## DEPARTMENTAL ASSESSMENT REPORT

Department: Mathematics
Academic Year: 2014 Semester: Fall
Course Assessed: Math 099 MOD Fundamentals of Intermediate Algebra and Geometry No of Students Assessed: 173
Type of Assessmer A 25-problem final exam.
Course Coordinator: Jose Hernandez

## ANALYSIS OF OVERALL RESULTS

1. Expected competency level: 40\%
2. How many students met the competency level? 151
3. What \% of students met the competency level? 87\%
4. No. of students enrolled in the course: 260
5. No. of students completing the final exam: 161
6. \% of students completing the final exam: $93 \%$
7. No. of students receiving a grade C or better: 144
8. \% of students receiving a grade C or better: $83 \%$
9. \% of enrolled students passing with C or better: $55 \%$
10. What objectives were not met by the majority of the students:

See the objectives below.
11. Was the assessment instrument adequate:

Yes, the assessment instrument was adequate.
12. The attainment of which objectives, if any, were not measured? Why not? Is it possible to make the instrument such that to measure all objectives?
All objectives were measured.
13. Comments - Recommendations:

Objective \# 1 Simplifying expressions containing rational exponents
Assessed by problem \#1.
Number of correct answers: 111
\% of correct answers: 64\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 2 Perform operations on and simplify radicals
Assessed by problem \# 2.
Number of correct answers: 67
$\%$ of correct answers: $39 \%$
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 3 Perform operations on and simplify rational expressions
Assessed by problem \# 3.
Number of correct answers: 87
\% of correct answers: 50\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 4 A Solve quadratic equations with real solutions
Assessed by problem \# 4.
Number of correct answers: 105
$\%$ of correct answers: 61\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 4 B Solve quadratic equations with real solutions
Assessed by problem \# 5
Number of correct answers: 83
\% of correct answers: 48\%
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 5 Solve rational equations
Assessed by problem \# 6
Number of correct answers: 104
\% of correct answers: 60\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 6 Solve absolute value equations
Assessed by problem \# 7
Number of correct answers: 84
\% of correct answers: 49\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 7 Solve radical equations
Assessed by problem \# 8
Number of correct answers: 122
$\%$ of correct answers: $71 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 8 Solve compound linear inequalities
Assessed by problem \# 9
Number of correct answers: 47
\% of correct answers: 27\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 9 Solve systems of linear inequalities in two variables
Assessed by problem \# 10
Number of correct answers: 48
$\%$ of correct answers: 28\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 10 Solve systems of linear equations in two and three variables
Assessed by problem \# 11
Number of correct answers: 99
$\%$ of correct answers: $57 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 11 Formulate and apply an equation, inequality or system of linear equations Assessed by problem \# 12.
Number of correct answers: 124
\% of correct answers: 72\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 12 Solve and evaluate literal equations, including nonlinear equations
Assessed by problem \# 13.
Number of correct answers: 95
$\%$ of correct answers: $55 \%$
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 13. Formulate and apply nonlinear literal equations
Assessed by problem \# 14.
Number of correct answers: 127
\% of correct answers: $73 \%$
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 14 A Graph linear and quadratic equations
Assessed by problem \# 15.
Number of correct answers: 47
\% of correct answers: 27\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 14 B Graph linear and quadratic equations
Assessed by problem \# 16
Number of correct answers: 140
\% of correct answers: 81\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 15 Equations of lines, parallel and perpendicular line
Assessed by problem \# 17.
Number of correct answers: 123
\% of correct answers: $71 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 16 Given relationships represented in multiple forms are functions
Assessed by problem \# 18.
Number of correct answers: 71
\% of correct answers: 41\%
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 17 Determine domain and range from the graph of a function
Assessed by problem \# 19.
Number of correct answers: 123
\% of correct answers: $71 \%$
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 18 Formulate and apply the concept of a function to contextual situation
Assessed by problem \# 20.
Number of correct answers: 47
$\%$ of correct answers: $27 \%$
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 19 Interpret slope in a linear model as a rate of change
Assessed by problem \# 21.
Number of correct answers: 144
\% of correct answers: 83\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 20 A Apply formulas of perimeter, area, and volume to 2 - and 3 dimensions
Assessed by problem \# 22.
Number of correct answers: 50
\% of correct answers: 29\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 20 B Apply formulas of perimeter, area, and volume to 2 - and 3 dimensions
Assessed by problem \# 23.
Number of correct answers: 88
\% of correct answers:
51\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 21 Apply the Pythagorean Theorem
Assessed by problem \# 24
Number of correct answers: 82
$\%$ of correct answers: 47\%
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 22 Apply the concepts of similarity and congruency of triangles
Assessed by problem \# 25
Number of correct answers: 139
\% of correct answers: 80\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

## Math 099 MOD Item analysis chart, graph SP 2014

Table I


The above table indicates the number of correct answers for each problem of the assessment instrument.

## Table II

Problem Score
$\begin{array}{ll}1 & 0 \\ 2 & 0\end{array}$ 3
$4 \quad 1$
2
3
2
10
4
7
6
10
16
10
20
23
22
13
6
10
7
0
1
0
0
173


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# Math 099 MOD Grade Distribution SP 2014 

## Table III

Grade Frequency

| A | 4 |
| :---: | :---: |
| B | 5 |
| C | 5 |
| D | 1 |
| F | 7 |
| ADW | 0 |
| WTH | 7 |
| TOTALS | 0 |


| Section | A | B | C | D | F | ADW | WTH | Totals |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M 099 AC MD |  |  |  |  |  |  |  |  |
| M 099 BD MD |  |  |  |  |  |  |  |  |
| M099 EG MD | 6 | 5 | 11 | 2 | 5 | 4 | 3 | 36 |
| M 099 FH MD | 1 | 4 | 10 | 3 | 12 | 3 | 8 | 41 |
| M 099 IK MD |  |  |  |  |  |  |  |  |
| M 099 JL MD | 8 | 17 | 6 | 1 | 5 | 1 | 4 | 42 |
| M 099 OQ MD |  |  |  |  |  |  |  |  |
| M 099 PR MD | 13 | 8 | 4 | 1 | 4 | 3 | 7 | 40 |
| M 099 UV MD | 9 | 7 | 7 | 2 | 8 | 2 | 4 | 39 |
| M099 HUOQ MD | 2 | 6 | 6 | 6 | 0 | 6 | 7 | 33 |
| M 099 SAT MD | 4 | 5 | 5 | 1 | 7 | 0 | 7 | 29 |

SP 2014 Math 099 MOD - Item Analysis, correct answers for each problem


| Section | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  | Totals |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M 099 AC MD |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M 099 BD MD |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M099 EG MD | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 3 | 1 | 2 | 4 | 2 | 4 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 24 |
| M 099 FH MD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 2 | 4 | 3 | 2 | 4 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 25 |
| M 099 IK MD |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M 099 JL MD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 7 | 6 | 6 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 31 |
| M 099 OQ MD |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 |
| M 099 PR MD | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 3 | 2 | 3 | 1 | 2 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 24 |
| M 099 UV MD | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 8 | 1 | 0 | 2 | 3 | 5 | 0 | 1 | 5 | 3 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 34 |
| M099 HUOQ M[ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 2 | 2 | 2 | 4 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| M 099 SAT MD | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 3 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | 18 |
| TOTALS | 0 | 0 | 0 | 1 | 2 | 3 | 2 | 10 | 4 | 7 | 6 | 10 | 16 | 10 | 20 | 23 | 22 | 13 | 6 | 10 | 7 | 0 | 1 | 0 | 0 | 173 |

## DEPARTMENTAL ASSESSMENT REPORT

Department: Mathematics
Academic Year: 2014 Semester: Fall
Course Assessed: Math 090No of Students Assessed:25
Type of Assessmer A 25-problem final exam.
Course Coordinator: Patricia Miceli
ANALYSIS OF OVERALL RESULTS

1. Expected competency level: ..... 40\%
2. How many students met the competency level? ..... 24
3. What \% of students met the competency level? ..... 96\%
4. No. of students enrolled in the course: ..... 36
5. No. of students completing the final exam: ..... 25
6. \% of students completing the final exam: ..... 69\%
7. No. of students receiving a grade C or better: ..... 15
8. \% of students receiving a grade C or better: ..... 60\%
9. \% of enrolled students passing with C or better: ..... 42\%10. What objectives were not met by the majority of the students:Objectives 8 ,was not met by the majority of students
10. Was the assessment instrument adequate:
Yes, the assessment instrument was adequate.
11. The attainment of which objectives, if any, were not measured?Why not? Is it possible to make the instrument such that tomeasure all objectives?
All objectives were measured.
12. Comments - Recommendations:

Objective \# 1 Problem-solving steps and strategies to form conjectures.
Assessed by problem \#1.
Number of correct answers: 21
\% of correct answers: 84\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 2 Set definitions, notations, relationships, perform operations on sets.
Assessed by problem \# 2.
Number of correct answers: 18
\% of correct answers: $72 \%$
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 3 Define a function, an equation, a function machine, ordered pairs, graph.
Assessed by problem \# 3.
Number of correct answers: 10
\% of correct answers: 40\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 4 Use logic in math thinking and problem solving.
Assessed by problem \# 4.
Number of correct answers: 9
\% of correct answers: 36\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# $5 \quad$ Know properties of numeration systems, give basic structure.
Assessed by problem \# 5.
Number of correct answers: 23
\% of correct answers: 92\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 6 Perform operations on whole numbers.
Assessed by problem \# 6.
Number of correct answers: 21
\% of correct answers: 84\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 7 Perform operations on integers.
Assessed by problem \# 7.
Number of correct answers: 13
\% of correct answers: $52 \%$
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 8 Use divisibility tests.
Assessed by problem \# 8.
Number of correct answers: 20
\% of correct answers: 80\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 9 Determine prime composite numbers and number of divisors.
Assessed by problem \# 9.
Number of correct answers: 18
\% of correct answers: 72\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 10 Determine greatest divisor and least multiple for more natural numbers.
Assessed by problem \# 10.
Number of correct answers: 9
\% of correct answers: 36\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 11 Solve problems using clocks and modular arithmetic.
Assessed by problem \# 11.
Number of correct answers: 19
\% of correct answers: 76\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 12 Represent rational numbers and know the properties.
Assessed by problem \# 12.
Number of correct answers: 19
\% of correct answers:
$76 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 13. Know and use the properties of exponents.
Assessed by problem \# 13.
Number of correct answers: 20
\% of correct answers: 80\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 14 Perform operations on decimals.
Assessed by problem \# 14.
Number of correct answers: 17
\% of correct answers: 68\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 15 Know properties and perform operations on real numbers.
Assessed by problem \# 15.
Number of correct answers: 21
\% of correct answers: 84\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 16 Algebraic skills writing and solving equations and inequalities in word problems Assessed by problem \# 16.
Number of correct answers: 21
\% of correct answers:
84\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 17 Formulate word problems as mathematical problems.
Assessed by problem \# 17.
Number of correct answers: 13
\% of correct answers:
52\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 18 Use properties of decimals to solve problems.
Assessed by problem \# 18.
Number of correct answers: 17
\% of correct answers:
68\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 19 Use properties of ratios proportional to solve problems.
Assessed by problem \# 19.
Number of correct answers: 19
\% of correct answers: 76\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 20 Define and determine percents.
Assessed by problem \# 20.
Number of correct answers: 16
\% of correct answers: 64\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 21 Use properties in percent problems
Assessed by problem \# 21
Number of correct answers: 21
\% of correct answers: 84\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 22 Percents in decimal form and vice versa
Assessed by problem \# 22
Number of correct answers: 18
\% of correct answers: 72\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 23 Solve simple interest problems
Assessed by problem \# 23
Number of correct answers: 17
\% of correct answers: 68\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 24 Solve compount inerest problems
Assessed by problem \# 24
Number of correct answers: 20
\% of correct answers: 80\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 25 Use compount interest formula to solve finance problems
Assessed by problem \# 25
Number of correct answers: 20
\% of correct answers: 80\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

## Math 090 Item analysis chart FA 2013

Table I
Problems Frequency

| 1 | 21 |
| :---: | :---: |
| 2 | 18 |
| 3 | 10 |
| 4 | 9 |
| 5 | 23 |
| 6 | 21 |
| 7 | 13 |
| 8 | 20 |
| 9 | 18 |
| 10 | 9 |
| 11 | 19 |
| 12 | 19 |
| 13 | 20 |
| 14 | 17 |
| 15 | 21 |
| 16 | 21 |
| 17 | 13 |
| 18 | 17 |
| 19 | 19 |
| 20 | 16 |
| 21 | 21 |
| 22 | 18 |
| 23 | 17 |
| 24 | 20 |
| 25 | 21 |



The above table indicates the number of correct answers for each problem of the assessment instrument.

