COURSE CALENDAR DESCRIPTION

Instrument systems and procedures for high-precision geodetic surveys. High-precision surveys in engineering physics; geodetic network densification, adjustment and analysis; procedures for deformation surveys and strain analysis. Establishment and observation of control networks for construction and monitoring of large engineering structures. Three lecture hours and one and a half hours of laboratory exercises hours per week. One term. Three credits. Prerequisites: LE/ESSE 2620 3.00, LE/ESSE 2630 3.00, LE/ESSE 3610 3.00, LE/ESSE 3620 3.00. Corequisite: LE/ESSE 3630 3.00. Prior to Fall 2014: Prerequisites: LE/EATS 2620 4.00 or LE/ENG 2120 4.00, LE/EATS 2630 3.00 or LE/ENG 2130 3.00, LE/EATS 3610 4.00 or LE/ENG 3110 4.00; LE/EATS 3620 4.00 or LE/ENG 3120 4.00 Corequisite: LE/EATS 3630 4.00 or LE/ENG 3130 4.00. Prior to Summer 2013: Prerequisites: SC/EATS 2620 4.00 or SC/ENG 2120 4.00, SC/EATS 2630 3.00 or SC/ENG 2130 3.00, SC/EATS 3610 4.00 or SC/ENG 3110 4.00; SC/EATS 3620 4.00 or SC/ENG 3120 4.00 Corequisite: SC/EATS 3630 4.00 or SC/ENG 3130 4.00.

INSTRUCTOR(S)

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<td>Wang, Jianguo</td>
<td>Sec. M / LECT / W</td>
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TOPICS AND CONCEPTS

Content:
1. Modern survey instruments – Testing, calibration and operation
2. EDM principles and errors
3. Theodolites and total station systems – principles, methodologies, errors, filed observation procedures.
4. High precision levelling – methodologies, errors, filed observation procedures.
5. GPS filed observation and data processing in geodetic control surveying.
7. Concepts of optimal control network design and software-aided network design
8. Development of data processing software utility for 3D engineering control survey
9. Selected projects and applications in Engineering Surveying.

Evaluation:
Laboratory exercises 45%;
Midterm 15%;
Participation 5%;
Final Exam 35%.
ADDITIONAL INFORMATION

Texts:

Suggested Bibliography:

ACADEMIC INTEGRITY LINKS
- Senate Policy on Academic Honesty - http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/
- Academic Integrity - http://lassonde.yorku.ca/academic-integrity

STUDENT LINKS
- Student Rights and Responsibilities - http://oscr.students.uit.yorku.ca/student-conduct
- Religious Observance - https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/wa/regobs
- Counselling and Disability Services - http://cds.info.yorku.ca/

Many courses utilize Moodle, York University’s course website system. If your course is using Moodle, click here to access it.

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