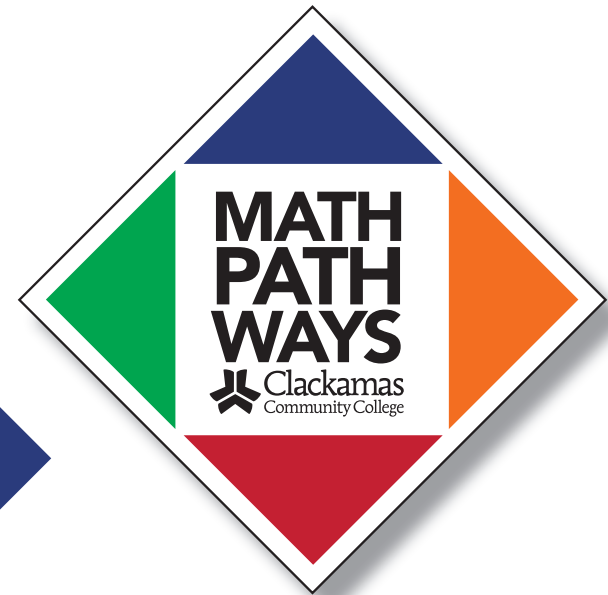


Want to find out which math path is right for your academic and career goals? Contact a CCC academic advisor at 503-594-3475 for help with choosing or switching your math path.

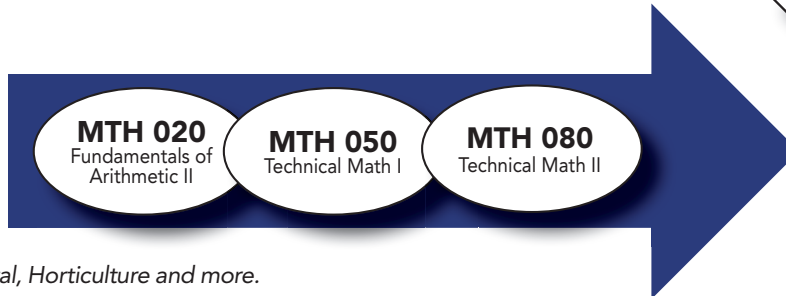
Transferring to a university? Choose the green or orange path.



CAREER TECH PATH (1-2 YEAR)

Jobs in this path include:

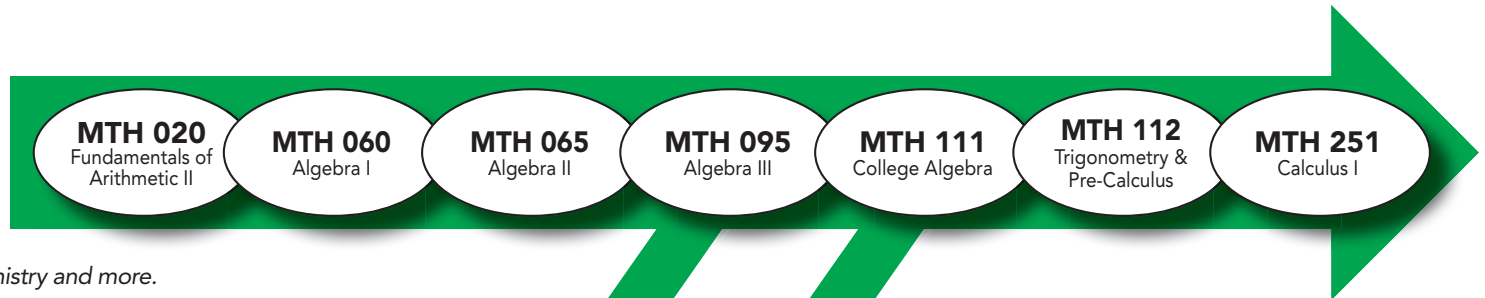
Automotive, Welding, Dental, Horticulture and more.



STEM PATH (TRADITIONAL)

Jobs in this path include:

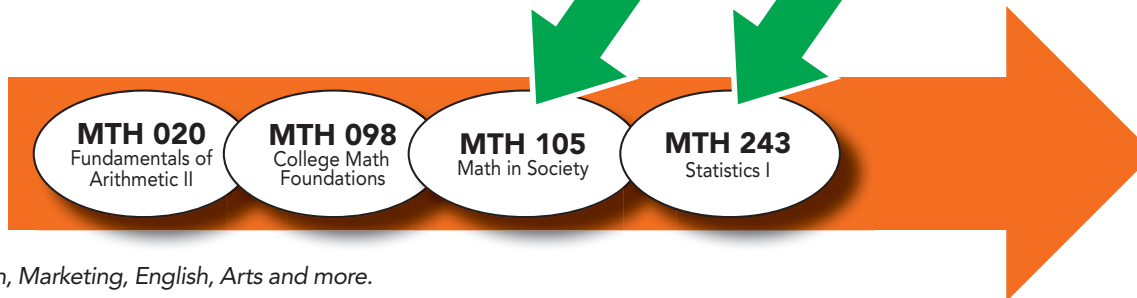
Science, Engineering, Chemistry and more.



