Carnegie Mellon University

Introduction to Statistics Courses

Open Learning Initiative
Transforming higher education through the science of learning.

Introductory statistics for students with limited algebra experience.

Choose the statistics materials that best meet your students' needs. Options range from the full, traditional treatment of probability and statistics to materials intentionally designed for students with limited algebra or English literacy proficiency.

Student-Centered Design

These courses are thoughtfully designed to make statistical concepts accessible to a broad range of learners, including those with varied math skills and English language backgrounds. Using clear language and a structured approach, the content supports understanding without compromising academic rigor. Engaging activities and real-time feedback empower students to build a solid foundation in statistics, while educators are equipped with real-time progress and proficiency insights to provide targeted support.

Core Components

- Up to 16 Weeks of Course Content
- $35 per Student
- Immediate, Targeted Feedback
- Graphical and Numerical Data Summaries
- Adaptive Courseware Supporting Diverse Learners

Probability & Statistics Course

This course introduces students to foundational statistical reasoning, enabling them to apply and interpret methods for descriptive and inferential analysis. Requiring only basic algebra, it covers classical probability and real-world applications across fields. The course includes text, simulations, case studies, interactive exercises, and StatTutor labs, adaptable to Excel, Minitab, R, TI calculators, or StatCrunch. Interactive elements and tutors provide targeted feedback, while Insights helps instructors track progress. Originally designed for standalone use, it is most effective in a hybrid format with face-to-face instruction.

Statistical Reasoning Course

This course is a streamlined version of Probability & Statistics with an abbreviated Probability Unit. Statistical Reasoning focuses on essential concepts and skills, equipping students to confidently select, apply, and interpret statistical methods.

Concepts of Statistics Course

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This course offers an accessible introduction to statistics, specifically designed for students who may have a limited background in algebra. In developing the course, the authors followed language and literacy guidelines crafted by experts in supporting students with limited literacy skills or those who are English language learners. The content remains rigorous and college-level, yet it's presented in clear, active language with concise sentences to enhance comprehension. Key topics include Data Production, Graphical and Numerical Data Summaries for Quantitative Data, Examining Relationships in Quantitative and Categorical Data, Probability in Statistical Inference, and Inference.

Designed by Educators, for Educators

These courses offer educators powerful tools to simplify teaching and maximize effectiveness. Insights provide real-time data on class performance, allowing for quick adjustments and targeted interventions. With streamlined grading, detailed progress tracking, and built-in assessments, educators can focus more on delivering impactful lessons and less on administrative tasks.

- Real-Time Learning Analytics
- LMS Integration
- Scalable and Flexible Design
- Free Educator Support Tools

Empower Students with Foundational Statistics Skills

Request a free trial to explore how these courses help students develop critical statistical reasoning and problem-solving abilities. Visit our website or scan the QR code for more details.

Concepts of Statistics
https://oli.cmu.edu/courses/concepts-of-statistics/

Probability & Statistics
https://oli.cmu.edu/courses/probability-and-statistics/

Statistical Reasoning
https://oli.cmu.edu/courses/statistical-reasoning/