FA 2013 Math 090 Score Distribution chart

| Problem | Score |
| :---: | ---: |
| 1 | 0 |
| 2 | 0 |
| 3 | 0 |
| 4 | 0 |
| 5 | 0 |
| 6 | 0 |
| 7 | 1 |
| 8 | 0 |
| 9 | 0 |
| 10 | 0 |
| 11 | 0 |
| 12 | 1 |
| 13 | 1 |
| 14 | 2 |
| 15 | 0 |
| 16 | 1 |
| 17 | 2 |
| 18 | 2 |
| 19 | 3 |
| 20 | 2 |
| 21 | 5 |
| 22 | 2 |
| 23 | 3 |
| 24 | 0 |
| 25 | 0 |
| Totals | 25 |



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| FA 2013 | Math 090 Grade Distribution chart Table III | Section | A | B | C | D | F | ADW | WTH | Totals |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grade | Frequency | M 090 AC |  |  |  |  |  |  |  |  |
| A | 1 | M 090 FH | 1 | 4 | 10 | 7 | 6 | 2 | 6 | 36 |
| B | 4 |  |  |  |  |  |  |  |  |  |
| C | 10 |  |  |  |  |  |  |  |  |  |
| D | 7 | TOTALS | 1 | 4 | 10 | 7 | 6 | 2 | 6 | 36 |
| F | 6 |  |  |  |  |  |  |  |  |  |
| ADW | 2 |  |  |  |  |  |  |  |  |  |
| WTH | 6 |  |  |  |  |  |  |  |  |  |
| Totals | 36 |  |  |  |  |  |  |  |  |  |



## SP 20142013 Math 090 Item Analysis

Section \#1 \#2 \#3 \# 4 \# 5 \# 6 \# 7 \# 8 \# 9 \# 10 \# 11 \# 12 \# 13 \#14 \#15 \#16 \# 17 \# 18 \# 19 20 21 22 23 24 25 TOTAL M 090 AC M 090 FH


FA 2013 Math 090 Score Distribution
Section


## DEPARTMENTAL ASSESSMENT REPORT



Objective \# 1 Simplifying expressions containing rational exponents
Assessed by problem \#1.
Number of correct answers: 261
$\%$ of correct answers: 69\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 2 Perform operations on and simplify radicals
Assessed by problem \# 2.
Number of correct answers: 183
$\%$ of correct answers: $48 \%$
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 3 Perform operations on and simplify rational expressions
Assessed by problem \# 3.
Number of correct answers: 262
$\%$ of correct answers: $69 \%$
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 4 A Solve quadratic equations with real solutions
Assessed by problem \# 4.
Number of correct answers: 236
$\%$ of correct answers: $62 \%$
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 4 B Solve quadratic equations with real solutions
Assessed by problem \# 5197
Number of correct answers: 52\%
\% of correct answers:
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 5 Solve rational equations
Assessed by problem \# 6
Number of correct answers: 274
$\%$ of correct answers: $72 \%$
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

## Objective \# 6 Solve absolute value equations

Assessed by problem \# 7
Number of correct answers: 257
\% of correct answers: 68\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 7 Solve radical equations
Assessed by problem \# 8
Number of correct answers: 319
\% of correct answers: 84\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 8 Solve compound linear inequalities
Assessed by problem \# 9
Number of correct answers: 112
\% of correct answers: $30 \%$
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 9 Solve systems of linear inequalities in two variables
Assessed by problem \# 10
Number of correct answers: 153
\% of correct answers: 40\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 10 Solve systems of linear equations in two and three variables
Assessed by problem \# 11
Number of correct answers: 276
\% of correct answers: 73\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 11 Formulate and apply an equation, inequality or system of linear equations
Assessed by problem \# 12.
Number of correct answers: 300
\% of correct answers: 79\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 12 Solve and evaluate literal equations, including nonlinear equations Assessed by problem \# 13.
Number of correct answers: 237
$\%$ of correct answers: $63 \%$
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 13. Formulate and apply nonlinear literal equations
Assessed by problem \# 14.
Number of correct answers: 320
$\%$ of correct answers: $85 \%$
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 14 A Graph linear and quadratic equations
Assessed by problem \# 15.
Number of correct answers: 112
$\%$ of correct answers: $30 \%$
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 14 B Graph linear and quadratic equations
Assessed by problem \# 16
Number of correct answers: 325
$\%$ of correct answers: $86 \%$
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 15 Equations of lines, parallel and perpendicular line
Assessed by problem \# 17.
Number of correct answers: 325
\% of correct answers: 86\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 16 Given relationships represented in multiple forms are functions
Assessed by problem \# 18.
Number of correct answers: 177
$\%$ of correct answers: 47\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

## Objective \# 17 Determine domain and range from the graph of a function

Assessed by problem \# 19.
Number of correct answers: 281
\% of correct answers: 74\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 18 Formulate and apply the concept of a function to contextual situation
Assessed by problem \# 20.
Number of correct answers: 110
$\%$ of correct answers: 29\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 19 Interpret slope in a linear model as a rate of change
Assessed by problem \# 21.
Number of correct answers: 370
$\%$ of correct answers: $98 \%$
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 20 A Apply formulas of perimeter, area, and volume to 2 - and 3 dimensions
Assessed by problem \# 22.
Number of correct answers: 180
$\%$ of correct answers: $48 \%$
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 20 B Apply formulas of perimeter, area, and volume to 2 - and 3 dimensions
Assessed by problem \# 23.
Number of correct answers: 231
$\%$ of correct answers: $61 \%$
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 21 Apply the Pythagorean Theorem
Assessed by problem \# 24
Number of correct answers: 179
$\%$ of correct answers: 47\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 22 Apply the concepts of similarity and congruency of triangles
Assessed by problem \# 25
Number of correct answers: 327
\% of correct answers: 87\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

## Math 099 Item analysis chart SP 2014

## Table I



The above table indicates the number of correct answers for each problem of the assessment instrument.

SP 2014 Math 099 Score Distribution chart


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## SP 2014 Math 099 - Item Analysis

| Section | \# 1 | \# 2 | \# 3 | \# 4 | \# 5 | \# 6 | \# 7 | \# 8 | \# 9 | \# 10 | \# 11 | \# 12 | \# 13 | \#14 | \#15 | \#16 | \# 17 | \# 18 | \# 19 | \# 20 | \# 21 | \# 22 | \# 23 | \# 24 | \#25 | Class Size |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M 099 AC | 17 | 6 | 17 | 11 | 18 | 18 | 20 | 24 | 4 | 8 | 23 | 26 | 24 | 22 | 7 | 24 | 24 | 12 | 22 | 8 | 30 | 11 | 20 | 13 | 25 | 30 |
| M 099 BD | 12 | 4 | 14 | 19 | 11 | 16 | 8 | 16 | 10 | 11 | 16 | 15 | 11 | 18 | 9 | 19 | 18 | 10 | 15 | 11 | 20 | 10 | 12 | 8 | 20 | 20 |
| M 099 CE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M 099 .CBK | 12 | 7 | 8 | 12 | 2 | 9 | 9 | 12 | 4 | 3 | 8 | 12 | 7 | 12 | 1 | 11 | 12 | 6 | 12 | 3 | 12 | 10 | 10 | 4 | 11 | 12 |
| M 099 DBK | 19 | 6 | 14 | 14 | 9 | 7 | 15 | 15 | 2 | 9 | 15 | 11 | 9 | 21 | 6 | 19 | 20 | 5 | 15 | 5 | 20 | 4 | 10 | 8 | 16 | 21 |
| M 099 DF | 18 | 15 | 21 | 4 | 15 | 20 | 16 | 19 | 12 | 11 | 16 | 16 | 16 | 18 | 11 | 11 | 19 | 14 | 17 | 8 | 21 | 15 | 15 | 16 | 18 | 22 |
| M 099 FBK | 7 | 5 | 7 | 7 | 6 | 5 | 14 | 10 | 2 | 5 | 6 | 8 | 6 | 11 | 2 | 10 | 9 | 2 | 11 | 2 | 12 | 6 | 12 | 8 | 3 | 13 |
| M 099 FH | 14 | 6 | 16 | 16 | 8 | 17 | 20 | 22 | 10 | 10 | 20 | 23 | 14 | 22 | 9 | 24 | 21 | 8 | 11 | 9 | 25 | 15 | 17 | 12 | 23 | 25 |
| M 099 Gl | 23 | 22 | 22 | 20 | 20 | 20 | 22 | 24 | 10 | 9 | 26 | 23 | 20 | 23 | 6 | 27 | 24 | 12 | 19 | 3 | 28 | 10 | 10 | 12 | 26 | 28 |
| M 099 Gl2 | 22 | 11 | 13 | 15 | 13 | 23 | 20 | 29 | 5 | 12 | 24 | 22 | 19 | 29 | 8 | 26 | 25 | 12 | 28 | 8 | 31 | 20 | 18 | 11 | 29 | 31 |
| M 099 HJ2 | 19 | 18 | 19 | 13 | 16 | 20 | 18 | 21 | 6 | 7 | 18 | 21 | 13 | 15 | 7 | 21 | 25 | 16 | 17 | 9 | 26 | 13 | 13 | 9 | 21 | 27 |
| M 099 HJ3 | 13 | 6 | 16 | 18 | 13 | 18 | 16 | 23 | 7 | 13 | 12 | 25 | 11 | 24 | 2 | 25 | 23 | 10 | 16 | 1 | 27 | 9 | 16 | 10 | 26 | 27 |
| M 099 IK | 23 | 14 | 21 | 18 | 13 | 23 | 9 | 21 | 7 | 3 | 12 | 21 | 19 | 22 | 8 | 21 | 20 | 18 | 21 | 5 | 25 | 10 | 15 | 16 | 22 | 25 |
| M 099 IK2 | 13 | 10 | 14 | 15 | 8 | 16 | 12 | 17 | 4 | 8 | 17 | 16 | 9 | 17 | 4 | 19 | 18 | 10 | 15 | 7 | 19 | 12 | 14 | 5 | 19 | 20 |
| M 099 MO | 15 | 17 | 22 | 20 | 17 | 26 | 23 | 27 | 17 | 19 | 26 | 27 | 23 | 26 | 16 | 26 | 27 | 21 | 26 | 20 | 29 | 16 | 23 | 21 | 27 | 29 |
| M 099 NP | 6 | 7 | 9 | 9 | 6 | 8 | 8 | 11 | 4 | 12 | 11 | 11 | 6 | 10 | 6 | 12 | 8 | 8 | 11 | 3 | 12 | 3 | 8 | 11 | 10 | 12 |
| M 099 NP2 | 12 | 14 | 13 | 9 | 8 | 12 | 14 | 14 | 2 | 2 | 13 | 15 | 14 | 15 | 5 | 14 | 16 | 8 | 11 | 1 | 15 | 8 | 9 | 7 | 15 | 16 |
| M 099 RT | 16 | 15 | 16 | 16 | 14 | 16 | 13 | 14 | 6 | 11 | 13 | 8 | 16 | 15 | 5 | 16 | 16 | 5 | 14 | 7 | 18 | 8 | 9 | 8 | 16 | 18 |
| TOTALS | 261 | 183 | 262 | 236 | 197 | 274 | 257 | 319 | 112 | 153 | 276 | 300 | 237 | 320 | 112 | 325 | 325 | 177 | 281 | 110 | 370 | 180 | 231 | 179 | 327 | 376 |

## SP 2014 Math 099 - Score Distribution



## DEPARTMENTAL ASSESSMENT REPORT

Department: Mathematics
Academic Year: 2014 Semester: Fall
Course Assessed: Math 118 General Ed. Math
No of Students Assessed: 333
Type of Assessmer A 25-problem final exam.
Course Coordinator: Qiana Lewis

## ANALYSIS OF OVERALL RESULTS

1. Expected competency level:

40\%
2. How many students met the competency level? 306
3. What \% of students met the competency level? $92 \%$
4. No. of students enrolled in the course: 29
5. No. of students completing the final exam: 333
6. \% of students completing the final exam: $100 \%$
7. No. of students receiving a grade C or better: 109
8. \% of students receiving a grade C or better: $33 \%$
10. What objectives were not met by the majority of the students:

All objectives were met by the majority of the students.
11. Was the assessment instrument adequate:

Yes, the assessment instrument was adequate.
12. The attainment of which objectives, if any, were not measured?

Why not? Is it possible to make the instrument such that to measure all objectives?
All objectives were measured.
13. Comments - Recommendations:

Objective \# 1 Translate symbolic statements into words and vice-versa
Assessed by problem \#1.
Number of correct answers: 310
\% of correct answers: 93\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 2 Determine the truth-value for compound statements
Assessed by problem \# 2.
Number of correct answers: 254
\% of correct answers: 76\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 3 Determine the negation statement
Assessed by problem \# 3.
Number of correct answers: 140
\% of correct answers: 42\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 4 Determine and relate the converse, inverse, and contra positive....
Assessed by problem \# 4.
Number of correct answers: 214
\% of correct answers: 64\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 5 Construct truth tables for compound statements
Assessed by problem \# 5.
Number of correct answers: 231
\% of correct answers: 69\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 6 Determine the validity of arguments using Euler diagrams and truth tables
Assessed by problem \# 6.
Number of correct answers: 127
\% of correct answers: 38\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 7 Develop and apply common counting method strategies.
Assessed by problem \# 7.
Number of correct answers: 117
\% of correct answers: 35\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 8 Apply the fundamental counting principle to application problems
Assessed by problem \# 8.
Number of correct answers: 296
\% of correct answers: 89\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 9 Use the factorial formula to determine the number of ways to arrange objects
Assessed by problem \# 9.
Number of correct answers: 274
\% of correct answers: 82\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 10 Apply permutations to application problems
Assessed by problem \# 10.
Number of correct answers: 210
\% of correct answers: 63\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 11 Apply combinations to application problems
Assessed by problem \# 11.
Number of correct answers: 257
\% of correct answers: 77\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 12 Use the complement and/or additive principle for counting ...
Assessed by problem \# 12.
Number of correct answers: 170
\% of correct answers: $51 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 13. Determine the empirical probability and theoretical probability..
Assessed by problem \# 13.
Number of correct answers: 290
\% of correct answers: 87\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 14 Determine the odds in favor and the odds against events
Assessed by problem \# 14.
Number of correct answers: 226
\% of correct answers: 68\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 15 Apply the addition rule of probability to real-life problems
Assessed by problem \# 15.
Number of correct answers: 170
\% of correct answers: $51 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 16 Apply the multiplication rule of probability to real-life problems Assessed by problem \# 16.
Number of correct answers: 196
\% of correct answers: 59\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 17 Apply the binomial probability formula to application problems Assessed by problem \# 17.
Number of correct answers: 110
\% of correct answers: 33\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 18 Determine expected values of random variables of real life
Assessed by problem \# 18.
Number of correct answers: 176
\% of correct answers: $53 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:
*

Objective \# 19 Gather, interpret, and present data in frequency distribution tables, histograms, and graphs
Assessed by problem \# 19.
Number of correct answers: 268
\% of correct answers: 80\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 20 Find and interpret measures of central tendency.
Assessed by problem \# 20.
Number of correct answers: 230
\% of correct answers: 69\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 21 Find and interpret various measures of dispersion.
Assessed by problem \# 21.
Number of correct answers: 178
\% of correct answers: $53 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 22 Use z-scores to compare data from different distributions.
Assessed by problem \# 22
Number of correct answers: 203
\% of correct answers: 61\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 23 Determine percentile and quartile for data, construct plots from results.
Assessed by problem \# 23.
Number of correct answers: 201
\% of correct answers: 60\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 24 Apply principles of normal distribution to real-life normally distributed.
Assessed by problem \# 24.
Number of correct answers: 104
\% of correct answers: 31\%
Did the majority of the students meet this objective: No
Comments - Recommendations:

Objective \# 25 Use regression analysis to formulate relationships between variables.
Assessed by problem \# 25.
Number of correct answers: 285
\% of correct answers: 86\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Math 118 Item analysis chart SP 2014

## Table I

Problems Frequency

| 1 | 310 |
| :---: | :---: |
| 2 | 254 |
| 3 | 140 |
| 4 | 214 |
| 5 | 231 |
| 6 | 127 |
| 7 | 117 |
| 8 | 296 |
| 9 | 274 |
| 10 | 210 |
| 11 | 257 |
| 12 | 170 |
| 13 | 290 |
| 14 | 226 |
| 15 | 170 |
| 16 | 196 |
| 17 | 110 |
| 18 | 176 |
| 10 | 268 |
| 20 | 230 |
| 21 | 178 |
| 22 | 203 |
| 23 | 201 |
| 24 | 104 |
| 25 | 285 |



The above table indicates the number of correct answers for each problem of the assessment instrument.