STATS PATH

Jobs in this path include:

Psychology, Communication, Marketing, English, Arts and more.



Is College Math Foundations (MTH 98) right for me?

Do you feel confident working with percentages, proportions, and ratios?

Do you have some previous math experience working with probability and statistics?

Do you feel comfortable with these example problems?

*If you answered YES to the above questions, you should consider **MTH-105**.*

**Check with academic advising to verify Stats Pathway courses meet the math requirements for your program.*

Benefits of MTH-098:

- Provides a supportive atmosphere where students work together in small groups to understand math concepts
- Understand important topics and trends that involve numbers in our society
- Build confidence to solve realistic problems and improve critical-thinking abilities, number sense, and estimation skills

Understanding and interpreting numbers and measurements...

- 1.** Describe how far it is from Portland, Oregon to New York, New York. What are two different ways you can explain this distance? How would you help someone understand how far away this is?
- 2.** When you compare the costs of grocery items, how do you decide which is the better deal? How would you help someone make this decision? (What is a “unit cost”? How does it help us compare two things?)
- 3.** Do you think the percent of people vaccinated against measles in the United States and Canada is similar or different? Why? What information would we need in order to calculate and compare these numbers?

Updated as of 10.2022



PASS Placement Advising
for Student Success

STATS PATH

MTH 020
Fundamentals of
Arithmetic II

MTH 098
College Math
Foundations

MTH 105
Intro to
Contemporary Math

MTH 243
Statistics I

Jobs in this path include:
Psychology, Communication, Marketing, English, Arts and more.

Is Math in Society (MTH 105) right for me?

Do you feel confident understanding data from news articles and popular media?

Do you have some previous math experience working with probability and statistics?

Do you feel comfortable writing about these questions?

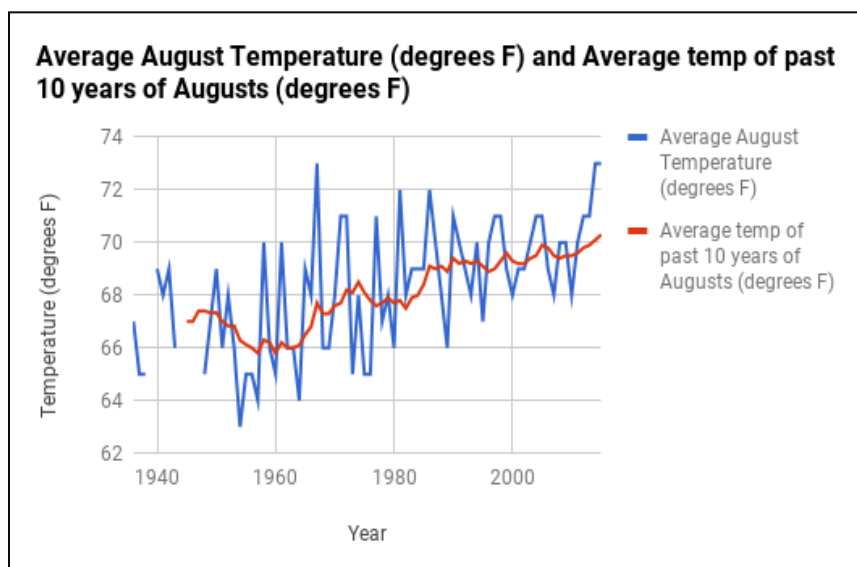
*If you answered YES to the above questions, you should consider **MTH-243**.*

**Check with academic advising to verify Stats Pathway courses meet the math requirements for your program.*

1. Understanding and interpreting information in graphs...

Answer the following questions to “tell the story” of this graph:

- What is being shown in this graph?
- What is the relationship between the red and blue lines? How much does each data set vary? Why do you think they vary differently?
- What does average mean here? Is it being used in multiple ways?
- What could we use this graph for?



Graph created by Kelly Mercer using Data Source: "Weather History for KPDX - August, 2016." *Weather Underground*, www.wunderground.com/history/airport/KPDX/. Web. 19 April 2017.

Updated as of 10.2022

STATS PATH

MTH 020
Fundamentals of
Arithmetic II

MTH 098
College Math
Foundations

MTH 105
Intro to
Contemporary Math

MTH 243
Statistics I

Jobs in this path include:

Psychology, Communication, Marketing, English, Arts and more.

