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Overview of Statway

Statway provides students with statistical reasoning skills needed for the 21st century. Going beyond a textbook, Statway course solutions are taught using contextualized, relevant curricula, and a unique pedagogy that combines collaborative learning and social-emotional supports.

Statway course solutions are designed to meet a range of high school and college-level math learning goals in person, online, and in a hybrid context.

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Carnegie Math Pathways offers two sets of supplemental resources that prepare students for success in and beyond Statway. These include Fundamentals lessons, which are focused on arithmetic, beginning algebra, and basic numeracy skills designed to bolster students’ proficiency in the prerequisite mathematical skills and understanding needed for success in Statway. Additionally, Carnegie Math Pathways Bridge Materials are supplemental lessons that develop the skills and knowledge to successfully bridge students’ path from Statway to pre-calculus.

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<th>Resource</th>
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<td>Fundamentals</td>
<td>Fundamentals is a series of lessons that can be used as a 1-term prerequisite or corequisite to Statway, or as specific lessons printed on-demand, as needed, to support Statway students.</td>
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<tr>
<td>Bridge Materials</td>
<td>Typically implemented as a 1-credit hour ad-on to a college-level course, or as lessons printed on-demand during the college-level course as needed.</td>
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Statway Course Solutions

Statway College

**Goal**
College-Level Credit

The goal of the Statway College (stand-alone) offering is to provide a one-term, college-level, introduction to statistics course.

**Learning Outcomes**
Statway College is a one-term, college-level statistics course that addresses all the college-level learning outcomes in a typical introduction to statistics course. It also incorporates Productive Persistence strategies.

Statway College covers all major topics typically contained in a college-level statistics course. It consists of seven modules:

1. Statistical analysis process, data visualization, measures of center, shape, and spread
2. Probability, probability distribution, and normal distribution
3. Sampling distribution, confidence intervals, and hypothesis testing for sample proportions
4. Sampling distribution, confidence intervals, and hypothesis testing for sample means
5. Two-sample tests, ANOVA, and choosing an appropriate test
6. Correlation and regression
7. Chi-square

**Implementation**
This offering is designed as a 3-credit course but can be taught as a 4-credit course.
Statway College with Corequisite

**Goal**
College-Level Credit

The goal of the Statway College with Corequisite solution is to provide a one-term, college-level statistics course for all students, with targeted supports built using the Carnegie Math Pathways design principles to provide effective scaffolding for students who need additional support. This solution consists of a one-term, college-level statistics course and a corresponding corequisite component. The corequisite component develops students' statistical and algebraic reasoning skills in support of the learning outcomes of the college-level statistics course.

**Learning Outcomes**
The course covers all major topics typically contained in a college-level statistics course. It consists of 7 modules:

1. Statistical analysis process, data visualization, measures of center, shape, and spread
2. Probability, probability distribution, and normal distribution
3. Sampling distribution, confidence intervals, and hypothesis testing for sample proportions
4. Sampling distribution, confidence intervals, and hypothesis testing for sample means
5. Two-sample tests, ANOVA, and choosing an appropriate test
6. Correlation and regression
7. Chi-square

The corequisite materials address learning outcomes and skills typically seen in a developmental math sequence, such as algebraic reasoning and thinking.

**Implementation**
The college-level component is designed as a 3 or 4 transfer-level credit course. The corequisite materials are designed to support a 1, 2, or 3 contact hour corequisite course depending on what is appropriate for student and program needs.
Fundamentals

**Goal**
Preparation for Statway

The goal of Fundamentals is to bolster students’ proficiency with the prerequisite mathematical skills and understanding, such as basic arithmetic, needed for success in Statway.

**Learning Outcomes**
The learning outcomes cover fundamental mathematics and pre-algebra and statistics, which students need to succeed in the Pathways, and include major topics from arithmetic, algebra, and numeracy.

**Implementation**
This offering is designed to be flexible. For example, it could be administered as:
- a stand-alone, prerequisite course to Statway, with 1-3 contact hours, or
- a corequisite taught in conjunction with the first term of Statway, with 1-3 contact hours.

Bridge Materials

**Goal**
Transition to College Algebra

The Bridge Materials are a set of lessons that colleges can use to provide Statway students a transition to college algebra, business math, or pre-calculus courses. These materials have been collaboratively designed by network faculty using the instructional design principles of the Pathways curricula.

**Learning Outcomes**
We have created 8 lessons around the following topics:
- Linear equations and inequalities, including systems
- Functions
- Exponent rules
- Polynomials expressions, including quadratic equations and factoring
- Rational expressions

**Implementation**
These lessons are designed to be implemented in any way that they are needed to support Statway students. For example, they can be administered at the end of a Statway term or integrated within Statway.
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www.carnegiemathpathways.org