SP 2014 Math 118 Score Distribution chart
Table II

| Problem | Score |
| :---: | ---: |
| 1 | 0 |
| 2 | 0 |
| 3 | 0 |
| 4 | 0 |
| 5 | 1 |
| 6 | 5 |
| 7 | 5 |
| 8 | 9 |
| 9 | 7 |
| 10 | 12 |
| 11 | 14 |
| 12 | 17 |
| 13 | 23 |
| 14 | 24 |
| 15 | 34 |
| 16 | 35 |
| 17 | 31 |
| 18 | 31 |
| 19 | 25 |
| 20 | 22 |
| 21 | 17 |
| 22 | 4 |
| 23 | 9 |
| 24 | 7 |
| 25 | 1 |
| Totals | 333 |




SP 2014 Math 118 - Item Analysis

| Section | 1 |  |  |  |  | 6 | 7 | 8 | 9 | \# 10 | 11 | \# 12 | \# 13 | \#14 | \#15 | \#16 | \# 17 | \# 18 | \# 19 | \# 20 | \# 21 | \# 22 | 23 | \# 24 | 25 | Class Size |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M 118 AC | 25 | 10 | 8 | 16 | 22 | 8 | 7 | 23 | 24 | 10 | 23 | 16 | 26 | 14 | 19 | 20 | 9 | 21 | 19 | 22 | 18 | 15 | 21 | 18 | 24 | 28 |
| M 118 AC2 | 28 | 28 | 5 | 22 | 24 | 14 | 9 | 26 | 27 | 27 | 24 | 14 | 29 | 20 | 18 | 14 | 7 | 9 | 24 | 27 | 24 | 23 | 23 | 9 | 29 | 31 |
| M 118 BD | 19 | 15 | 9 | 15 | 13 | 5 | 6 | 20 | 17 | 13 | 18 | 10 | 17 | 10 | 8 | 16 | 9 | 14 | 16 | 15 | 12 | 7 | 15 | 11 | 14 | 23 |
| M 118 BFYR | 11 | 10 | 2 | 6 | 6 | 5 | 3 | 11 | 8 | 7 | 6 | 3 | 12 | 7 | 2 | 2 | 1 | 5 | 8 | 9 | 4 | 3 | 1 | 0 | 11 | 12 |
| M 118 CE | 23 | 7 | 14 | 15 | 16 | 8 | 8 | 18 | 22 | 12 | 21 | 18 | 19 | 10 | 7 | 14 | 8 | 17 | 23 | 17 | 10 | 11 | 8 | 6 | 18 | 25 |
| M 118 IBK | 9 | 7 | 5 | 5 | 6 | 3 | 2 | 9 | 8 | 3 | 7 | 5 | 9 | 7 | 3 | 6 | 4 | 2 | 7 | 6 | 7 | 7 | 9 | 5 | 8 | 9 |
| M 118 EG | 22 | 18 | 13 | 18 | 20 | 5 | 7 | 22 | 21 | 19 | 21 | 1 | 20 | 15 | 15 | 19 | 17 | 11 | 21 | 2 | 18 | 19 | 18 | 10 | 19 | 22 |
| M 118 EG2 | 29 | 27 | 26 | 22 | 19 | 26 | 21 | 29 | 29 | 19 | 28 | 21 | 29 | 27 | 16 | 17 | 16 | 13 | 16 | 20 | 27 | 20 | 25 | 8 | 27 | 29 |
| M 118 FHYR | 23 | 20 | 2 | 17 | 17 | 6 | 2 | 19 | 17 | 12 | 17 | 15 | 18 | 13 | 11 | 11 | 5 | 12 | 16 | 15 | 7 | 13 | 8 | 5 | 20 | 23 |
| M 118 IK |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M 118 MO | 34 | 33 | 6 | 13 | 26 | 16 | 10 | 32 | 30 | 21 | 25 | 15 | 31 | 22 | 12 | 12 | 4 | 17 | 32 | 25 | 15 | 20 | 18 | 8 | 33 | 37 |
| M 118 NP | 9 | 14 | 9 | 10 | 11 | 9 | 13 | 10 | 15 | 14 | 9 | 9 | 9 | 19 | 9 | 9 | 9 | 10 | 21 | 10 | 9 | 10 | 9 | 9 | 9 | 21 |
| M 118 NP2 | 17 | 13 | 14 | 10 | 10 | 7 | 7 | 18 | 13 | 12 | 13 | 12 | 14 | 12 | 7 | 12 | 9 | 12 | 16 | 13 | 0 | 13 | 15 | 1 | 18 | 18 |
| M 118 HUOQ | 14 | 10 | 10 | 8 | 10 | 5 | 4 | 13 | 9 | 12 | 10 | 3 | 12 | 9 | 6 | 12 | 3 | 7 | 11 | 9 | 0 | 9 | 9 | 4 | 14 | 14 |
| M 118 QS | 27 | 22 | 11 | 22 | 19 | 7 | 14 | 27 | 17 | 17 | 18 | 15 | 25 | 25 | 20 | 19 | 3 | 17 | 24 | 25 | 15 | 20 | 12 | 3 | 25 | 27 |
| M118 SAYR | 20 | 20 | 6 | 15 | 12 | 3 | 4 | 19 | 17 | 12 | 17 | 13 | 20 | 16 | 17 | 13 | 6 | 9 | 14 | 15 | 12 | 13 | 10 | 7 | 16 | 20 |
| TOTALS | 310 | 254 | 140 | 214 | 231 | 127 | 117 | 296 | 274 | 210 | 257 | 170 | 290 | 226 | 170 | 196 | 110 | 176 | 268 | 230 | 178 | 203 | 201 | 104 | 285 | 339 |

## SP 2014 Math 118 - Score Distribution chart

| Section | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |  |  | 19 | 20 | 21 | 22 | 23 | 24 |  | Totals |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M 118 AC | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 5 | 2 | 2 | 2 | 4 | 1 | 0 | 0 | 1 | 0 | 28 |
| M 118 AC2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 5 | 5 | 6 | 5 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 31 |
| M 118 BD | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 4 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 23 |
| M 118 BFYR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 0 | 2 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| M 118 CE | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 1 | 3 | 4 | 3 | 3 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 27 |
| M 118 IBK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 9 |
| M 118 EG | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 4 | 0 | 1 | 0 | 0 | 22 |
| M 118 EG2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 1 | 1 | 3 | 6 | 1 | 3 | 4 | 1 | 3 | 5 | 1 | 32 |
| M 118 FHYR | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 3 | 2 | 1 | 1 | 3 | 0 | 4 | 1 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 23 |
| M 118 IK |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M 118 MO | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 2 | 2 | 2 | 3 | 4 | 3 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 24 |
| M 118 NP | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 1 | 4 | 0 | 6 | 2 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 21 |
| M 118 NP2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 4 | 1 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 18 |
| M 118 HUOQ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 1 | 0 | 2 | 2 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 14 |
| M 118 QS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 0 | 6 | 2 | 2 | 1 | 4 | 3 | 3 | 0 | 0 | 0 | 0 | 27 |
| M118 SAYR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 1 | 0 | 1 | 0 | 0 | 21 |
| TOTALS | 0 | 0 | 0 | 0 | 1 | 5 | 5 | 9 | 7 | 12 | 14 | 17 | 23 | 24 | 34 | 35 |  |  | 25 | 22 | 17 | 4 | 9 | 7 | 1 | 333 |

## DEPARTMENTAL ASSESSMENT REPORT

Department: MathematicsAcademic Year: 2014 Semester: FallCourse Assessed: Math 121 Math for Elementary Teachers I
No of Students Assessed: ..... 20
Type of Assessmer A 20-problem final exam.
Course Coordinator: Panagos Papageorgiu
ANALYSIS OF OVERALL RESULTS

1. Expected competency level: ..... 40\%
2. How many students met the competency level? ..... 20
3. What \% of students met the competency level? ..... 100\%
4. No. of students enrolled in the course: ..... 20
5. No. of students completing the final exam: ..... 20
6. \% of students completing the final exam: ..... 100\%
7. No. of students receiving a grade C or better: ..... 20
8. \% of students receiving a grade C or better: ..... 100\%
9. \% of enrolled students passing with C or better: ..... 100\%
10. What objectives were not met by the majority of the students:Objectives 8 ,was not met by the majority of students
11. Was the assessment instrument adequate:
Yes, the assessment instrument was adequate.
12. The attainment of which objectives, if any, were not measured?
Why not? Is it possible to make the instrument such that tomeasure all objectives?
All objectives were measured.
13. Comments - Recommendations:

Objective \# 1 Problem-solving steps and strategies to form conjectures.
Assessed by problem \#1.
Number of correct answers: 12
\% of correct answers: 60\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 2 Set definitions, notations, relationships, perform operations on sets.
Assessed by problem \# 2.
Number of correct answers: 13
\% of correct answers: 65\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 3 Define a function, an equation, a function machine, ordered pairs, graph.
Assessed by problem \# 3.
Number of correct answers: 14
\% of correct answers: 70\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 4 Use logic in math thinking and problem solving.
Assessed by problem \# 4.
Number of correct answers: 16
\% of correct answers: 80\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 5 Know properties of numeration systems, give basic structure.
Assessed by problem \# 5.
Number of correct answers: 12
\% of correct answers: 60\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 6 Perform operations on whole numbers.
Assessed by problem \# 6.
Number of correct answers:
14
\% of correct answers: 70\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 7 Perform operations on integers.
Assessed by problem \# 7.
Number of correct answers: 10
\% of correct answers:
50\%
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 8 Use divisibility tests.
Assessed by problem \# 8.
Number of correct answers: 12
\% of correct answers:
60\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 9 Determine prime composite numbers and number of divisors.
Assessed by problem \# 9.
Number of correct answers: 13
\% of correct answers: 65\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 10 Determine greatest divisor and least multiple for more natural numbers.
Assessed by problem \# 10.
Number of correct answers: 6
\% of correct answers:
$30 \%$
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 11 Solve problems using clocks and modular arithmetic.
Assessed by problem \# 11.
Number of correct answers: 10
\% of correct answers:
50\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 12 Represent rational numbers and know the properties.
Assessed by problem \# 12.
Number of correct answers: 18
$\%$ of correct answers: $90 \%$
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 13. Know and use the properties of exponents.
Assessed by problem \# 13.
Number of correct answers: 12
\% of correct answers:
60\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 14 Perform operations on decimals.
Assessed by problem \# 14.
Number of correct answers: 17
\% of correct answers: 85\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 15 Know properties and perform operations on real numbers.
Assessed by problem \# 15.
Number of correct answers: 15
\% of correct answers: 75\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 16 Algebraic skills writing and solving equations and inequalities in word problems Assessed by problem \# 16.
Number of correct answers: 16
\% of correct answers: 80\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 17 Formulate word problems as mathematical problems.
Assessed by problem \# 17.
Number of correct answers: 13
\% of correct answers: 65\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 18 Use properties of decimals to solve problems.
Assessed by problem \# 18.
Number of correct answers: 13
\% of correct answers: 65\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 19 Use properties of ratios proportional to solve problems.
Assessed by problem \# 19.
Number of correct answers: 9
\% of correct answers: 45\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 20 Define and determine percents.
Assessed by problem \# 20.
Number of correct answers: 11
\% of correct answers: 55\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Math 121 Item analysis chart SP 2014

## Table I

Problems Frequency

| 1 | 12 |
| :---: | :---: |
| 2 | 13 |
| 3 | 14 |
| 4 | 16 |
| 5 | 12 |
| 6 | 14 |
| 7 | 10 |
| 8 | 12 |
| 9 | 13 |
| 10 | 6 |
| 11 | 10 |
| 12 | 18 |
| 13 | 12 |
| 14 | 17 |
| 15 | 15 |
| 16 | 16 |
| 17 | 13 |
| 18 | 13 |
| 19 | 9 |
| 20 | 11 |



The above table indicates the number of correct answers for each problem of the assessment instrument.



