COURSE DESCRIPTION

Type of study	**full-time 1st degree (BSc)**	**Field of study**	**Civil Engineering**
Specialization	**Civil Engineering**		

Code	**Course name (acc. to curricula of study)**	**ECTS point**
N05134	**Foundations**	**5**

Unit running the course	**Semester**
Dep. of Road Engineering, Geotechnics and Geodesy	**V**

Number of hours in semester	**L – 10**	**A – 0**	**Lb – 0**	**Ws – 0**	**D – 20**	**S – 0**

Lerning outcomes

Recognition the state of art practice and design of foundations

Prerequisites:

Soil mechanics, strength of materials, strructural mechanics, concrete structures.

Frame programme

Classification of foundations. Bearing capacity of shallow foundats. Mat and plate foundations. Excavations. Ground water level lowering. Sheat-pile walls. Retaining walls. Slurry walls. Embankments. Deep foundations. Pile foundations. Static capacity of single pile and pile groups. Settlements of pile foundations. Improving of soils. Precompresion. Vertical drains. Stone columns. Jet grouting. Use of geotextiles to improve soils. Neils and anchores. Reinforced earth.

Form of lecture assessment

Kolloquium ☐ **Final test** ☐ **Written exam** ☒ **Oral exam** ☒

References:

1. Z.Wiłun: Zarys geotechniki, Wydawnictwo Komunikacji i Łączności, W-wa 2000
2. B.Rossiński: Fundamentowanie, Arkady, W-wa 1978
3. Z.Grabowski, S.Pisarczyk, M.Obrycki: Fundamentowanie, Wyd. Politechniki Warszawskiej, W-wa 1999
4. K.Biernatowski i inni: Fundamentowanie, Arkady, W-wa 1988
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The content was worked out by: Dr hab. inż. Z. Szypcio	**Date: 2008.0215**
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