

## GEOG. 477: INTRODUCTION TO REMOTE SENSING OF ENVIRONMENT

LECTURES: TR 9:30-10:45AM • CAROLINA HALL 322 • FALL 2022 • UNC-CHAPEL HILL

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***Discover your planet from dizzying heights!*** This course covers the basic theory and mechanics of remote sensing, image processing, and related theoretical aspects of radiation and the environment. We also discuss the story of how and why we gained the capacity to observe Earth conducting her business in real time, how these observations are applied to contemporary environmental and societal issues, and how to use these observations to measure, map, and monitor the planet.

For the hands-on parts of the course we will use data collected by space-based imaging instruments on board Earth-orbiting satellites. We will work with these data, learn their basic characteristics and properties, learn how to use and analyze them, and how to apply them to the study of air, water, land, life, and people. In order to extract information from satellite data, students will use specialized software to apply the digital image analysis methods discussed in class.

Through this course, students should gain the basic concepts and language skills necessary to understand and communicate with others about remote sensing, as well as the background necessary to begin using remote sensing for research and applications.