| Section | A | B | C | D | F | ADW | WTH | Totals |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M 121CE | 9 | 8 | 3 | 0 | 0 | 0 | 0 | 20 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| TOTALS | 9 | 8 | 3 | 0 | 0 | 0 | 0 | 20 |


| M 121CE | 12 | 13 | 14 | 16 | 12 | 14 | 10 | 12 | 13 | 6 | 10 | 18 | 12 | 17 | 15 | 16 | 13 | 13 | 9 | 11 | 18 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| TOTALS | 12 | 13 | 14 | 16 | 12 | 14 | 10 | 12 | 13 | 6 | 10 | 18 | 12 | 17 | 15 | 16 | 13 | 13 | 9 | 11 | 18 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## SP 2014 Math 121 - Score Distribution

| Section | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| M 121CE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 3 | 2 | 1 | 1 | 4 | 3 | 1 | 0 | 0 |
| 20 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TOTALS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 3 | 2 | 1 | 1 | 4 | 3 | 1 | 0 | 0 |
| 20 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Department: MathematicsAcademic Year: 20134 Semester: Fall
Course Assessed: Math 122 Mathematics for Elementary Teachers IINo of Students Assessed:9
Type of Assessment: A 20-problems Test
Course Coordinator Panagos Papageorgiu
ANALYSIS OF OVERALL RESULTS

1. Expected competency level: ..... 40\%
2. How many students met the competency level? ..... 8
3. What \% of students met the competency level? ..... 89\%
4. No. of students enrolled in the course: ..... 9
5. No. of students completing the final exam: ..... 9
6. \% of students completing the final exam: ..... 100\%
7. No. of students receiving a grade C or better: ..... 9
8. \% of students receiving a grade C or better: ..... 100\%
9. \% of enrolled students passing with C or better: ..... 100\%
10. What objectives were not met by the majority of the students:Objectives 3 and 18 were not met
11. Was the assessment instrument adequate:
Yes, the assessment instrument was adequate.
12. The attainment of which objectives, if any, were not measured?
Why not? Is it possible to make the instrument such that tomeasure all objectives?
All objectives were measured.
13. Comments - Recommendations:

Objective \# 1 Determine empirical and theoretical probability of an event.
Assessed by problem \#1.
Number of correct answers: 6
$\%$ of correct answers: 67\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 2 Determine odds and expected value of an event.
Assessed by problem \# 2.
Number of correct answers: 5
\% of correct answers: 56\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 3 Methods of counting to determine possible outcomes for situations.
Assessed by problem \# 3.
Number of correct answers: 6
\% of correct answers: 67\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 4 Interpret and present data in plots, graphs, and tables.
Assessed by problem \# 4.
Number of correct answers:
\% of correct answers: 33\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 5 Find and interpret measures of central tendency
Assessed by problem \# 5.
Number of correct answers: 7
\% of correct answers: 78\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 6 Find and interpret measures of dispersion.
Assessed by problem \# 6.
Number of correct answers: 4
\% of correct answers: 44\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 7 Know basic geometric notions for points, lines, and planes.
Assessed by problem \# 7.
Number of correct answers: 9
\% of correct answers:
100\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 8 Know basic geometric notions for plane figures.
Assessed by problem \# 8.
Number of correct answers: 8
\% of correct answers: 89\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 9 Determine linear measure and distance in English and Metric system.
Assessed by problem \# 9.
Number of correct answers: 9
\% of correct answers:
100\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 10 Know and use theorems involving angles.
Assessed by problem \# 10.
Number of correct answers:
\% of correct answers:
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 11 Know and use concepts of three-dimensional figures. page 4
Assessed by problem \# 11.
Number of correct answers: 9
\% of correct answers: 100\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 12 Demonstrate the concepts of similarity and congruence through construction.
Assessed by problem \# 12.
Number of correct answers: 8
\% of correct answers: 89\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 13. Know and use congruence properties.
Assessed by problem \# 13.
Number of correct answers: 7
\% of correct answers:
78\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 14 Answer questions involving similar triangles, figures, and coordinates.
Assessed by problem \# 14.
Number of correct answers:
9
\% of correct answers:
100\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 15 Determine area of polygons and circles in the English and Metric system.
Assessed by problem \# 15.
Number of correct answers:
\% of correct answers:
6
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 16 Know and use the Pythagorean Theorem and distance formula.
Assessed by problem \# 16.
Number of correct answers: 5
\% of correct answers: $56 \%$
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 17 Determine the surface area and volume of three-dimensional figures in the English and metric system.
Assessed by problem \# 17.
Number of correct answers: 8
\% of correct answers: 89\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 18 Perform and determine motions in the plane that are isometrics and/or size transformations.
Assessed by problem \# 18.
Number of correct answers: 1
\% of correct answers: 11\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 19 Perform and determine line, rotational, point, and or plane symmetries.
Assessed by problem \# 19.
Number of correct answers: 0
\% of correct answers: 0\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 20 Use the Cartesian coordinate system to study geometry using algebra and interpret algebraic phenomena geometrically.
Assessed by problem \# 20.
Number of correct answers: 0
\% of correct answers: 0\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Math 122 Item analysis chart SP 2014
Table I


The above table indicates the number of correct answers for each problem of the assessment instrument.

SP 2014 Math 122 Score Distribution chart Table II


 M 122 EG TOTALS $\begin{array}{llllllllll}6 & 5 & 6 & 3 & 7 & 4 & 9 & 8 & 9 & 5\end{array}$ 5 8100

## SP 2014 Math 122 - Score Distribution

$\begin{array}{llllllllllllllllllllllllll}\text { Section } & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12 & 13 & 14 & 15 & 16 & 17 & 18 & 19 & 20 & 21 & 22 & 23 & 24 & 25\end{array}$ M 122EG TOTALS
$\begin{array}{lllllllll}0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0\end{array}$


0 $\square$ $0 \quad 0$

## DEPARTMENTAL ASSESSMENT REPORT

Department: Mathematics
Academic Year: 2014 Semester: FallCourse Assessed: Math 125 Introductory statisticsNo of Students Assessed:186
Type of Assessment: A 20-problems Test
Course Coordinator Jose Hernandez
ANALYSIS OF OVERALL RESULTS

1. Expected competency level: 40\%
2. How many students met the competency level? ..... 163
3. What \% of students met the competency level? ..... 88\%
4. No. of students enrolled in the course: ..... 235
5. No. of students completing the final exam: ..... 163
6. \% of students completing the final exam: ..... 88\%
7. No. of students receiving a grade C or better: ..... 151
8. \% of students receiving a grade C or better: ..... 81\%
9. \% of enrolled students passing with C or better: ..... 64\%10. What objectives were not met by the majority of the students:Objectives $11,13,15$ and 18 were not met11. Was the assessment instrument adequate:Yes, the assessment instrument was adequate.
10. The attainment of which objectives, if any, were not measured?

Why not? Is it possible to make the instrument such that to measure all objectives?
All objectives were measured.
13. Comments - Recommendations:

Objective \# 1 Demonstrate knowledge of statistical terms such as population, sample, or (response) variable, data types, or descriptive and inferential statistics.
Assessed by problem \#1.
Number of correct answers: 88
\% of correct answers: $47 \%$
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 2 Identify sampling techniques.
Assessed by problem \# 2.
Number of correct answers: 94
\% of correct answers: 51\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 3 Construct a frequency distribution from raw data.
Assessed by problem \# 3.
Number of correct answers: 113
$\%$ of correct answers: 61\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 4 Interpret data in graphical form such as a histogram, stem-and-leaf plot or box-and-whisker plot.
Assessed by problem \# 4.
Number of correct answers: 74
\% of correct answers: 40\%
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 5 Describe data by measures of center, variation or position.
Assessed by problem \# 5 .
Number of correct answers: 123
$\%$ of correct answers: 66\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 6 Knowledge of terms related to probability. Experience, outcomes, sample space.
Assessed by problem \# 6.
Number of correct answers: 61
\% of correct answers: 33\%
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 7 Demonstrate proper use of the rules of probability.
Assessed by problem \# 7.
Number of correct answers: 100
\% of correct answers: 54\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 8 Construct a probability distribution for discrete random variables.
Assessed by problem \# 8.
Number of correct answers: 123
$\%$ of correct answers: $66 \%$
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 9 Compute the mean, variance, or standard deviation of a discrete probability distributior Assessed by problem \# 9.
Number of correct answers: 124
\% of correct answers: 67\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 10 Perform a computation for a special discrete probability distribution.
Assessed by problem \# 10.
Number of correct answers:
80
\% of correct answers:
$43 \%$
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 11 Demonstrate knowledge of the properties for a normal or standard normal distribution.
Assessed by problem \# 11.
Number of correct answers: 112
$\%$ of correct answers: $60 \%$
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 12 Compute an area under the normal curve.
Assessed by problem \# 12.
Number of correct answers: 99
\% of correct answers: 53\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 13. Solve an application problem involving the normal distribution.
Assessed by problem \# 13.
Number of correct answers:
80
\% of correct answers:
43\%
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 14 Demonstrate knowledge of the Central Limit Theorem.
Assessed by problem \# 14.
Number of correct answers: 75
\% of correct answers: 40\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 15 Solve an application problem involving the Central Limit Theorem.
Assessed by problem \# 15.
Number of correct answers:
\% of correct answers:
95
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 16 Demonstrate knowledge of terms related to interval estimation.
Assessed by problem \# 16.
Number of correct answers: 108
\% of correct answers: 58\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 17 Compute a confidence interval or sample size needed for the population mean or population proportion.
Assessed by problem \# 17.
Number of correct answers: 84
\% of correct answers: 45\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 18 Interpret a confidence interval for the population mean or proportion.
Assessed by problem \# 18.
Number of correct answers: 107
\% of correct answers: 58\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 19 Demonstrate knowledge of terms related to hypothesis testing.
Assessed by problem \# 19.
Number of correct answers: 93
\% of correct answers: 50\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 20 Perform or state a hypothesis test for the population mean or proportion Assessed by problem \# 20.
Number of correct answers:
\% of correct answers:
$28 \%$
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 21 Perform or state a hypothesis test for the population mean or proportion Assessed by problem \# 21
Number of correct answers: 120
$\%$ of correct answers: 65\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Math 125 Item analysis chart SP 2014
Table I


The above table indicates the number of correct answers for each problem of the assessment instrument.


| SP 2014 | Math $\mathbf{1 2 5}$ Grade Distribution chsrt |
| :---: | :---: |
| Table III |  |
| Grade | Frequency |
| A | 67 |
| B | 54 |
| C | 30 |
| D | 19 |
| F | 16 |
| ADW | 9 |
| WTH | 40 |
| TOTALS | 235 |



| Section | A | B | C | D | F | ADW | A -W | Totals |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M 125 AC | 4 | 5 | 7 | 6 | 6 | 4 | 10 | 42 |
| M 125 BD | 13 | 19 | 7 | 2 | 2 | 0 | 1 | 44 |
| M 125 EG | 28 | 0 | 0 | 0 | 1 | 2 | 4 | 35 |
| M 125 3LC | 6 | 4 | 3 | 2 | 1 | 1 | 8 | 25 |
| M 125 GBK | 0 | 10 | 4 | 0 | 1 | 0 | 2 | 17 |
| M 125 JL |  |  |  |  |  |  |  |  |
| M 125 NP | 9 | 8 | 4 | 1 | 4 | 1 | 9 | 36 |
| M 125RT | 7 | 8 | 5 | 8 | 1 | 1 | 6 | 36 |
| TOTALS | 67 | 54 | 30 | 19 | 16 | 9 | 40 | 235 |

## SP 2014 Math 125 - Item Analysis

Section

| \# 1 |  |  | 4 | \# 5 | \# 6 | \# 7 | \# 8 | \# 9 | \# 10 | \# 11 | \# 12 | \# 13 | \#14 | \#15 | \#16 | \# 17 | \# 18 | \# 19 | \# 20 | \#21 | Class Size |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 17 | 22 | 24 | 10 | 15 | 16 | 17 | 23 | 23 | 24 | 21 | 16 | 7 | 11 | 14 | 15 | 14 | 20 | 11 | 15 | 16 | 26 |
| 30 | 26 | 31 | 22 | 37 | 5 | 24 | 33 | 33 | 8 | 30 | 22 | 34 | 15 | 30 | 19 | 31 | 30 | 26 | 9 | 39 | 41 |
| 4 | 14 | 12 | 9 | 19 | 9 | 13 | 18 | 16 | 16 | 11 | 15 | 14 | 10 | 8 | 19 | 12 | 16 | 18 | 10 | 16 | 26 |
| 7 | 3 | 10 | 5 | 7 | 5 | 11 | 6 | 11 | 6 | 11 | 8 | 7 | 7 | 6 | 6 | 6 | 4 | 4 | 5 | 13 | 14 |
| 2 | 4 | 5 | 4 | 10 | 2 | 9 | 10 | 7 | 3 | 9 | 8 | 5 | 8 | 7 | 13 | 3 | 9 | 7 | 3 | 13 | 14 |
| 6 | 10 | 14 | 3 | 18 | 8 | 12 | 12 | 16 | 7 | 12 | 12 | 6 | 8 | 12 | 14 | 5 | 11 | 12 | 0 | 8 | 20 |
| 22 | 15 | 17 | 21 | 17 | 16 | 14 | 21 | 18 | 16 | 18 | 18 | 7 | 16 | 18 | 22 | 13 | 17 | 15 | 10 | 15 | 29 |
| 88 | 94 | 113 | 74 | 123 | 61 | 100 | 123 | 124 | 80 | 112 | 99 | 80 | 75 | 95 | 108 | 84 | 107 | 93 | 52 | 120 | 170 |

## SP 2014 Math 125 - Score Distribution

| Section | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | Totals |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| M 125 AC | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 3 | 3 | 4 | 4 | 0 | 2 | 2 | 1 | 3 | 0 | 0 | 26 |
| M 125 BD | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 | 3 | 1 | 9 | 6 | 5 | 2 | 1 | 3 | 2 | 0 | 0 | 41 |
| M 125 EG | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 3 | 4 | 3 | 2 | 1 | 3 | 1 | 1 | 2 | 0 | 0 | 0 | 1 | 26 |
| M 125 3LC | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 1 | 1 | 4 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 15 |
| M 125 GBK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 8 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| M 125 JL |  | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 3 | 2 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 12 |
| M 125 NP | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 2 | 1 | 4 | 2 | 0 | 3 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 23 |
| M 125RT | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 5 | 3 | 1 | 2 | 2 | 3 | 0 | 4 | 0 | 4 | 1 | 0 | 1 | 0 | 29 |
| TOTALS | 0 | 0 | 0 | 1 | 5 | 6 | 10 | 10 | 15 | 25 | 17 | 13 | 23 | 16 | 12 | 8 | 12 | 5 | 6 | 1 | 1 | 186 |

