

SLO Performance Report

Program: Mathematics

Date: 11-02-2019

Terms: Spring 2019, Fall 2018, Summer 2018

MATHB2: Basic Functions and Calculus for Business

Upon completion the student will be able to: Translate application problems such as revenue, profit and cost, and then solve using calculus.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 8 | 47.06% | 9 | 52.94% | 17 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 8 | 47.06% | 9 | 52.94% | 17 | 100.00% |

Apply appropriate algorithms to evaluate limits, derivatives, and integrals to formulate solutions to business applications.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|-------|----------------------------|-------|-------|-------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Demonstrate the concepts of business calculus by communicating in written, verbal and graphical form.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|-------|----------------------------|-------|-------|-------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 8 | 47.06% | 9 | 52.94% | 17 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 8 | 47.06% | 9 | 52.94% | 17 | 100.00% |

MATHB21: Special Projects in Mathematics

Upon completion the student will be able to: The student will demonstrate their knowledge of mathematics and its application in various settings.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|-------|----------------------------|-------|-------|-------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|-------|----------------------------|-------|-------|-------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

MATHB22: Elementary Probability and Statistics

Upon completion the student will be able to: Translate application problems by using inferential data analysis techniques. Analyze and interpret solutions.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|--------|----------------------|-------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 172 | 18.88% | 78 | 8.56% | 414 | 45.44% | 247 | 27.11% | 911 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 172 | 18.88% | 78 | 8.56% | 414 | 45.44% | 247 | 27.11% | 911 | 100.00% |

Upon completion the student will be able to: Apply appropriate techniques of probability and probability distributions to solve problems.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|-------|----------------------------|-------|-------|-------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Demonstrate statistical knowledge of descriptive statistics by clearly communicating concepts in written or verbal form.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|-------|----------------------------|-------|-------|-------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|--------|----------------------|-------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 172 | 18.88% | 78 | 8.56% | 414 | 45.44% | 247 | 27.11% | 911 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 172 | 18.88% | 78 | 8.56% | 414 | 45.44% | 247 | 27.11% | 911 | 100.00% |

MATHB23: Finite Mathematics

Upon completion the student will be able to: Translate application problems related to linear programming, finance, business and economics. Solve and interpret solutions.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|--------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 3 | 3.30% | 23 | 25.27% | 30 | 32.97% | 35 | 38.46% | 91 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 3 | 3.30% | 23 | 25.27% | 30 | 32.97% | 35 | 38.46% | 91 | 100.00% |

Upon completion the student will be able to: Distinguish and apply appropriate formulas to solve problems involving in finance, combinatorics, and sets.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|-------|----------------------------|-------|-------|-------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Distinguish between approaches related to linear programming, finance, and combinatorics in written or verbal form.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|---------------|--------------------|---------------|----------------------------|---------------|-----------|----------------|
| Spring 2019 | 3 | 3.30% | 23 | 25.27% | 30 | 32.97% | 35 | 38.46% | 91 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 3 | 3.30% | 23 | 25.27% | 30 | 32.97% | 35 | 38.46% | 91 | 100.00% |

MATHB1B: Precalculus II

1. Upon completion of the course, the student will translate applications of distance, angle and wave behaviors by identifying and applying appropriate trigonometric formulas, and then solve and interpret solutions.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|---------------|--------------------|---------------|----------------------------|---------------|------------|----------------|
| Spring 2019 | 2 | 1.87% | 14 | 13.08% | 36 | 33.64% | 55 | 51.40% | 107 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 2 | 1.87% | 14 | 13.08% | 36 | 33.64% | 55 | 51.40% | 107 | 100.00% |

2. Upon completion of the course, the student will classify trigonometric functions. Apply appropriate identities and formulas to evaluate, simplify and solve equations.

CSLO not included in any Assessment Rubric

3. Upon completion of the course, the student will demonstrate mathematical knowledge by clearly communicating concepts in written, verbal and graphing forms, including proofs.

