EXPANDED COURSE DESCRIPTION
EARTH, SPACE SCIENCE AND ENGINEERING
Lassonde School of Engineering
Earth and Space Science and Engineering
LE / ESSE 4630 3.0 SECTION M
GEOMATICS IMAGE PROCESSING
FALL 2017 / WINTER 2018

Last Modified Date: 08/18/2017

COURSE CALENDAR DESCRIPTION

Digital imaging from remote platforms. Image processing and analysis, including radiometric and geometric corrections and geometric enhancements, multispectral classification, digital photogrammetry fundamentals, workstations, photogrammetric processing. Two lecture hours and three hours of laboratory exercises per week. One term. Three credits. Prerequisites: LE/ESSE 3650 3.00; LE/ESSE 4220 3.00. Prior to Fall 2014: Prerequisites: LE/EATS 3650 4.00 or LE/ENG 3150 4.00; LE/EATS 4220 3.00. Prior to Summer 2013: Prerequisites: SC/EATS 3650 4.00 or SC/ENG 3150 4.00; SC/EATS 4220 3.00.

INSTRUCTOR(S)

<table>
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<tr>
<th>Name</th>
<th>Section / Format / Term</th>
<th>Contact Email</th>
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<tbody>
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<td>Hu, Baoxin</td>
<td>Sec. M / LECT / W</td>
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TOPICS AND CONCEPTS

Content:
- Fundamentals of digital imaging
- Radiometric and geometric correction
- Image enhancement
- Imagery transformation
- Feature extraction and selection
- Multispectral segmentation and classification
- Data fusion and change

GRADED ASSESSMENT

Evaluation:
Assignments 30%
Midterm 20%
Participation 10%
Final Exam 40%

ADDITIONAL INFORMATION


Suggested Bibliography:
- Digital Photogrammetry: An Addendum to the Manual of Photogrammetry, W. Greve, Editor, 1996, ASPRS.


• *A Guided Tour of Computer Vision*, Nalwa, S., Addison-Wesley 1993.


• *Algorithms for Image Processing and Computer Vision*, Parker, R., Wiley.

**ACADEMIC INTEGRITY LINKS**

• Senate Policy on Academic Honesty

• Academic Integrity

**STUDENT LINKS**

• Student Rights and Responsibilities

• Religious Observance

• Academic Accommodation for Students with Disabilities

• Counselling and Disability Services

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