## DEPARTMENTAL ASSESSMENT REPORT

| Department: | Mathematics |  |
| :--- | :--- | :--- |
| Academic Year: | 2014 | Semester: Fall |
| Course Assessed: Math 140 | College Mathematics, Concepts in Algebra |  |
| No of Students Assessed: | 101 |  |

Type of Assessmer A 25-problem final exam.
Course Coordinator

## ANALYSIS OF OVERALL RESULTS

1. Expected competency level: ..... 40\%
2. How many students met the competency level? ..... 94
3. What \% of students met the competency level? ..... 93\%
4. No. of students enrolled in the course: ..... 186
5. No. of students completing the final exam: ..... 101
6. \% of students completing the final exam: ..... 54\%
7. No. of students receiving a grade C or better: ..... 89
8. \% of students receiving a grade C or better: ..... 88\%
9. \% of enrolled students passing with C or better: ..... 48\%
10. What objectives were not met by the majority of the students:Objectives $11,17,19$, and 20 were not met by the majority of the students.11. Was the assessment instrument adequate:Yes, the assessment instrument was adequate.
11. The attainment of which objectives, if any, were not measured?Why not? Is it possible to make the instrument such that tomeasure all objectives?
All objectives were measured.
12. Comments - Recommendations:

Objective \# 1 Solving problems involving factoring polynomials or factoring rational expressions Assessed by problem \#1.
Number of correct answers: 47
\% of correct answers: 47\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 2 Performing operations with rational expressions
Assessed by problem \# 2.
Number of correct answers: 51
\% of correct answers: 50\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 3 Solving problems involving complex fraction.
Assessed by problem \# 3.
Number of correct answers: 80
\% of correct answers: 79\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 4 Solving rational equations
Assessed by problem \# 4.
Number of correct answers: 62
\% of correct answers: 61\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 5 Computing problems using the rules of (rational) exponents
Assessed by problem \# 5.
Number of correct answers: 72
\% of correct answers: $71 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 6 Performing operations with radical terms
Assessed by problem \# 6.
Number of correct answers: 70
\% of correct answers: 69\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 7 Solving radical equations
Assessed by problem \# 7.
Number of correct answers: 63
\% of correct answers: 62\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 8 Solving application problems involving first degree and literal equations Assessed by problem \# 8.
Number of correct answers: 75
\% of correct answers: 74\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 9 Solving problems involving imaginary or complex numbers
Assessed by problem \# 9.
Number of correct answers: 61
\% of correct answers: 60\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 10 Solving quadratic equations using factoring, completing the square or the quadratic formula
Assessed by problem \# 10.
Number of correct answers: 45
\% of correct answers: 45\%
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 11 Solving linear inequalities
Assessed by problem \# 11.
Number of correct answers: 77
\% of correct answers: 76\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 12 Solving absolute value equations or inequalities page 4
Assessed by problem \# 12.
Number of correct answers: 64
\% of correct answers: 63\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 13. Solving rational inequalities
Assessed by problem \# 13.
Number of correct answers: 48
\% of correct answers: 48\%
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 14 Solving problems of straight line involving slope, intercepts or parallel and perpendicular lines
Assessed by problem \# 14.
Number of correct answers: 45
\% of correct answers: 45\%
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 15 Solving systems of linear equations
Assessed by problem \# 15.
Number of correct answers:
81
\% of correct answers:
80\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 16 Solving problems involving matrices
Assessed by problem \# 16.
Number of correct answers: 83
\% of correct answers: 82\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 17 Solving problems using the remainder theorem, factor theorem
Assessed by problem \# 17.
Number of correct answers: 55
\% of correct answers: 54\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 18 Solving problems using the theory of equations
Assessed by problem \# 18.
Number of correct answers: 64
\% of correct answers: 63\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:
*

Objective \# 19 Solving problems involving exponential and logarithmic functions Assessed by problem \# 19.
Number of correct answers: 37
\% of correct answers: 37\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 20 Solving logarithmic equations
Assessed by problem \# 20.
Number of correct answers: 55
\% of correct answers: 54\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 21 Solving exponential equations
Assessed by problem \# 21.
Number of correct answers: 41
\% of correct answers: $41 \%$
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 22 Performing basic operations with functions
Assessed by problem \# 22
Number of correct answers:
71
\% of correct answers:
70\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 23 Computing the inverse functions
Assessed by problem \# 23.
Number of correct answers:
59
\% of correct answers: 58\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 24 Solving systems of non-linear equations
Assessed by problem \# 24.
Number of correct answers: 88
\% of correct answers: 87\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 25 Solving problems involving parabolas, circles, ellipses, hyperbolas Assessed by problem \# 25.
Number of correct answers: 62
\% of correct answers:
61\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Math 140 Item analysis chart SP 2014

## Table



The above table indicates the number of correct answers for each problem of the assessment instrument.

## SP 2014 Math 140 Score Distribution chart

## Table II

Problem Score

| 1 | 0 |
| :---: | :---: |
| 2 | 0 |
| 3 | 0 |
| 4 | 0 |
| 5 | 0 |
| 6 | 0 |
| 7 | 2 |
| 8 | 0 |
| 9 | 5 |
| 10 | 6 |
| 11 | 9 |
| 12 | 4 |
| 13 | 12 |
| 14 | 7 |
| 15 | 7 |
| 16 | 5 |
| 17 | 17 |
| 18 | 9 |
| 19 | 8 |
| 20 | 0 |
| 21 | 5 |
| 22 | 2 |
| 23 | 1 |
| 24 | 1 |
| 25 | 1 |
| Totals | 101 |



|  | Table III | Section | A | B | C | D | F | ADW | WTH | Totals |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grade | Frequency | M 140 AC | 11 | 7 | 1 | 0 | 0 | 4 | 12 | 35 |
| A | 30 | M 140 BDYR | 2 | 0 | 2 | 2 | 8 | 0 | 10 | 24 |
| B | 33 | M 140 EG | 7 | 9 | 4 | 3 | 5 | 2 | 6 | 36 |
| C | 26 | M 140 HJ | 1 | 5 | 9 | 0 | 4 | 0 | 8 | 27 |
| D | 9 | M 140 JL | 4 | 2 | 1 | 1 | 1 | 8 | 1 | 18 |
| F | 22 | M 140 MO | 1 | 3 | 1 | 3 | 4 | 5 | 7 | 24 |
| ADW | 19 | M 140SA | 4 | 7 | 8 | 0 | 0 | 0 | 3 | 22 |
| WTH | 47 |  |  |  |  |  |  |  |  |  |
| TOTALS | 186 |  |  |  |  |  |  |  |  |  |
|  |  | TOTALS | 30 | 33 | 26 | 9 | 22 | 19 | 47 | 186 |



## SP 2014 Math 140 - Item Analysis

Section \#1 \#2 \# 3 \#4 \# 5 \# 6 \# 7 \# 8 \# 9 \# 10 \#11 \#12 \#13 \#14 \#15 \#16 \#17 \#18 \#19 \# 20 \# 21 \# 22 \# 23 \# 24 \#25 Class Size

| M 140 AC | 1 | 1 | 11 | 8 | 13 | 8 | 11 | 11 | 6 | 4 | 11 | 8 | 3 | 8 | 14 | 16 | 8 | 7 | 1 | 4 | 3 | 13 | 6 | 16 | 8 | 17 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| M 140 BDYR | 5 | 6 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | 5 | 7 | 5 | 5 | 5 | 7 | 7 | 5 | 6 | 5 | 5 | 6 | 6 | 7 | 6 | 6 | 7 |
| M 140 EG | 3 | 2 | 15 | 18 | 13 | 13 | 14 | 19 | 15 | 1 | 15 | 13 | 5 | 10 | 15 | 18 | 10 | 19 | 2 | 19 | 7 | 19 | 14 | 20 | 15 | 22 |
| M 140 HJ | 10 | 12 | 11 | 5 | 14 | 14 | 11 | 12 | 8 | 12 | 10 | 13 | 8 | 4 | 14 | 11 | 9 | 6 | 9 | 10 | 4 | 10 | 9 | 14 | 11 | 16 |
| M 140 JL | 7 | 9 | 9 | 7 | 5 | 8 | 7 | 7 | 8 | 7 | 7 | 8 | 8 | 5 | 7 | 6 | 6 | 7 | 6 | 7 | 5 | 5 | 5 | 9 | 4 | 9 |
| M 140 MO | 2 | 2 | 9 | 7 | 8 | 8 | 7 | 7 | 9 | 2 | 9 | 5 | 3 | 4 | 7 | 9 | 9 | 7 | 2 | 5 | 6 | 5 | 5 | 8 | 6 | 10 |
| M 140 SA | 19 | 19 | 19 | 11 | 13 | 14 | 7 | 13 | 9 | 14 | 18 | 12 | 16 | 9 | 17 | 16 | 8 | 12 | 12 | 5 | 10 | 13 | 13 | 15 | 12 | 19 |


| TOTALS | 47 | 51 | 80 | 62 | 72 | 70 | 63 | 75 | 61 | 45 | 77 | 64 | 48 | 45 | 81 | 83 | 55 | 64 | 37 | 55 | 41 | 71 | 59 | 88 | 62 | 100 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## SP 2014 Math 140 - Score Distribution

| Section | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | Totals |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M 140 AC | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 3 | 2 | 5 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| M 140 BDYR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| M 140 EG | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| M 140 HJ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 4 | 0 | 2 | 2 | 3 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 16 |
| M 140 JL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 9 |
| M 140 MO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 2 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| M 140 SA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 1 | 2 | 0 | 1 | 0 | 5 | 0 | 2 | 1 | 1 | 1 | 0 | 19 |
|  | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 5 | 6 | 9 | 4 | 12 | 7 | 7 | 5 | 17 | 9 | 8 | 0 | 5 | 2 | 1 | 1 | 1 | 101 |

TOTALS

| Academic Year: $\quad 2014$ | Semester: | Fall |
| :--- | :---: | :---: |
| Course Assessed: Math $\mathbf{1 4 3}$ | Pre-Calculus |  |
| No of Students Assessed: | 209 |  |
| Type of Assessment: A 24-problems Test |  |  |

Course Coordinator Hellen Colman
ANALYSIS OF OVERALL RESULTS

1. Expected competency level: 40\%
2. How many students met the competency level? 209
3. What \% of students met the competency level? $100 \%$
4. No. of students enrolled in the course: 241
5. No. of students completing the final exam: 209
6. \% of students completing the final exam: 87\%
7. No. of students receiving a grade C or better: 140
8. \% of students receiving a grade C or better: $67 \%$
9. \% of enrolled students passing with C or better: $58 \%$
10. What objectives were not met by the majority of the students:

All objectives were met by the majority of the students.
11. Was the assessment instrument adequate:

Yes, the assessment instrument was adequate.
12. The attainment of which objectives, if any, were not measured?

Why not? Is it possible to make the instrument such that to measure all objectives?
All objectives were measured.
13. Comments - Recommendations:

Objective \# 1 Polynomials - Factoring.

Assessed by problem \#1.
Number of correct answers: 192
\% of correct answers: 92\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 2 Rational Exponents.
Assessed by problem \# 2.
Number of correct answers: 117
\% of correct answers: 56\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 3 Complex Numbers.
Assessed by problem \# 3.
Number of correct answers: 166
\% of correct answers: 79\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 4 Quadratic Equations.
Assessed by problem \# 4.
Number of correct answers: 192
\% of correct answers: 92\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 5 Inequalities- linear, absolute, value, quadratic, rational.
Assessed by problem \# 5.
Number of correct answers: 155
\% of correct answers: $74 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

## Objective \# 6 Linear Functions.

Assessed by problem \# 6.
Number of correct answers: 148
\% of correct answers: $71 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 7 Circle, Quadratic function.
Assessed by problem \# 7.
Number of correct answers: 174
\% of correct answers: 83\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 8 Conic Sections.
Assessed by problem \# 8.
Number of correct answers: 147
\% of correct answers: 70\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 9 Remainder theorem, Factor theorem, Synthetic division.
Assessed by problem \# 9.
Number of correct answers: 144
\% of correct answers: 69\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 10 Fundamental theorem, Conjugate pair theorem Assessed by problem \# 10.
Number of correct answers: 174
\% of correct answers: 83\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:
Objective \# 11 Descartes' Rule, Rational roots theorem, Upper/lower bound theorem.
Assessed by problem \# 11. Number of correct answers:134
\% of correct answers: ..... 64\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:
Objective \# 12 Exponential/Logarithmic functions Graphs, Equations, and applications. Assessed by problem \# 12.
Number of correct answers: 129
\% of correct answers: 62\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:
Objective \# 13. Function - Composition, Inverse
Assessed by problem \# 13.
Number of correct answers: 164
\% of correct answers: 78\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 14 Systems of linear and nonlinear equations, matrices, determinants Cramer's Rule.
Assessed by problem \# 14.
Number of correct answers: 156
\% of correct answers: 75\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 15 Systems of non-linear equations.
Assessed by problem \# 15.
Number of correct answers: 124
\% of correct answers: 59\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

## Objective \# 16 Sequence - explicit/recursive definition

Assessed by problem \# 16.
Number of correct answers: 103
\% of correct answers: 49\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 17 Arithmetic/geometric series.
Assessed by problem \# 17.
Number of correct answers: 100
\% of correct answers: 48\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 18 Permutations and combinations.
Assessed by problem \# 18.
Number of correct answers: 174
\% of correct answers: 83\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 19 Binomial theorem
Assessed by problem \# 19.
Number of correct answers: 176
\% of correct answers: 84\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 20 Trigonometric functions - graphs, Pythagorean identities Assessed by problem \# 20.
Number of correct answers: 192
\% of correct answers: 92\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

## Objective \# 21 Associated angles

Assessed by problem \# 21.
Number of correct answers: 184
\% of correct answers: 88\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 22 Sum and difference formulas, double and half angle identities.
Assessed by problem \# 22
Number of correct answers: 187
\% of correct answers: 89\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 23 Trigonometric equations and inverse trigonometric function.
Assessed by problem \# 23.
Number of correct answers: 152
\% of correct answers: 73\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 24 Laws of sines, cosines and area of a triangle.
Assessed by problem \# 24.
Number of correct answers: 126
\% of correct answers: 60\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 25
Assessed by problem \# 25
Number of correct answers: 152
\% of correct answers: $73 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Math 143 Item analysis chart SP 2014
Table I


The above table indicates the number of correct answers for each problem of the assessment instrument.

