
**INTRODUCTION TO LiDAR BASED ENHANCED FOREST
INVENTORY (EFI), TERRAIN and SURFACE PRODUCTS FOR
FOREST PROFESSIONALS**

FROM: MARITIME COLLEGE OF FOREST TECHNOLOGY

SUBJECT: February 20th & 21st, 2017 course offering

The Maritime College of Forest Technology's, Department of Continuing Education is pleased to offer **Introduction to LiDAR Based Enhanced Forest Inventory (EFI), Terrain and Surface Products for Forest Professionals** with Riley Côté-DeMerchant as lead instructor. The dates are February 20th & 21st, 2017 beginning at 8:30 AM each day. The course will be held in room 224 of the Maritime College of Forest Technology, Fredericton, New Brunswick. Specific course details including an instructor profile, application form, and tuition costs are included in the attached announcement.

As LiDAR accessibility continues to increase, more industries are adopting the technology and discovering its practical and cost-saving applications. Resource industries including forestry, mining, and energy, are using LiDAR to increase efficiencies and lower operational costs. These industries are continuously discovering new ways to manipulate and apply data to better their operations, such as discovering watercourses and previously undetected structures and growth patterns.

Much like the GIS, LiDAR has the potential to revolutionize the forest industry. The availability of LiDAR derived Enhanced Forest Inventories has recently become more common and available across many land bases in New Brunswick and Nova Scotia, presenting forest professionals with an unprecedented amount of relevant data. The available information ranges from basic tree height, to more complex and detailed inventory attributes such as diameter distribution of stems throughout a stand. Further, EFI provides highly detailed information on the ground, including elevation data, percent slope and, and accurate hydrographic information.

Through hands on demonstrations of software, this course will introduce students to the basics of LiDAR; what it is, how it works, and why it is an economical choice for data collection and analysis. An overview of LiDAR equipment, and discussion of predicted upcoming LiDAR advances, applications and trends will also take place. Riley will also provide insight into the cost-savings that Leading Edge Geomatics (LEG)'s LiDAR products and services provides. You will find out exactly how LiDAR technology can:

- Lower operational costs
- Identify high value wood products
- Analyze variation in forest growth and performance
- Increase safety
- Reduce negative environmental impacts
- Improve change detection
- Account for within stand variability across the landbase

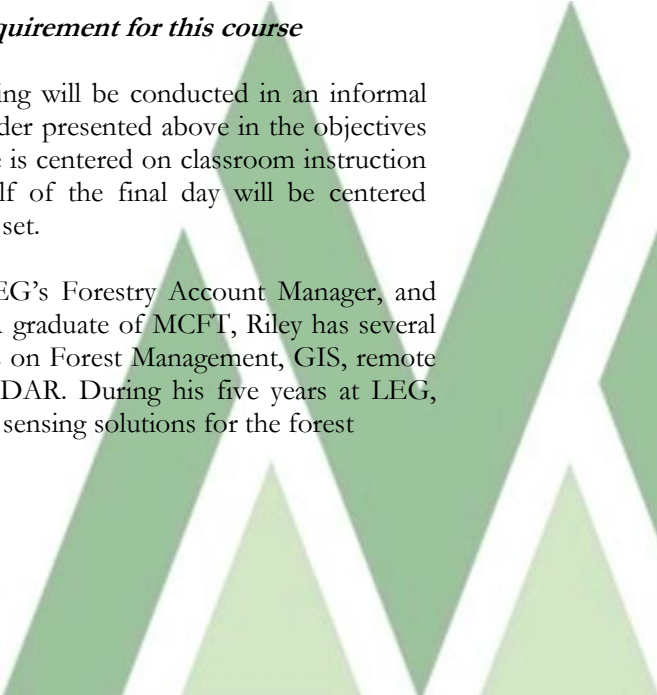
If you have any questions or wish to reserve a seat on this or any other course, please call 506-458-0649.