CSLO not included in any Assessment Rubric

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|--------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 2 | 1.87% | 14 | 13.08% | 36 | 33.64% | 55 | 51.40% | 107 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 2 | 1.87% | 14 | 13.08% | 36 | 33.64% | 55 | 51.40% | 107 | 100.00% |

MATHB4A: Mathematics for Elementary School Teaching

Upon completion the student will be able to: Use multiple problem-solving strategies and approaches to solve real-world application problems, and to develop problems for all contexts of basic number operations using whole numbers, integers, rational numbers, sets, functions, and logic.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 3 | 2.34% | 6 | 4.69% | 37 | 28.91% | 82 | 64.06% | 128 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 3 | 2.34% | 6 | 4.69% | 37 | 28.91% | 82 | 64.06% | 128 | 100.00% |

Identify patterns and relationships between operations involving whole numbers, integers, and rational numbers, and to develop the real number system to introduce algebraic concepts within the real number system.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Develop mathematical vocabulary for use in the mathematics elementary school classroom.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|---------------|----------------------------|---------------|------------|----------------|
| Spring 2019 | 3 | 2.34% | 6 | 4.69% | 37 | 28.91% | 82 | 64.06% | 128 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 3 | 2.34% | 6 | 4.69% | 37 | 28.91% | 82 | 64.06% | 128 | 100.00% |

MATHB1A: Precalculus I

1. Upon successful completion of the course, the student will translate and solve application problems including exponential, linear, quadratic and optimization problems. Be able to interpret solutions.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-------|------------|----------------------|------------|--------------------|------------|----------------------------|------------|-------|------------|
| | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Spring 2019 | 53 | 15.87% | 42 | 12.57% | 153 | 45.81% | 86 | 25.75% | 334 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 53 | 15.87% | 42 | 12.57% | 153 | 45.81% | 86 | 25.75% | 334 | 100.00% |

2. Upon successful completion of the course, the student will classify various functions, and apply an appropriate algorithm to find solutions, both algebraically and by using the graph of the function.

CSLO not included in any Assessment Rubric

3. Upon successful completion of the course, the student will describe the behavior of various functions. Formulate conjectures on the nature of the roots of polynomials.

CSLO not included in any Assessment Rubric

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-------|------------|----------------------|------------|--------------------|------------|----------------------------|------------|-------|------------|
| | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Spring 2019 | 53 | 15.87% | 42 | 12.57% | 153 | 45.81% | 86 | 25.75% | 334 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 53 | 15.87% | 42 | 12.57% | 153 | 45.81% | 86 | 25.75% | 334 | 100.00% |

MATHB50: Modern College Arithmetic and Pre-Algebra

Upon completion the student will be able to: Demonstrate the ability to add, subtract, multiply, and divide whole numbers, integers, fractions, mixed numbers, and decimals.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Solve Linear Equations by: a) Using the Addition/Subtraction property of equality, b) Using the Multiplication/Division property of equality.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Translate English sentences to algebraic equations.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Simplify mathematical statements using the correct order of operations.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Calculate the perimeter and area of rectangles and triangles. Calculate the area and circumference of a circle.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Find equivalent forms of numbers (i.e. change fractions to decimals, change percents to fractions, change fractions to percents, change decimals to fractions, change decimals to percents, change percents to decimals, change mixed numbers to improper fractions, change improper fractions to mixed numbers).

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Round whole numbers and decimals appropriately as directed.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Apply the concept of percent to real-world applications such as sales tax, discount, and simple interest.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Make conversions in the US Customary System of measurements, as well as in the Metric System.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

MATHB60: Beginning Algebra

Upon completion the student will be able to: Translate application problems, such as distance, percent, and geometry by formatting an appropriate equation or inequality. Solve and interpret solutions.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|--------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 10 | 2.79% | 119 | 33.24% | 49 | 13.69% | 180 | 50.28% | 358 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 10 | 2.79% | 119 | 33.24% | 49 | 13.69% | 180 | 50.28% | 358 | 100.00% |

Upon completion the student will be able to: Classify linear, rational, and quadratic functions, and apply appropriate algorithms, including factoring, graphing, and symbolic representations to find solutions.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|-------|----------------------------|-------|-------|-------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Demonstrate mathematical knowledge by clearly communicating linear, exponent, and rational concepts in written or verbal form.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|-------|----------------------------|-------|-------|-------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|--------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 10 | 2.79% | 119 | 33.24% | 49 | 13.69% | 180 | 50.28% | 358 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 10 | 2.79% | 119 | 33.24% | 49 | 13.69% | 180 | 50.28% | 358 | 100.00% |