SP 2014 Math 143 Score Distribution chart
Table II

| Problem | Score |
| :---: | ---: |
| 1 | 0 |
| 2 | 0 |
| 3 | 0 |
| 4 | 0 |
| 5 | 0 |
| 6 | 1 |
| 7 | 0 |
| 8 | 0 |
| 9 | 1 |
| 10 | 2 |
| 11 | 4 |
| 12 | 3 |
| 13 | 5 |
| 14 | 5 |
| 15 | 9 |
| 16 | 17 |
| 17 | 20 |
| 18 | 19 |
| 19 | 22 |
| 20 | 23 |
| 21 | 20 |
| 22 | 22 |
| 23 | 14 |
| 24 | 15 |
| 25 | 7 |
| Totals | 209 |




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## SP 2014 Math 143 - Item Analysis

Section

| 143 | 2 | 11 | 21 | 27 | 21 | 18 | 13 |  | 18 | 24 | 17 | 19 | 25 | 20 | 1 | 15 | 17 | 2 | 26 | 27 | 23 | 25 | 1 | 16 | 20 | 28 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M 143 BD | 27 | 9 | 24 | 24 | 27 | 19 | 26 | 26 | 17 | 20 | 21 | 17 | 22 | 19 | 11 | 15 | 18 | 24 | 24 | 27 | 23 | 24 | 17 | 14 | 18 | 2 |
| 43 FH | 31 | 16 | 2 | 31 | 1 | 20 | 28 | 2 | 21 | 23 | 16 | 16 | 2 | 18 | 2 | 13 | 9 | 26 | 30 | 29 | 30 | 31 | 9 | 18 | 4 | 32 |
| M 143 IK | 31 | 22 | 29 | 30 | 26 | 23 | 29 | 24 | 26 | 28 | 18 | 24 | 24 | 25 | 23 | 23 | 20 | 29 | 27 | 28 | 30 | 30 | 23 | 25 | 29 | 31 |
| M143 JL | 14 | 11 | 15 | 16 | 16 | 14 | 16 | 13 | 11 | 16 | 11 | 11 | 8 | 13 | 14 | 14 | 13 | 16 | 14 | 16 | 16 | 14 | 10 | 11 | 13 | 17 |
| M 143 MO | 35 | 23 | 30 | 35 | 35 | 32 | 32 | 32 | 28 | 34 | 23 | 19 | 31 | 34 | 16 | 12 | 19 | 28 | 25 | 33 | 29 | 34 | 30 | 18 | 22 | 37 |
| M 143 NP | 31 | 25 | 27 | 29 | 18 | 22 | 30 | 2 | 23 | 29 | 28 | 23 | 32 | 27 | 26 | 11 | 4 | 29 | 30 | 32 | 33 | 29 | 26 | 24 | 26 | 33 |
| M 143 LNP | 18 | 3 | 11 | 15 | 12 | 11 | 16 | 10 | 10 | 12 | 18 | 15 | 15 | 12 | 13 | 9 | 6 | 12 | 14 | 17 | 16 | 14 | 9 | 11 | 10 | 18 |


| TOTALS | 192 | 117 | 166 | 192 | 155 | 148 | 174 | 147 | 144 | 174 | 134 | 129 | 164 | 156 | 124 | 103 | 100 | 174 | 176 | 192 | 184 | 187 | 152 | 126 | 152 | 225 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## SP 2014 Math 143 - Score Distribution

| Section | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |  | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | Totals |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M 143 AC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 2 | 3 | 3 | 3 | 2 | 1 | 2 | 5 | 2 | 1 | 1 | 29 |
| M 143 BD | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 3 | 5 | 4 | 1 | 2 | 2 | 2 | 3 | 1 | 5 | 0 | 31 |
| M 143 FH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 1 | 4 | 6 | 4 | 8 | 1 | 2 | 0 | 1 | 0 | 0 | 32 |
| M 143 IK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 3 | 2 | 3 | 2 | 3 | 4 | 6 | 4 | 31 |
| M143 JL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 3 | 3 | 1 | 4 | 1 | 1 | 16 |
| M 143 MO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 1 | 1 | 3 | 3 | 4 | 6 | 5 | 6 | 1 | 2 | 0 | 37 |
| M 143 NP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 4 | 5 | 3 | 7 | 4 | 4 | 1 | 0 | 1 | 33 |
| M 143 LNP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 3 | 0 | 1 | 1 | 1 | 0 | 18 |
| TOTALS | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 4 | 3 | 5 | 5 | 9 | 17 | 20 | 19 | 22 | 23 | 20 | 22 | 14 | 15 | 7 | 227 |

## DEPARTMENTAL ASSESSMENT REPORT

| Department: | Mathematics |  |
| :--- | :---: | :--- |
| Academic Year: | $\mathbf{2 0 1 4}$ | Semester: Fall |
| Course Assessed: Math $\mathbf{1 4 4}$ | Finite Mathematics |  |
| No of Students Assessed: | 12 |  |
| Type of Assessment: A 20-problems Test |  |  |
|  |  |  |
| Course Coordinator: | Sharda Gudehithlu |  |

## ANALYSIS OF OVERALL RESULTS

1. Expected competency level: ..... 40\%
2. How many students met the competency level? ..... 12
3. What \% of students met the competency level? ..... 100\%
4. No. of students enrolled in the course: ..... 18
5. No. of students completing the final exam: ..... 12
6. \% of students completing the final exam: ..... 67\%
7. No. of students receiving a grade C or better: ..... 12
8. \% of students receiving a grade C or better: ..... 100\%
9. \% of enrolled students passing with C or better: ..... 67\%
10. What objectives were not met by the majority of the students:Objectives 4,16 and 20 were not met by the majority of the students
11. Was the assessment instrument adequate:

Yes, the assessment instrument was adequate.
12. The attainment of which objectives, if any, were not measured? Why not? Is it possible to make the instrument such that to measure all objectives?
All objectives were measured.
13. Comments - Recommendations:

NOTE: 4 students completed the final exam separate and passed. That is what the difference is between 43 completing and 47 receiving $C$ or better grade.

Objective \# 1 Solving or graphing linear equations or inequalities
Assessed by problem \#1.
Number of correct answers: 11
\% of correct answers: 92\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 2 Systems of linear equations in two and three variables.
Assessed by problem \# 2.
Number of correct answers: 10
\% of correct answers: 83\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 3 Operations of matrix algebra or matrix inversion.
Assessed by problem \# 3.
Number of correct answers: 12
\% of correct answers: 100\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 4 Solving systems of equations using matrices.
Assessed by problem \# 4.
Number of correct answers: 10
\% of correct answers:
83\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# $5 \quad$ Obtaining feasible regions for linear mathematics inequalities
Assessed by problem \# 5 .
Number of correct answers:

$$
10
$$

\% of correct answers:
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 6 Setting up linear programming problems graphically
Assessed by problem \# 6.
Number of correct answers: 11
\% of correct answers:
92\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 7 Solving linear programming problems graphically
Assessed by problem \# 7.
Number of correct answers: 6
\% of correct answers: $50 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 8 Linear programming problems using the simplex method Assessed by problem \# 8.
Number of correct answers: 10
\% of correct answers: 83\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 9 Problems involving simple or compound interest.
Assessed by problem \# 9.
Number of correct answers: 8
\% of correct answers: 67\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 10 Problems involving annuities or amortization of loans.
Assessed by problem \# 10.
Number of correct answers:
10
\% of correct answers: 83\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 11 Problems involving sets and set operations.
Assessed by problem \# 11.
Number of correct answers: 10
\% of correct answers: 83\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 12 Use the principles of counting.
Assessed by problem \# 12.
Number of correct answers: 8
\% of correct answers:
67\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 13. Solving problems involving permutations or combinations.
Assessed by problem \# 13.
Number of correct answers:
11
\% of correct answers: 92\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 14 Problems using the basic rules of probability.
Assessed by problem \# 14.
Number of correct answers:
10
\% of correct answers: 83\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 15 Demonstrating knowledge of the terms of probability.
Assessed by problem \# 15.
Number of correct answers: 12
\% of correct answers:
100\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 16 Problems involving the binomial distribution.
Assessed by problem \# 16.
Number of correct answers: 10
\% of correct answers: 83\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 17 Computing problems using a frequency or probability distribution.
Assessed by problem \# 17.
Number of correct answers: 11
\% of correct answers: $92 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 18 Computing the mean or variance, or standard deviation of a probability distribution.
Assessed by problem \# 18.
Number of correct answers: 2
\% of correct answers: 17\%
Did the majority of the students meet this objective: No
Comments - Recommendations:

Objective \# 19 Computing problems involving the normal distribution.
Assessed by problem \# 19.
Number of correct answers: 10
\% of correct answers:
83\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 20 Problem solving involving logic or truth tables.
Assessed by problem \# 20.
Number of correct answers: 8
\% of correct answers: 67\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 21
Assessed by problem \# 21
Number of correct answers: 11
\% of correct answers: 92\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 22
Assessed by problem \# 22
Number of correct answers: 12
\% of correct answers: 100\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 23
Assessed by problem \# 23
Number of correct answers: 7
\% of correct answers: 58\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 24
Assessed by problem \# 24
Number of correct answers: 11
\% of correct answers: 92\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 25
Assessed by problem \# 25
Number of correct answers: 10
\% of correct answers: 83\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Math 144 Item analysis chart SP 2014
Table I


The above table indicates the number of correct answers for each problem of the assessment instrument.



## SP 2014 Math 144 - Item Analysis

$\begin{array}{llllllllllllllllllllllllllllllllllll}\text { Section } & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12 & 13 & 14 & 15 & 16 & 17 & 18 & 19 & 20 & 21 & 22 & 23 & 24 & 25 & \text { Totals }\end{array}$ M 144 GI

## SP 2014 Math 144 - Score Distribution

| Section <br> M 144 GI | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |  |  | 3 |  |  |  | 17 | 18 |  |  | 1 |  |  | 24 |  | tals |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M 144 JL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 0 | 12 |
| M 144 MO |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TOTALS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 0 | 12 |

## DEPARTMENTAL ASSESSMENT REPORT

Academic Year: 2014 Semester: FallCourse Assessed: Math 204 Calculus For Business and Social SciencesNo of Students Assessed: ..... 18
Type of Assessment: A 24-problems Test
Course Coordinator: Vinay Duggal NO DATA SUBMEETED
ANALYSIS OF OVERALL RESULTS

1. Expected competency level: ..... 40\%
2. How many students met the competency level? ..... 18
3. What \% of students met the competency level? ..... 100\%
4. No. of students enrolled in the course: ..... 34
5. No. of students completing the final exam: ..... 18
6. \% of students completing the final exam: ..... 53\%
7. No. of students receiving a grade C or better: ..... 13
8. \% of students receiving a grade C or better: ..... 72\%
9. \% of enrolled students passing with C or better: ..... 38\%
10. What objectives were not met by the majority of the students:All objectives were met by the majority of the students.
11. Was the assessment instrument adequate:Yes, the assessment instrument was adequate.
12. The attainment of which objectives, if any, were not measured?Why not? Is it possible to make the instrument such that tomeasure all objectives?
All objectives were measured.
13. Comments - Recommendations:

Objective \# 1 Functions, their domains and graphs
Assessed by problem \#1.
Number of correct answers: 15
\% of correct answers: 83\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 2 Slopes and linear functions
Assessed by problem \# 2.
Number of correct answers: 17
\% of correct answers: 94\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 3 Quadratic and other types of functions
Assessed by problem \# 3.
Number of correct answers: 14
\% of correct answers: 78\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 4 Limits and continuity
Assessed by problem \# 4.
Number of correct answers: 12
\% of correct answers: 67\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 5 Average rate of change
Assessed by problem \# 5.
Number of correct answers: 9
\% of correct answers:
50\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 6 Instantaneous rate of change
Assessed by problem \# 6.
Number of correct answers: 18
\% of correct answers: 100\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 7 Differentiation using limits
Assessed by problem \# 7.
Number of correct answers: 8
\% of correct answers:
44\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 8 Differentiation techniques
Assessed by problem \# 8.
Number of correct answers: 11
\% of correct answers: 61\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 9 The chain rule
Assessed by problem \# 9.
Number of correct answers: 12
\% of correct answers: 67\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 10 Higher-order derivatives
Assessed by problem \# 10.
Number of correct answers: 15
\% of correct answers: 83\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 11 First and second derivatives and the study of extreme page 4 and inflection points
Assessed by problem \# 11.
Number of correct answers: 7
\% of correct answers: 39\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 12 Graph sketching
Assessed by problem \# 12.
Number of correct answers: 2
\% of correct answers: 11\%
Did the majority of the students meet this objective: NO
Comments - Recommendations:

Objective \# 13. Optimization problems
Assessed by problem \# 13.
Number of correct answers: 18
\% of correct answers: 100\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 14 Implicit differentiation and related rates
Assessed by problem \# 14.
Number of correct answers: 13
\% of correct answers: 72\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 15 Exponential functions and their derivatives
Assessed by problem \# 15.
Number of correct answers: 16
\% of correct answers: 89\%
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 16 Logarithmic functions and their derivatives
Assessed by problem \# 16.
Number of correct answers: 11
\% of correct answers: 61\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 17 The fundamental theorem of calculus; evaluation of definite integrals Assessed by problem \# 17.
Number of correct answers: 14
\% of correct answers: 78\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 18 Areas under curves
Assessed by problem \# 18.
Number of correct answers: 10
\% of correct answers: $56 \%$
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 19 Integration techniques: substitution, integration by parts, tables Assessed by problem \# 19.
Number of correct answers:
9
\% of correct answers:
50\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 20 Improper integrals
Assessed by problem \# 20.
Number of correct answers: 11
\% of correct answers: 61\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 21 Functions of several variables and their derivatives
Assessed by problem \# 21.
Number of correct answers: 2
\% of correct answers: 11\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 22 Extrema of functions of several variables and Lagrange multipliers
Assessed by problem \# 22
Number of correct answers: 6
\% of correct answers: 33\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 23 Relative extrema
Assessed by problem \# 23.
Number of correct answers: 16
\% of correct answers: 89\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 24 Maximum of a function subject to a given constraint
Assessed by problem \# 24.
Number of correct answers:
6
\% of correct answers:
33\%
Did the majority of the students meet this objective:
No
Comments - Recommendations:

Objective \# 25 Maximum of a function subject to a given constraint
Assessed by problem \# 25.
Number of correct answers:
13
\% of correct answers:
72\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Math 204 Item analysis chart SP 2014

## Table I

Problems Frequency

| 1 | 15 |
| :---: | :---: |
| 2 | 17 |
| 3 | 14 |
| 4 | 12 |
| 5 | 9 |
| 6 | 18 |
| 7 | 8 |
| 8 | 11 |
| 9 | 12 |
| 10 | 15 |
| 11 | 7 |
| 12 | 2 |
| 13 | 18 |
| 14 | 13 |
| 15 | 16 |
| 16 | 11 |
| 17 | 14 |
| 18 | 10 |
| 10 | 9 |
| 20 | 11 |
| 21 | 2 |
| 22 | 6 |
| 23 | 16 |
| 24 | 6 |



The above table indicates the number of correct answers for each problem of the assessment instrument.