*Todd MacPherson, Supervisor
Department of Continuing Education*



INTRODUCTION TO LiDAR BASED ENHANCED FOREST INVENTORY (EFI), TERRAIN and SURFACE PRODUCTS FOR FOREST PROFESSIONALS

- DATES:** February 20th & 21st, 2017
- TIME:** 8:30 AM – 4:30 PM each day
- LOCATION:** Room 224, Blenis Hall, Maritime College of Forest Technology, Fredericton NB.
- OBJECTIVES:** This program is designed to help participants:
- Provide an overview of what LiDAR is and how it works
 - Briefly describe and discuss LiDAR Sensors, Acquisition, Accuracy Assessment, Quality Control and Processing
 - Overview of LiDAR Applications other than forestry
 - Detailed Review of LiDAR Applications for Forestry from a Maritime Context
 - Details of EFI and LiDAR surface and terrain products
 - Benefits of EFI and LiDAR surface and terrain products
 - How to integrate EFI and LiDAR surface and terrain products into your business
 - Hands on analysis of EFI and LiDAR surface and terrain products
 - Discuss predicted trends and application advancements
- CANDIDATES:** This program is designed for people working in the resource industry, such as forestry, mining, and energy, with a specific focus for those who participate in:
- harvest and silvicultural planning
 - road and trail planning
 - process improvement analysis
 - wetland or watercourse mapping
- Working knowledge of ArcGIS is a requirement for this course*
- FORMAT:** **Introduction to LiDAR Products** training will be conducted in an informal manner. The workshop will follow the order presented above in the objectives of the course. The majority of the course is centered on classroom instruction with individual and group exercises. Half of the final day will be centered around hands on analysis of a sample data set.
- FACILITATORS:** **Riley Côté-DeMerchant** is currently LEG's Forestry Account Manager, and has been with the company since 2010. A graduate of MCFT, Riley has several years' experience in Forestry, with a focus on Forest Management, GIS, remote sensing, and forest inventorying using LiDAR. During his five years at LEG, Riley has been working to develop remote sensing solutions for the forest
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FACILITATORS (cont'd):

industry, and has also aided in the development of solutions for vegetation mapping as it pertains to both the powerline and airport industries.

Riley is well-versed in many aspects of the Forest Industry, having attended countless workshops and conferences, and presented at the Enhanced Forest Inventory Workshop at the Canadian Woodlands Forum Spring Meeting in Moncton, and the LiDAR in Forest Management Seminar at the Northern Hardwoods Research Institute.

Duncan Allen is the Remote Sensing Solutions Team Lead. He is responsible for all phases of LiDAR and Photogrammetry production support and related GIS integration. A graduate of UNB and COGS, Duncan began his career with LEG in 2008. He has been involved in nearly every project at Leading Edge, managing teams, working directly with data, or both. Duncan has contributed to the development of many of LEG's solutions, specifically their EFI products.

Kyle Buckley is the Forest Inventory Analyst at Leading Edge, and is a graduate of both UNB's forestry degree and Algonquin College's forest technology programs. Prior to joining LEG in February of 2017, Kyle gained experience in the silvicultural and inventory practices of western Canada, as well as in urban forestry. Since starting at LEG, Kyle has lead multiple field data collection efforts, and has trained clients on the proper mensuration techniques required for the collection of LiDAR calibration plots. Together with the LEG's Forestry Account Manager, Kyle works daily with the forest product deliverables to ensure acceptable levels of accuracy and precision are met, and that products continue evolving in order to satisfy the ever-changing needs of the forestry profession.

ENROLMENT: Enrolment will be limited to twenty five (25) candidates on a first come-first served basis.

ACCOMMODATIONS: Commercial rooms and/or board are available at nearby commercial establishments.

MEALS: Two nutrition breaks per day and your lunch is included in your tuition fee.

TUITION: Tuition for the program, including supplies, is \$479.00 + 15% HST.

CANCELLATION POLICY:

In 2017 we saw a significant increase in last minute cancellations and no-shows to our courses. This causes additional costs to MCFE. Being a not-for-profit organization we simply cannot afford this. In order to keep costs and tuition prices as low as possible we have implemented a strict cancellation policy. Please refer to the registration form for details.

**Introduction to LiDAR Based Enhanced Forest Inventory (EFI), Terrain and Surface Products for Forest Professionals is equivalent to
*14 Continuing Forestry Education Credits***