MATHB65: Intermediate Algebra for Statistics

Upon completion the student will be able to: Translate application problems such as distance, percent, geometry, motion, mixture, and work by formatting an appropriate equation or inequality. Solve and interpret solutions.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 4 | 4.82% | 6 | 7.23% | 39 | 46.99% | 34 | 40.96% | 83 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 4 | 4.82% | 6 | 7.23% | 39 | 46.99% | 34 | 40.96% | 83 | 100.00% |

Upon completion the student will be able to: Classify linear, rational, exponential and logarithmic functions, and apply appropriate algorithms, including factoring, graphing, and symbolic representations to find solutions.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|-------|----------------------------|-------|-------|-------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Demonstrate mathematical knowledge by clearly communicating linear, exponent, rational, and exponential and logarithmic concepts in written or verbal form.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|---------------|----------------------------|---------------|-----------|----------------|
| Spring 2019 | 4 | 4.82% | 6 | 7.23% | 39 | 46.99% | 34 | 40.96% | 83 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 4 | 4.82% | 6 | 7.23% | 39 | 46.99% | 34 | 40.96% | 83 | 100.00% |

MATHB6A: Analytic Geometry/Calculus I

Upon completion student will be able to: Translate application problems, such as related rates, optimization, and velocity-displacement. Solve and interpret solutions using calculus.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----------|---------------|----------------------|---------------|--------------------|---------------|----------------------------|---------------|------------|----------------|
| Spring 2019 | 35 | 22.15% | 50 | 31.65% | 40 | 25.32% | 33 | 20.89% | 158 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 35 | 22.15% | 50 | 31.65% | 40 | 25.32% | 33 | 20.89% | 158 | 100.00% |

Apply appropriate algorithms to evaluate limits, derivatives, and integrals to formulate solutions.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Demonstrate the concepts of calculus by communicating in written, verbal and graphical form.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----------|---------------|----------------------|---------------|--------------------|---------------|----------------------------|---------------|------------|----------------|
| Spring 2019 | 35 | 22.15% | 50 | 31.65% | 40 | 25.32% | 33 | 20.89% | 158 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 35 | 22.15% | 50 | 31.65% | 40 | 25.32% | 33 | 20.89% | 158 | 100.00% |

MATHB6B: Analytic Geometry/Calculus II

Upon completion the student will be able to: 1. Calculate derivatives of exponential and logarithmic functions, inverse trigonometric functions, hyperbolic functions, and inverse hyperbolic functions. Identify when to use logarithmic differentiation. Solve problems involving exponential and logarithm functions.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|--------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 1 | 1.49% | 20 | 29.85% | 21 | 31.34% | 25 | 37.31% | 67 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 1 | 1.49% | 20 | 29.85% | 21 | 31.34% | 25 | 37.31% | 67 | 100.00% |

2. Integrate exponential and logarithmic functions, and hyperbolic functions. Identify integrands that are derivatives of inverse trigonometric functions or inverse hyperbolic functions. Determine when to use u-substitution or complete the square.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|--------|----------------------|--------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 7 | 18.92% | 15 | 40.54% | 8 | 21.62% | 7 | 18.92% | 37 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 7 | 18.92% | 15 | 40.54% | 8 | 21.62% | 7 | 18.92% | 37 | 100.00% |

3. Determine an appropriate method of integration and apply that method. Choose partial fractions (may first require long division), integration by parts, trigonometric substitution (use a triangle or an identity) or a combination of methods. Use numerical methods such as the trapezoidal rule or Simpson's Rule to evaluate a definite integral.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|--------|----------------------|--------|--------------------|-------|----------------------------|--------|-------|---------|
| Spring 2019 | 1 | 12.50% | 6 | 75.00% | 0 | 0.00% | 1 | 12.50% | 8 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 1 | 12.50% | 6 | 75.00% | 0 | 0.00% | 1 | 12.50% | 8 | 100.00% |

