# COURSE OUTLINE Remote Sensing of the Environment using Active Sensors Lecture: David Strong Building C108 | 10:30am-

An introductory text that provides both the basics of remote sensing of more advanced material on sensors and processing techniques. FREELY AVAILABLE:

http://ezproxy.library.uvic.ca/login?url=http://onlinelibrary.wiley.com/book/10.1002/9780470 666517

**2.** Richards, J.A., (2009). Remote Sensing with Imaging Radar. Springer, Heidelberg, Germany.

A resource book which does an excellent job of providing a rigorous treatment of microwave imaging but in a manner suited to earth scientists rather than practitioners of theoretical electromagnetism. Focus is on radar but the book includes a chapter on passive microwave remote sensing.

**3.** Woodhouse, I.H. (2006). Introduction to Microwave Remote Sensing. Taylor and Francis, Boca Raton, Florida.

A very readable primer in active and passive microwave remote sensing. Contains overviews of several applications.

### INSTRUCTOR INFORMATION

Aikaterini Tavri, Department of Geography, DTB A247 (ICE Lab), atavri@uvic.ca.

When emailing me please include 'GEOG 322 - your name - brief subject' in the subject line. This helps me sort through emails and makes it easier to respond to your message.

#### Office Hours: Wednesdays from 1pm to 2pm (zoom link will be provided)

**Profile**: I am a PhD Candidate in the Ice Climate Ecosystem (ICE) remote sensing laboratory at the Department of Geography. My research focuses on the Arctic sea ice in the Canadian Archipelago, studying the melt season using Synthetic Aperture Radars (SAR). I have a BSc in oceanography and marine sciences and an MSc in satellite application engineering. I am passionate about teaching remote sensing topics for earth observation. To learn more about me and/or our Lab activities, and stay updated with exciting new studies in our field, please visit <u>https://icelab.ca/research/</u>

### LEARNING OUTCOMES

Theoretical: foundations of passive and active microwave remote sensing and LiDAR, information extraction, and policy issues. Technical: state-of-the-art software, image processing, modelling, and information extraction procedures. Practical: remote sensing and geospatial data analysis skills, remote sensing as a science and resource management tool, critical assessment of research literature, scientific and technical writing, knowledge communication.

#### **EVALUATION**

[1] Midterm Exam	20%
[2] Final Exam	30%
[3] Lab 1	10%
[4] Lab 2	10%
[5] Lab 3	15%
[6] Lab 4	15%

outside of regularly scheduled labs will be required to complete assignments, so plan accordingly. All assignments must be submitted in PDF form, following academic standards.

There will be a 20% penalty for late lab submissions and assignments in 5 days, they will be automatically graded with 0.

Infractions will be dealt with in accordance with university policy. Commonly, the penalty for any form of cheating/plagiarism is a grade of F on the tests or laboratory assignments, or a final grade of F in the course. However, depending on the severity of the case other penalties may include a record on the student's transcript or expulsion.

### ACCESSIBILITY

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a documented disability/health consideration that may require accommodations, please feel free to approach me and/or the Centre for Accessible Learning (CAL) as soon as possible. The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations http://www.uvic.ca/services/cal/. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

### POSITIVITY AND SAFETY

The University of Victoria is committed to promoting, providing and protecting a positive and safe learning and working environment for all its members. To ensure that all class members feel welcomed and equally able to contribute to class discussions, we will all endeavor to be respectful in our language, our examples, and the manner in which we conduct our discussions and group work. If you have any concerns about the climate of the class, please contact me.

#### SEXUALIZED VIOLENCE PREVENTION AND RESPONSE AT UVIC

UVic takes sexualized violence seriously, and has raised the bar for what is considered acceptable behavior. We encourage students to learn more about how the university defines sexualized violence and its overall approach by visiting www.uvic.ca/svp. If you or someone you know has been impacted by sexualized violence and needs information, advice, and/or support please contact the sexualized violence resource office in Equity and Human Rights (EQHR). Whether or not you have been directly impacted, if you want to take part in the important prevention work taking place on campus, you can also reach out: Where: Sexualized violence resource office in EQHR, Sedgewick C119 Phone: 250.721.8021

Email: svpcoordinator@uvic.ca Web: www.uvic.ca/svp

## COURSE EXPERIENCE SURVEY (CES)

We value your feedback on this course. Towards the end of the course, as in all other courses at UVic, you will have the opportunity to complete an anonymous survey regarding your learning experience (CES). The survey is vital to providing feedback to me regarding the course and my teaching, as well as to help the department improve the overall program for students in the future. The survey is accessed via MyPage and can be done on your laptop, tablet, or mobile device. I will remind you and provide you with more detailed information nearer the time but please be thinking about this important activity during the course.

#### NOTE:

A note to remind you to take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress. All of us benefit from support during times of struggle. You are not alone.

Counselling Services -