2. Understanding and interpreting information with tables...

Consider the following questions:

- What is being shown in these tables? How do the tables relate to each other?
- What could we use this table for?
- Estimate this person's car budget to show how much they should budget each month.

	Amount	Frequency
Car Payment	\$297	Once per month
AAA membership	\$109	Once per year
Insurance	\$288	Once every six months
Registration	\$132	Once every 2 years

Gas and Maintenance

Fuel Economy	22 miles per gallon
Miles driven per week	242 miles
Cost of gas	\$4.40 per gallon

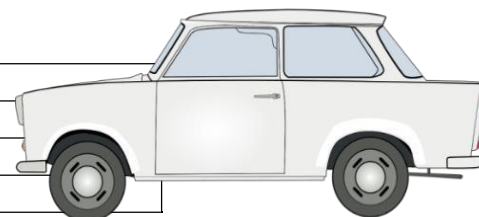


Figure 1 "Trabant" by molnar is in the Public Domain, CC0

How well do you know Statistics (MTH243)?

Do these topics look familiar to you?

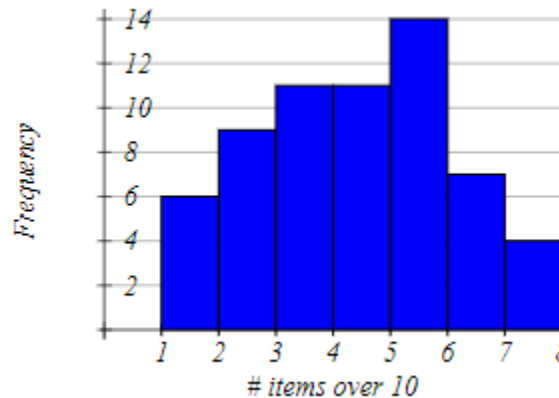
Have you learned about these topics in a prior math class?

If you reviewed this material, would you be able to answer most of these questions confidently?

*If you answered **YES** to at least two of the above questions, you should consider taking the next level course.*

MTH-244 (Stats)

1. During one shift, the express lane clerk recorded how many times customers violated the "10 items or less" rule for his lane. In particular, he recorded how many items over the limit each violator placed on the conveyor belt. This data is summarized in the histogram below.



What is the most frequent number of over-the-limit items for this data set?

What is the frequency of the most frequent number of over-the-limit items?

The clerk went to the store manager and claimed that this data shows that too many customers are violating the "10 items or less" rule. Comment on this argument.

2. A friend tells you about a recent study dealing with the number of years of teaching experience among current college professors. He remembers the mean but can't recall whether the standard deviation was 6 months, 6 years or 16 years. Which was it?

Use the *Empirical Rule* to explain your answer.

3. Consider this research scenario:
"In a study of 1000 pet cats in the US, researchers found evidence that some cats recognized their names."

Describe the sample in this scenario

4. Can you make a scatterplot of data using a spreadsheet?

What does a scatterplot tell you about the relationship between two variables?

Do these topics look familiar to you?

Have you learned about these topics in a prior math class?

If you reviewed this material, would you be able to answer most of these questions confidently?

If you answered YES to at least two of the above questions, you should consider taking the next level course.

MTH-244 (Stats)

5. You work for a large farm that grows crops of corn. You are investigating the mass (weight) of individual ears of corn, and how consistent that weight is. You randomly select $n = 13$ ears of corn and weight each ear:

Mass(g) of ear of corn

526.8	499.5	479.4	508.7	686	499.9	497
490	893.2	539.3	552.8	595.7	479.2	

Are there any outliers by the 1.5 IQR rule?

Are there any outliers by the 3-standard deviation rule?

Which rule is more appropriate to use here? Why?

6. A group of people were asked if they had run a red light in the last year. 164 responded "yes" and 421 responded "no".

A person is chosen at random from this group. Find the probability they have run a red light in the last year.

7. The lengths of pregnancies in a small town are normally distributed with a mean of 263 days and a standard deviation of 14 days.

What proportion of pregnancies last beyond 308 days?

Why does this result make sense?

8. A company produces steel rods. The lengths of the steel rods are normally distributed with a mean of 145.2 cm and a standard deviation of 2.4 cm.

For shipment, 18 steel rods are bundled together. Find the probability that the average length of a randomly selected bundle of steel rods is greater than 145.4 cm.

STATS PATH

Jobs in this path includes:

Psychology, Communication, Marketing, English, Arts and more.

MTH 020
Fundamentals of
Arithmetic II

MTH 098
College Math
Foundations

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MTH 243
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