4. Evaluate improper integrals, as well as use L'Hopital's Rule to evaluate limits of indeterminate form and ranking of functions according to their growth rates.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

5. Know properties of sequences. Recognize monotonic sequences and know when they converge. Test whether a sequence converges or diverges by using a limit or the Sandwich Theorem.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

6. Be familiar with geometric series, telescoping series, and p-series. Test whether a series converges (absolutely or conditionally) or diverges. Be able to apply the nth-term test for divergence, the integral test, the direct comparison test, the limit comparison test, the ratio test, and the nth-root test. Determine radius and interval of convergence.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

7. Additional applications such as work, volumes, arc length, area of a surface of revolution, moments and centers of mass, separable differential equations, growth and decay.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

8. Build the Taylor series, Taylor polynomial of order n, or Maclaurin series of a function. Know the form of the binomial series. Estimate the error in truncating a series. Differentiate and integrate power series.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

9. Translate rectangular coordinates to polar coordinates and polar to rectangular. Graph, calculate slope, area, or shared area of polar curves.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

10. Calculus of parametric equations. Be able to parameterize an equation. Be able to graph, differentiate, and integrate parametric equations.

CSLO not included in any Assessment Rubric

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|---------------|--------------------|---------------|----------------------------|---------------|------------|----------------|
| Spring 2019 | 9 | 8.04% | 41 | 36.61% | 29 | 25.89% | 33 | 29.46% | 112 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 9 | 8.04% | 41 | 36.61% | 29 | 25.89% | 33 | 29.46% | 112 | 100.00% |

MATHB6C: Calculus III

Upon completion the student will be able to:1. Perform vector operations;

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|---------------|----------------------|--------------|--------------------|---------------|----------------------------|---------------|-----------|----------------|
| Spring 2019 | 9 | 11.69% | 0 | 0.00% | 55 | 71.43% | 13 | 16.88% | 77 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 9 | 11.69% | 0 | 0.00% | 55 | 71.43% | 13 | 16.88% | 77 | 100.00% |

| |
|--|
| 2. Determine equations of lines and planes; CSLO not included in any Assessment Rubric |
| 3. Find the limit of a function at a point; CSLO not included in any Assessment Rubric |
| 4. Evaluate derivatives and write the equation of a tangent plane at a point; CSLO not included in any Assessment Rubric |
| 5. Determine differentiability; CSLO not included in any Assessment Rubric |
| 6. Find local extrema and test for saddle points; CSLO not included in any Assessment Rubric |
| 7. Solve constraint problems using Lagrange multipliers; CSLO not included in any Assessment Rubric |
| 8. Compute arc length and find the divergence and curl of a vector field; CSLO not included in any Assessment Rubric |
| |

9. Evaluate two and three dimensional integrals;

CSLO not included in any Assessment Rubric

10. Apply Green's, Stokes', and divergence theorems.

CSLO not included in any Assessment Rubric

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|--------|----------------------|-------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 9 | 11.69% | 0 | 0.00% | 55 | 71.43% | 13 | 16.88% | 77 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 9 | 11.69% | 0 | 0.00% | 55 | 71.43% | 13 | 16.88% | 77 | 100.00% |

MATHB6D: Ordinary Differential Equations

Upon completion the student will be able to: Explain the criteria for the existence of a unique solution to an initial value problem.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|-------|----------------------------|-------|-------|-------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Find critical points and phase portrait for autonomous differential equations. The student will also sketch solution curves based on that information.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Solve first order differential equations by separable variables, integration factors, exact equations, and substitutions. In addition, be able to find power series solutions to ordinary differential equations and apply the existence and uniqueness theorems for ordinary differential equations.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Set up differential equations to model growth and decay, Newton's Law of Warming/Cooling, mixture problems, population dynamics, and predator/prey.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|---------------|----------------------------|---------------|-----------|----------------|
| Spring 2019 | 3 | 6.00% | 0 | 0.00% | 40 | 80.00% | 7 | 14.00% | 50 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 3 | 6.00% | 0 | 0.00% | 40 | 80.00% | 7 | 14.00% | 50 | 100.00% |

