

Wood--B ased Composite Science and Technology Online Distance Education Series

Course Module: Applied Statistics and Data Analysis

Instructors:

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Course Description:

This course introduces students to applied statistics and data analysis with a focus on the practical implications of statistics in the field of wood-based composites. The course will prepare the student to collect and analyze data using basic statistical tools. Students will learn how to compute and interpret basic descriptive statistics such as mean and standard deviation. Students will also learn how to compare means from different samples using t-tests and ANOVA and how to interpret the results of those tests. Understanding how and why to collect data and analyze data is critical for quality control, troubleshooting, and product performance.

Course Lectures:

Lecture	Title
1	Introduction
2	Sampling
3	Plotting
4	Basic statistics
5	Determining normality
6	t-tests
7	ANOVA

Approximate Time:

10 hours of asynchronous online instruction, available during a 13-week period after enrollment. Each lecture requires 45 to 90 minutes.

Learning Assessment:

Each lecture contains a quiz. Quizzes are not graded and may be retaken. A one-hour final examination is required for completion and may also be retaken. The course is graded on a pass or fail basis, with 70% score on final examination to pass. The exam must be completed prior to the end of 13 weeks after enrolling. *Students must email the instructor after completing the final exam!*

Certificate of Completion:

Students must complete all lectures, quizzes and the final exam to receive a Certificate of Completion. To request a certificate, students must email the instructor after passing the final exam.

Recommended Reading:

The following documents can be downloaded from the Course Documents section of this course website.

References:

Lohr, S. 1999. Sampling: Design and Analysis. Duxbury Press. 494 pp.

Malhotra, N. and D. Birks. 2007. Marketing Research: An Applied Approach. 2nd Edition.

Financial Times Press. 864 pp.

Ott, R. L. and M. Longnecker. 2001. An Introduction to Statistical Methods and Data

Analysis. 5th Edition. Duxbury Press. 1152 pp.