## SP 2014 Math 204 Score Distribution chart

Table II


| SP 2014 | Math 204 Grade Distribution chart |
| :---: | :---: |
| Table III |  |
| Grade | Frequency |
| A | 4 |
| B | 9 |
| C | 6 |
| D | 2 |
| F | 3 |
| ADW | 1 |
| WTH | 9 |
| TOTALS | 34 |

Grade distribution chart


SP 2014 Math 204 Score distribution
$\begin{array}{llllllllllllllllllllllllll}\text { Section } & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12 & 13 & 14 & 15 & 16 & 17 & 18 & 19 & 20 & 21 & 22 & 23 & 24 & 25\end{array}$
M 204AC 000

Department: Mathematics
Academic Year: 2014 Semester: Fall
Course Assessed: Math 207 Calculus and Analytic Geometry I
No of Students Assessed: ..... 118
Type of Assessment: A 22-problems Test
Course Coordinator: Lidia Dobria
ANALYSIS OF OVERALL RESULTS

1. Expected competency level: ..... 40\%
2. How many students met the competency level? ..... 110
3. What \% of students met the competency level? ..... 93\%
4. No. of students enrolled in the course: ..... 201
5. No. of students completing the final exam: ..... 118
6. \% of students completing the final exam: ..... 59\%
7. No. of students receiving a grade C or better: ..... 123
8. \% of students receiving a grade C or better: ..... 104\%
9. \% of enrolled students passing with C or better: ..... 61\%
10. What Learning Outcomes were not met by the majority of the students:
Only \#18. Antidifferentiation basic rules.11. Was the assessment instrument adequate:Yes, the assessment instrument was adequate.
11. The attainment of which objectives, if any, were not measured?Why not? Is it possible to make the instrument such that tomeasure all objectives?
All objectives were measured.
12. Comments - Recommendations:
Emphasize the basic table of differentiation/antidifferention Rulesusing more examples.
SLO \#19: Spend a little more time explaining the substitution process

Objective \# 1 Evaluation of Limits.
Assessed by problem \#1.
Number of correct answers: 74
$\%$ of correct answers: 63\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 2 Vertical and Horizontal Asymptotes.
Assessed by problem \# 2.
Number of correct answers: 90
\% of correct answers: 76\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 3 Differentiation of Algebraic Functions.
Assessed by problem \# 3.
Number of correct answers: 103
\% of correct answers: 87\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 4 Differentiation of Trigonometric Functions.
Assessed by problem \# 4.
Number of correct answers: 90
$\%$ of correct answers: 76\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# $5 \quad$ Chain Rule.
Assessed by problem \# 5.
Number of correct answers: 93
\% of correct answers: 79\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 6 Implicit Differentiation.
Assessed by problem \# 6.
Number of correct answers: 100
\% of correct answers: 85\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 7 Differentiation of Logarithmic and Exponential Functions.
Assessed by problem \# 7.
Number of correct answers:
90
\% of correct answers: $76 \%$
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 8 Differentiation of Inverse Trigonometric Functions
Assessed by problem \# 8.
Number of correct answers: 89
\% of correct answers: $75 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 9 Successive Differentiation
Assessed by problem \# 9.
Number of correct answers: 81
\% of correct answers: 69\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 10 Rectilinear Motion
Assessed by problem \# 10.
Number of correct answers: 101
\% of correct answers: 86\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 11 Related Rates
Assessed by problem \# 11.
Number of correct answers: 81
\% of correct answers: 69\%
Did the majority of the students meet this objective:

## Yes

Comments - Recommendations:

Objective \# 12 First derivative: Tangent, Increasing/decreasing functions Assessed by problem \# 12.
Number of correct answers: 62
\% of correct answers:
53\%
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 13. Second Derivative
Assessed by problem \# 13.
Number of correct answers: 92
\% of correct answers: 78\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 14 Optimization problems
Assessed by problem \# 14.
Number of correct answers: 80
\% of correct answers: 68\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 15 Logarithmic Differentiation
Assessed by problem \# 15.
Number of correct answers:
\% of correct answers:92

Did the majority of the students meet this objective:

## Yes

Comments - Recommendations:

Objective \# 16 Differentials-Error estimation
Assessed by problem \# 16.
Number of correct answers: 90
$\%$ of correct answers: 76\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 17 L'Hospital's Rule
Assessed by problem \# 17.
Number of correct answers:
77
$\%$ of correct answers: 65\%
Did the majority of the students meet this objective:
MARGINAL
Comments - Recommendations:

Objective \# 18 Antidifferentiation. Basic Rule.
Assessed by problem \# 18.
Number of correct answers: 81
\% of correct answers: 69\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 19 Integration by substitution
Assessed by problem \# 19.
Number of correct answers: 74
\% of correct answers: 63\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 20 Integration of Trigonometric functions
Assessed by problem \# 20.
Number of correct answers: 93
\% of correct answers: 79\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 21 Definite integral. Fundamental theorem of calculus Assessed by problem \# 21.
Number of correct answers: 83
\% of correct answers: 70\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 22 Evaluate indefinite Integral by substitution Assessed by problem \# 22
Number of correct answers: 66
\% of correct answers: $56 \%$
Did the majority of the students meet this objective:
NO
Comments - Recommendations:
Objective \# 23 Evaluate a definite integral
Assessed by problem \# 23
Number of correct answers: 74
\% of correct answers: 63\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 24 Average value of a function.
Assessed by problem \# 24
Number of correct answers: 74
\% of correct answers: 63\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:
Objective \# 25 Evaluate a definite integral by substitution
Assessed by problem \# 25
Number of correct answers: 71
\% of correct answers: 60\%
Did the majority of the students meet this objective:
Comments - Recommendations:

Math 207 - Item analysis chart SP 2014

## Table I

Problems Frequency

| 1 | 74 |
| :---: | :---: |
| 2 | 90 |
| 3 | 103 |
| 4 | 90 |
| 5 | 93 |
| 6 | 100 |
| 7 | 90 |
| 8 | 89 |
| 9 | 81 |
| 10 | 101 |
| 11 | 81 |
| 12 | 62 |
| 13 | 92 |
| 14 | 80 |
| 15 | 92 |
| 16 | 90 |
| 17 | 77 |
| 18 | 81 |
| 10 | 74 |
| 20 | 93 |
| 21 | 83 |
| 22 | 66 |



The above table indicates the number of correct answers for each problem of the assessment instrument.

| Problem | Score |
| :---: | ---: |
| 1 | 0 |
| 2 | 0 |
| 3 | 0 |
| 4 | 1 |
| 5 | 0 |
| 6 | 1 |
| 7 | 3 |
| 8 | 3 |
| 9 | 2 |
| 10 | 3 |
| 11 | 7 |
| 12 | 2 |
| 13 | 2 |
| 14 | 7 |
| 15 | 6 |
| 16 | 5 |
| 17 | 7 |
| 18 | 12 |
| 19 | 6 |
| 20 | 16 |
| 21 | 10 |
| 22 | 4 |
| 23 | 7 |
| 24 | 8 |
| 25 | 6 |
| Totals | 118 |



Table III

| Grade | Frequenc |
| :---: | :---: |
| A | 46 |
| B | 48 |
| C | 29 |
| D | 14 |
| F | 19 |
| ADW | 4 |
| WTH | 41 |
| Totals | 201 |



| Section | A | B | C | D | F | ADW | WTH | Totals |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M 207AC | 8 | 7 | 5 | 3 | 3 | 3 | 12 | 41 |
| M 207BD | 16 | 11 | 5 | 1 | 4 | 0 | 3 | 40 |
| M 207EG | 8 | 11 | 7 | 2 | 5 | 0 | 5 | 38 |
| M 207FH | 10 | 14 | 6 | 2 | 4 | 1 | 5 | 42 |
| M 207 PR | 4 | 5 | 6 | 6 | 3 | 0 | 16 | 40 |


| TOTALS | 46 | 48 | 29 | 14 | 19 | 4 | 41 | 201 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## FA 2014 Math 207 - Item Analysis

| Section | \# 1 | \# 2 | \# 3 | \# 4 | \# 5 | \# 6 | \# 7 | \# 8 | \# 9 | \# 10 | \# 11 | \# 12 | \# 13 | \#14 | \#15 | \#16 | \# 17 | \# 18 | \# 19 | \# 20 | \# 21 | \# 22 | \#23 | \#24 | \#25 | Totals |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M 207AC | 22 | 13 | 23 | 18 | 16 | 22 | 12 | 22 | 13 | 20 | 24 | 15 | 23 | 17 | 20 | 23 | 20 | 11 | 11 | 18 | 16 | 8 | 19 | 15 | 13 | 26 |
| M 207BD | 26 | 26 | 29 | 26 | 25 | 26 | 26 | 23 | 23 | 27 | 26 | 16 | 27 | 16 | 23 | 25 | 22 | 33 | 22 | 26 | 27 | 17 | 18 | 22 | 19 | 33 |
| M 207EG | 26 | 23 | 22 | 25 | 25 | 22 | 24 | 20 | 24 | 22 | 1 | 16 | 16 | 19 | 22 | 16 | 11 | 19 | 20 | 21 | 15 | 22 | 14 | 15 | 15 | 26 |
| M 207FH |  | 25 | 25 | 18 | 23 | 25 | 24 | 20 | 18 | 28 | 25 | 11 | 23 | 24 | 23 | 21 | 21 | 14 | 17 | 24 | 22 | 17 | 19 | 18 | 22 | 30 | M 207 PR


|  |  | 3 | 4 | 3 | 4 | 5 | 4 | 4 | 3 | 4 | 5 | 4 | 3 | 4 | 4 | 5 | 3 | 4 | 4 | 4 | 3 | 2 | 4 | 4 | 2 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TOTALS | 74 | 90 | 103 | 90 | 93 | 100 | 90 | 89 | 81 | 101 | 81 | 62 | 92 | 80 | 92 | 90 | 77 | 81 | 74 | 93 | 83 | 66 | 74 | 74 | 71 | 120 |

FA 2014 Math 207 - Score Distribution

| Section | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | Totals |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| M 207AC | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 5 | 3 | 1 | 0 | 1 | 1 | 27 |
| M 207BD | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 3 | 3 | 1 | 3 | 1 | 2 | 3 | 2 | 1 | 2 | 2 | 3 | 33 |
| M 207EG | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 2 | 0 | 4 | 0 | 4 | 2 | 2 | 4 | 3 | 0 | 27 |
| M 207FH | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 4 | 2 | 4 | 3 | 0 | 1 | 2 | 2 | 31 |  | M 207 PR

$\begin{array}{lllllllllllllllllllllllllllllllllll}\text { TOTALS } & 0 & 0 & 0 & 1 & 0 & 1 & 3 & 3 & 2 & 3 & 7 & 2 & 2 & 7 & 6 & 5 & 7 & 12 & 6 & 16 & 10 & 4 & 7 & 8 & 6 & 118\end{array}$

## DEPARTMENTAL ASSESSMENT REPORT

| Department: | Mathematics |  |
| :--- | :---: | :---: |
| Academic Year: | 2014 | Semester: |
| Course Assessed: Math 208 | Calculus and Analytic Geometry II |  |
| No of Students Assessed: | 76 |  |
| Type of Assessment: A 25-problems Test |  |  |
|  |  |  |
| Course Coordinator: |  |  |
| Stan Buchcic |  |  |

## ANALYSIS OF OVERALL RESULTS

1. Expected competency level: ..... 40\%
2. How many students met the competency level? ..... 73
3. What \% of students met the competency level? ..... 96\%
4. No. of students enrolled in the course: ..... 98
5. No. of students completing the final exam: ..... 76
6. \% of students completing the final exam: ..... 78\%
7. No. of students receiving a grade C or better: ..... 75
8. \% of students receiving a grade C or better: ..... 99\%
9. \% of enrolled students passing with C or better: ..... 77\%
10. What objectives were not met by the majority of the students:All objectives were met by the majority of the students.
11. Was the assessment instrument adequate:Yes, the assessment instrument was adequate.
12. The attainment of which objectives, if any, were not measured?Why not? Is it possible to make the instrument such that tomeasure all objectives?
All objectives were measured.
13. Comments - Recommendations:

Objective \# 1 Hyperbolic functions
Assessed by problem \#1.
Number of correct answers: 59
\% of correct answers: 78\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 2 Integration by parts
Assessed by problem \# 2.
Number of correct answers: 45
\% of correct answers: 59\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 3 Integration by partial fractions
Assessed by problem \# 3.
Number of correct answers: 63
\% of correct answers: 83\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 4 Improper integrals
Assessed by problem \# 4.
Number of correct answers: 70
\% of correct answers: 92\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 5 Trigonometric integrals
Assessed by problem \# 5 .
Number of correct answers: 67
\% of correct answers: 88\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 6 Trigonometric substitutions
Assessed by problem \# 6.
Number of correct answers: 45
\% of correct answers: 59\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 7 Area between curves
Assessed by problem \# 7.
Number of correct answers: 46
\% of correct answers: 61\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 8 Volume of solids of revolution
Assessed by problem \# 8.
Number of correct answers: 58
\% of correct answers: 76\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 9 Arc length of plane curves
Assessed by problem \# 9.
Number of correct answers: 62
\% of correct answers: 82\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 10 Surface area of solids of revolution
Assessed by problem \# 10.
Number of correct answers: 54
\% of correct answers: $71 \%$
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 11 Work
Assessed by problem \# 11.
Number of correct answers: 54
\% of correct answers: $71 \%$
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 12 Sequences
Assessed by problem \# 12.
Number of correct answers: 48
\% of correct answers: 63\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 13. Geometric series, telescoping series, p series Assessed by problem \# 13.
Number of correct answers: 45
\% of correct answers: 59\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 14 Convergence tests: Divergence test comparison, integral tests
Assessed by problem \# 14.
Number of correct answers: 57
\% of correct answers: 75\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 15 Convergence Tests- Alternating series - Absolute/conditional convergence Assessed by problem \# 15.
Number of correct answers: 56
\% of correct answers: 74\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 16 Convergence tests - Ratio/root tests
Assessed by problem \# 16.
Number of correct answers: 50
\% of correct answers: 66\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 17 Radius of convergence of power series
Assessed by problem \# 17.
Number of correct answers: 53
\% of correct answers: 70\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 18 Taylor and Maclaurin series and polynomials and the Algebra and Calculus of power series
Assessed by problem \# 18.
Number of correct answers:
\% of correct answers: 67\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 19 Polar coordinates
Assessed by problem \# 19.
Number of correct answers: 57
\% of correct answers: 75\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 20 Equations in Polar coordinates
Assessed by problem \# 20.
Number of correct answers: 59
\% of correct answers: 78\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

## Objective \# 21 Parametric Equations

Assessed by problem \# 21.
Number of correct answers: 64
\% of correct answers: 84\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 22 Area in Polar coordinates
Assessed by problem \# 22
Number of correct answers:
72
\% of correct answers: 95\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

Objective \# 23 Parabola
Assessed by problem \# 23.
Number of correct answers: 55
\% of correct answers: 72\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 24 Vertex of a parabola
Assessed by problem \# 24.
Number of correct answers: 46
\% of correct answers: 61\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 25 Ellipse
Assessed by problem \# 25.
Number of correct answers:
52
\% of correct answers:
68\%
Did the majority of the students meet this objective:
Yes
Comments - Recommendations:

SP 2014 Math 208 - Item analysis chart
Table I
Problems Frequency

| 1 | 59 |
| :--- | :--- |
| 2 | 45 |
| 3 | 63 |
| 4 | 70 |
| 5 | 67 |
| 6 | 45 |
| 7 | 46 |
| 8 | 58 |
| 9 | 62 |
| 10 | 54 |
| 11 | 54 |
| 12 | 48 |
| 13 | 45 |
| 14 | 57 |
| 15 | 56 |
| 16 | 50 |
| 17 | 53 |
| 18 | 51 |
| 10 | 57 |
| 20 | 59 |
| 21 | 64 |
| 22 | 72 |
| 23 | 55 |
| 24 | 46 |
| 25 | 52 |



The above table indicates the number of correct answers for each problem of the assessment instrument.

## Table II

Problem Score

| 1 | 0 |
| :---: | :---: |
| 2 | 0 |
| 3 | 0 |
| 4 | 0 |
| 5 | 0 |
| 6 | 0 |
| 7 | 2 |
| 8 | 0 |
| 9 | 1 |
| 10 | 0 |
| 11 | 1 |
| 12 | 1 |
| 13 | 1 |
| 14 | 7 |
| 15 | 8 |
| 16 | 7 |
| 17 | 7 |
| 18 | 7 |
| 19 | 7 |
| 20 | 8 |
| 21 | 4 |
| 22 | 6 |
| 23 | 4 |
| 24 | 3 |
| 25 | 2 |
| Totals | 76 |




Page 9

## FA 2014 Math 208 - Item Analysis

$$
\text { Section \# } 1 \text { \# } 2 \text { \#3 \#4 \#5 \#6 \#7 \#8 }
$$

$$
\begin{array}{lllllllllllllllllllllllllllllllll}
\text { M 208NP } & 18 & 13 & 23 & 22 & 22 & 12 & 14 & 17 & 19 & 21 & 16 & 12 & 18 & 16 & 16 & 16 & 17 & 16 & 16 & 17 & 24 & 21 & 19 & 17 & 16 & 24
\end{array}
$$

$$
\begin{array}{lllllllllllllllllllllllllllllllllllll}
\text { TOTALS } & 59 & 45 & 63 & 70 & 67 & 45 & 46 & 58 & 62 & 54 & 54 & 48 & 45 & 57 & 56 & 50 & 53 & 51 & 57 & 59 & 64 & 72 & 55 & 46 & 52 & 75
\end{array}
$$

FA 2014 Math 208 - Score Distribution
$\begin{array}{llllllllllllllllllllllllllllllllllllllllllll}\text { Section } & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12 & 13 & 14 & 15 & 16 & 17 & 18 & 19 & 20 & 21 & 22 & 23 & 24 & 25 & \text { Totals }\end{array}$

$\begin{array}{lllllllllllll}M 208 N P & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0\end{array}$
$\begin{array}{llllllllllll}\text { TOTALS } & 0 & 0 & 0 & 0 & 0 & 0 & 2 & 0 & 1 & 0 & 1\end{array}$

## DEPARTMENTAL ASSESSMENT REPORT

Department: Mathematics
Academic Year: 2014 Semester: FallCourse Assessed: Math 209 Calculus and Analytic Geometry IIINo of Students Assessed: 43
Type of Assessmer A 24-problem final exam.
Course Coordinator Stan Buchcic
ANALYSIS OF OVERALL RESULTS

1. Expected competency level: ..... 40\%
2. How many students met the competency level? ..... 43
3. What \% of students met the competency level? ..... 100\%
4. No. of students enrolled in the course: ..... 59
5. No. of students completing the final exam: ..... 43
6. \% of students completing the final exam: ..... 73\%
7. No. of students receiving a grade C or better: ..... 59
8. \% of students receiving a grade C or better: ..... 100\%
9. \% of enrolled students passing with C or better: ..... 100\%
10. What objectives were not met by the majority of the students:All objectives were met by the majority of the students.
11. Was the assessment instrument adequate:Yes, the assessment instrument was adequate.
12. The attainment of which objectives, if any, were not measured?Why not? Is it possible to make the instrument such that tomeasure all objectives?
All objectives were measured.
13. Comments - Recommendations:

Objective \# 1 Convert the Polar equation in Cartesian form
Assessed by problem \#1.
Number of correct answers: 35
\% of correct answers: 81\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 2 Find the area of region in Polar coordinates
Assessed by problem \# 2.
Number of correct answers: 40
\% of correct answers: 93\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 3 Calculate Dot, Cross and Triple product for Vectors in 3 dimensions
Assessed by problem \# 3.
Number of correct answers: 42
\% of correct answers: 98\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 4 Find the parametric equations of the line in 3 dimensions
Assessed by problem \# 4.
Number of correct answers: 35
\% of correct answers: 81\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# $5 \quad$ Find the equation of the plane in 3 dimensions
Assessed by problem \# 5.
Number of correct answers: 34
\% of correct answers: 79\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 6 Identify the curve given in parametric form
Assessed by problem \# 6.
Number of correct answers: 37
\% of correct answers:
86\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 7 Identify the quadric surface
Assessed by problem \# 7.
Number of correct answers: 34
\% of correct answers: 79\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 8 Find the equation of the surface in cylindrical coordinates Assessed by problem \# 8.
Number of correct answers: 39
\% of correct answers: 91\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 9 Find the arc length of the vector valued function
Assessed by problem \# 9.
Number of correct answers: 13
\% of correct answers:
$30 \%$
Did the majority of the students meet this objective:
NO
Comments - Recommendations:

Objective \# 10 Find the curvature of the vector valued function
Assessed by problem \# 10.
Number of correct answers: 37
\% of correct answers:
86\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 11 Find the acceleration of a particle moving along a curve page 4 Assessed by problem \# 11.
Number of correct answers: 33
\% of correct answers:
77\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 12 Find the partial derivative for a given function
Assessed by problem \# 12.
Number of correct answers:35
\% of correct answers: 81\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 13. Use total differential to approximate the change in $F(x, y)$ as $(x, y)$ varies from P to Q
Assessed by problem \# 13.
Number of correct answers:
39
\% of correct answers: 91\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 14 Find the gradient of a function
Assessed by problem \# 14.
Number of correct answers: 36
\% of correct answers: 84\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 15 Find the equation of a tangent plane to the surface at a given point Assessed by problem \# 15.
Number of correct answers: 26
\% of correct answers: 60\%
Did the majority of the students meet this objective:
YES
Comments - Recommendations:

Objective \# 16 Evaluate the double integral
Assessed by problem \# 16.
Number of correct answers: 30
\% of correct answers: 70\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 17 Evaluate the triple integral
Assessed by problem \# 17.
Number of correct answers: 31
\% of correct answers: 72\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 18 Find the Jacobian
Assessed by problem \# 18.
Number of correct answers: 25
\% of correct answers: 58\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:
*

Objective \# 19 Find the divergence of the vector field
Assessed by problem \# 19.
Number of correct answers: 36
\% of correct answers: 84\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 20 Evaluate the line integral
Assessed by problem \# 20.
Number of correct answers: 33
\% of correct answers: 77\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 21 Find the potential function for a conservative vector field Assessed by problem \# 21.
Number of correct answers: 32
\% of correct answers: 74\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 22 Find the flux integral
Assessed by problem \# 22
Number of correct answers: 33
\% of correct answers: 77\%
Did the majority of the students meet this objective: Yes
Comments - Recommendations:

Objective \# 23 Evaluate the integral using Green's Theorem
Assessed by problem \# 23.
Number of correct answers: 26
\% of correct answers: 60\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

Objective \# 24 Use Divergence theorem to find the flux integral
Assessed by problem \# 24.
Number of correct answers: 39
\% of correct answers: 91\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:
Objective \# 25
Assessed by problem \# 245
Number of correct answers: 35
\% of correct answers: 81\%
Did the majority of the students meet this objective: YES
Comments - Recommendations:

## FA 2012 Math 209 - Item analysis chart

Table I


The above table indicates the number of correct answers for each problem of the assessment instrument.

FA 2012 Math 209 - Score Distribution chart

## Table II

Problem Score

| 1 | 0 |
| :---: | :---: |
| 2 | 0 |
| 3 | 0 |
| 4 | 0 |
| 5 | 0 |
| 6 | 0 |
| 7 | 0 |
| 8 | 0 |
| 9 | 0 |
| 10 | 0 |
| 11 | 1 |
| 12 | 0 |
| 13 | 8 |
| 14 | 2 |
| 15 | 3 |
| 16 | 1 |
| 17 | 1 |
| 18 | 4 |
| 19 | 3 |
| 20 | 6 |
| 21 | 6 |
| 22 | 6 |
| 23 | 0 |
| 24 | 2 |
| 25 | 0 |
| Totals | 43 |



| FA 2012 Math 209 - Grade Distribution |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Table III | Section | A | B | C | D | F | ADW | WTH | Totals |
| Grade | Frequency | M 209BD | 10 | 7 | 8 | 0 | 1 | 0 | 10 | 36 |
| A | 17 | M 209MO | 7 | 9 | 3 | 0 | 1 | 1 | 2 | 23 |
| B | 16 |  |  |  |  |  |  |  |  |  |
| C | 11 |  |  |  |  |  |  |  |  |  |
| D | 0 | TOTALS | 17 | 16 | 11 | 0 | 2 | 1 | 12 | 59 |
| F | 2 |  |  |  |  |  |  |  |  |  |
| ADW | 1 |  |  |  |  |  |  |  |  |  |
| WTH | 12 |  |  |  |  |  |  |  |  |  |
| Totals | 59 |  |  |  |  |  |  |  |  |  |



FA 20124Math 209 - Item Analysis
 $\begin{array}{llllllllllllllllllllllllllllllllllll}M & 209 B D & 20 & 23 & 23 & 19 & 19 & 21 & 17 & 20 & 8 & 21 & 18 & 21 & 23 & 21 & 15 & 16 & 15 & 14 & 21 & 16 & 19 & 18 & 14 & 20 & 20 & 25\end{array}$

| M 209 MO | 15 | 17 | 19 | 16 | 15 | 16 | 17 | 19 | 5 | 16 | 15 | 14 | 16 | 15 | 11 | 14 | 16 | 11 | 15 | 17 | 13 | 15 | 12 | 19 | 15 | 19 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |



## FA 2014 Math 209 - Score Distribution

$\begin{array}{llllllllllllllllllllllllll}\text { Section } & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12 & 13 & 14 & 15 & 16 & 17 & 18 & 19 & 20 & 21 & 22 & 23 & 24 & 25 \\ \text { Totals }\end{array}$ | M 209BD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 1 | 1 | 1 | 0 | 3 | 1 | 3 | 3 | 4 | 0 | 1 | 0 | 25 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| M 209MO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 0 | 1 | 1 | 2 | 3 | 3 | 2 | 0 | 1 | 0 | 18 |