Solve homogenous and non-homogenous differential equations by methods that include method of undetermined coefficients, variation of parameters, Cauchy-Euler equations, and substitutions.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Solve system of linear differential equations by elimination and/or eigenvalues.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

LaPlace transforms to solve initial value problems.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Use numerical methods to solve initial value problems. Methods could include Euler’s method, Taylor series solution, and the Runge-Kutta method

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|---------------|----------------------------|---------------|-----------|----------------|
| Spring 2019 | 3 | 6.00% | 0 | 0.00% | 40 | 80.00% | 7 | 14.00% | 50 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 3 | 6.00% | 0 | 0.00% | 40 | 80.00% | 7 | 14.00% | 50 | 100.00% |

MATHB6E: Elementary Linear Algebra

Upon completion the student will be able to: Find solutions of systems of equations using various methods appropriate to lower division linear algebra;

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Use bases and orthonormal bases to solve problems in linear algebra;

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Find the dimension of spaces such as those associated with matrices and linear transformations;

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Find eigenvalues and eigenvectors and use them in applications; and

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|---------------|----------------------|---------------|--------------------|---------------|----------------------------|---------------|-----------|----------------|
| Spring 2019 | 7 | 14.58% | 5 | 10.42% | 30 | 62.50% | 6 | 12.50% | 48 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 7 | 14.58% | 5 | 10.42% | 30 | 62.50% | 6 | 12.50% | 48 | 100.00% |

Upon completion the student will be able to: Prove basic results in linear algebra using appropriate proof-writing techniques such as linear independence of vectors; properties of subspaces; linearity, injectivity and surjectivity of functions; and properties of eigenvectors and eigenvalues.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|-------|--------------------|-------|----------------------------|-------|-------|-------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|--------|----------------------|--------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 7 | 14.58% | 5 | 10.42% | 30 | 62.50% | 6 | 12.50% | 48 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 7 | 14.58% | 5 | 10.42% | 30 | 62.50% | 6 | 12.50% | 48 | 100.00% |

MATHB70: Intermediate Algebra

Upon completion the student will be able to: Translate application problems involving motion, mixture and work by formulating appropriate equations, systems of equations or inequalities. Solve and interpret results.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----|-------|----------------------|--------|--------------------|--------|----------------------------|--------|-------|---------|
| Spring 2019 | 53 | 6.04% | 248 | 28.25% | 332 | 37.81% | 245 | 27.90% | 878 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 53 | 6.04% | 248 | 28.25% | 332 | 37.81% | 245 | 27.90% | 878 | 100.00% |

Upon completion the student will be able to: Classify linear and non-linear functions, including conic and logarithmic. Apply appropriate algorithms, including factoring, graphing, and symbolic representations to find solutions.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Upon completion the student will be able to: Demonstrate mathematical knowledge by clearly communicating linear and non-linear concepts including radicals, exponential and logarithmic concepts in written or verbal form.

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|----------|--------------|----------------------|--------------|--------------------|--------------|----------------------------|--------------|----------|--------------|
| Spring 2019 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

Totals for CSLOs

| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
|-------------|-----------|--------------|----------------------|---------------|--------------------|---------------|----------------------------|---------------|------------|----------------|
| Spring 2019 | 53 | 6.04% | 248 | 28.25% | 332 | 37.81% | 245 | 27.90% | 878 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 53 | 6.04% | 248 | 28.25% | 332 | 37.81% | 245 | 27.90% | 878 | 100.00% |

| Report Totals: | | | | | | | | | | |
|-----------------------|------------|---------------|-----------------------------|---------------|---------------------------|---------------|-----------------------------------|---------------|--------------|----------------|
| | N/A | | Exceeds expectations | | Meets expectations | | Does not meet expectations | | Total | |
| Spring 2019 | 363 | 10.83% | 632 | 18.85% | 1292 | 38.54% | 1065 | 31.77% | 3352 | 100.00% |
| Fall 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Summer 2018 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Totals | 363 | 10.83% | 632 | 18.85% | 1292 | 38.54% | 1065 | 31.77% | 3352 | 100.00% |