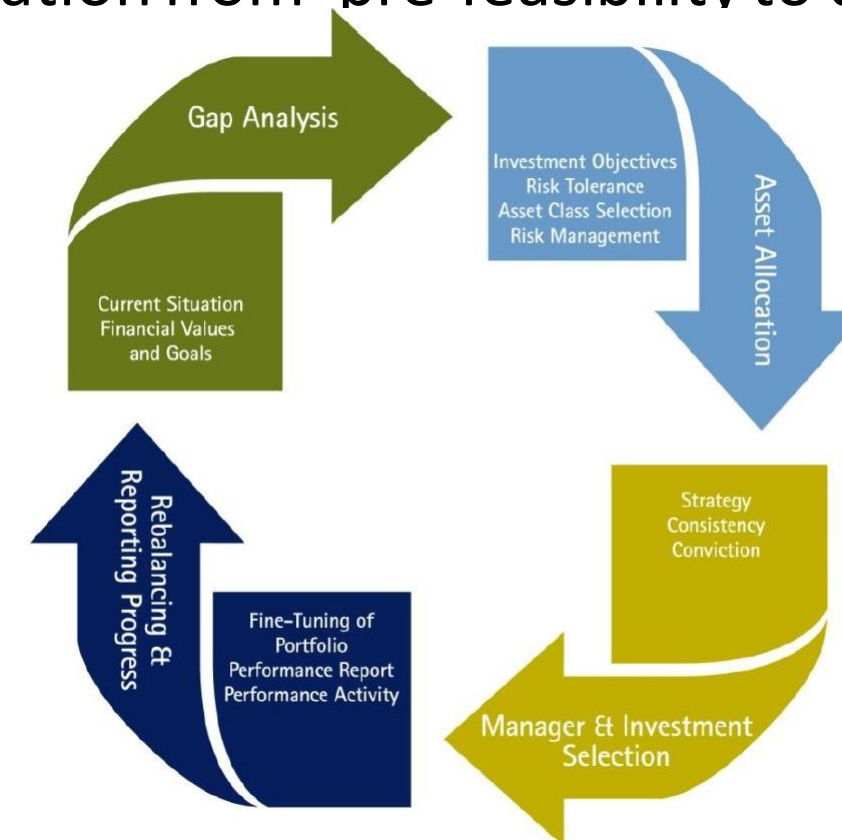
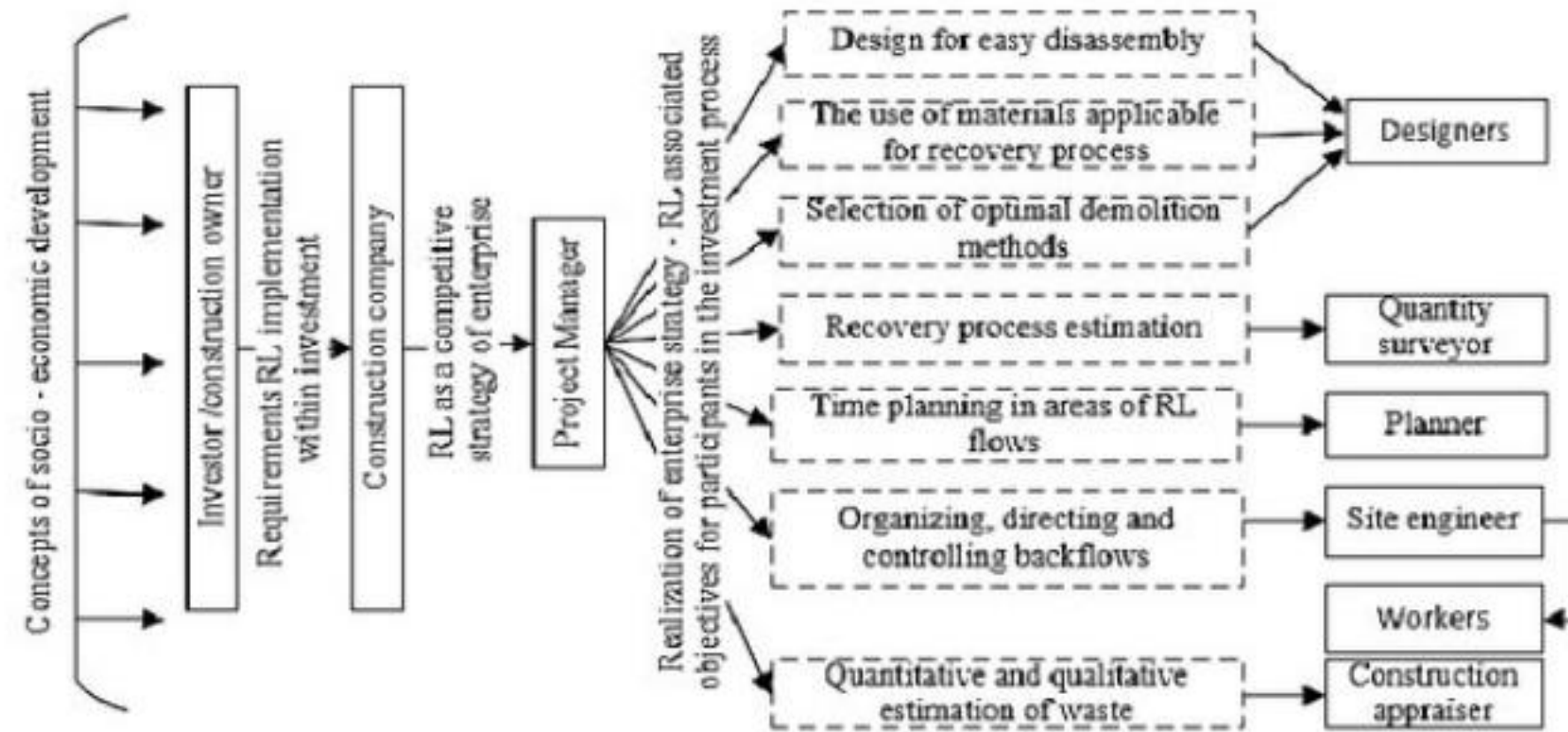


[8]

Elective course (May 13 – first enrolment round):

Organization of Investment Process – PhD Eng. H. Anysz / PhD Eng. A. Foremny

Modern methods of investment processes organisation from pre-feasibility to demolishon works.



Sources:

9. <https://www.researchgate.net/publication/283962411>

10. <https://assetsandincome.com/blog/6-step-investment-proc>

11. <https://arch.pg.edu.pl/en/dotfoad/education/bachelor-studies>

COOPERATION WITH THE DIVISION:

Diploma theses

Industry collaboration / expert studies

ERASMUS+ projects: www.erasmusplus.il.pw.edu.pl

Conferences

Postgraduate studies:

Health & Safety in Construction – PhD Eng. K. Kaczorek

ESG in Construction – PhD Eng. K. Kaczorek

Psychology of Project Management in Construction – PhD Eng. M. Książek-Nowak

Construction Management (international accreditation) – PhD Eng. P. Nowak

Infrastructure Project Management in Railway Construction – Prof. M. Krzemiński

Railway Construction Management – Prof. M. Krzemiński

Student Scientific Associations:

Project Management in Construction (job fairs, student events, site visits)

Supervisor: PhD Eng. Krzysztof Kaczorek

Interfaculty – SMART CITY (projects funded by Ministry and NCBiR, competence development)

Supervisor: PhD Eng. Paweł Nowak



Thank you!