****

**Trinity Washington University**

**College of Arts and Sciences**

**Staff Semester Report**

**Math 101S, Math 102,**

**Math 108, Math 123**

**Fall Semester 2012**

**Joseph Sheridan**

**Mathematics Specialist**



**Table of Contents**

**Part I Introduction**

Report Objectives . . . . . . . . . . . . . . . . . . . . . . . . . . . 3

 Report Goals . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 3

Courses . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 3

 Course Descriptions . . . . . . . . . . . . . . . . . . . . . . . . . 3

 Course Methods . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4

 Course Objectives . . . . . . . . . . . . . . . . . . . . . . . . . . . 4

**Part II Pre-Test Information** . . . . . . . . . . . . . . . . . . . . . . .. . . . . . .4

**Part III Post-Test Information** . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 5

**Part IV Semester Outcomes**

 Math 101S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 5

 Math 102 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 11

 Math 108

 Math 123

**Part V Longitudinal Outcomes**

 Math 101S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 16

 Math 102 – Math 123 . . . . . . . . . . . . . . . . . . . . . . . 18

**Part VI Recommendations**

 Previous . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 19

 New . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 21

**Part VII Conclusions** . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 21

**Part VIII Appendices**

 Math 101S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 22

 Math 102 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 31

**Part I: Introduction**

Objectives: The objective of this semester report is to assess the continuing progress of Math 101S, Math 102, and Math 123. The report will analyze correlations between pre-tests, post-tests and the students’ final grades. Statistics will be used to correlate student outcomes in pre-requisite courses to the next sequential math courses (Math 102 and Math 123). This report will also examine pass/fail rates of students placing into these courses with Accuplacer scores, students that are repeating a course, or in the case of Math 102 and Math 123, students’ successful completion of prerequisite math courses. Additionally, the report will examine any trends in the learning outcomes that adversely affect the University’s retention goals.

Goals: The goals of this report are twofold. The first goal is to continuously examine and re-examine Math 101S to ensure that it is meeting the needs of our incoming student population each semester so that the University goals of retention are met without compromising the course integrity or the course content standards. Secondly, this report examines the content and rigor of Math 102 so that our students choosing to major in a math or science are prepared not only with the proper prerequisites but the mathematical skills to be successful in the next math sequential course.

Courses: Introduction to Algebra – Math 101S; Intermediate Algebra – Math 102; Finite Mathematics – Math 108 and Pre-Calculus – Math 123. This report includes data from 8 sections of Math 101S from the fall semester of 2011 (n = 191), one section of Math 102 (n = 28), four sections of Math 108 (n = 89) and one section of Pre-Calculus; Math 123 (n = 18).

### Course Descriptions:

 **Math 101S:** This course provides students with an intensive review of high school algebra and prepares them for their first college level mathematics course. Topics include a review of basic arithmetic operations, the real number system, algebraic expressions and exponents with basic rules of algebra, linear equations and inequalities with applications, graphs of equations and inequalities, operations on polynomials, introduction to systems of equations, and introduction to factoring.

 **Math 102:** This course is intended for those math and science majors who have some background in algebra (Math 101S or placement score) but lack the preparation needed to study pre-calculus and calculus. Topics include exponents, factoring, quadratic and polynomial expressions, equalities and inequalities, rational expressions, radical expressions and equations, and systems of equations and inequalities.

 **Math 108:** This course is intended to provide a broad-based general overview of the college mathematics, especially those majoring in the social sciences, business, nursing, and allied health fields. Topics include a continuation of the algebra topics of Math 101S; critical thinking skills, sets, logic and the real number system. In addition to these topics, graphs, functions, modeling and data analysis, use of matrices to solve system of equations, systems of linear inequalities and understanding of dimensional analysis and conversions to and from the metric system are also covered.

 **Math 123:** This course prepares students for calculus. Topics include the concept of a function, exponential and logarithmic functions, and trigonometric functions and coordinate geometry.

Course Methods:Both Math 101S and Math 102 have incorporated a very rigorous adaptation of the MyMathLab pedagogy in conjunction with VAK (Visual, Auditory, and Kinesthetic) styled classroom lectures, culturally responsive mathematics activities and presentation of mathematical material. Lesson plans followed an aggressive differentiated instructional model. Math 108 and Math 123 also incorporated the MyMathLab pedagogy.

Course Objectives: Upon successful completion of the course, students will have the skills necessary to enroll in the next sequential mathematics course. Additionally, upon completion of the course, students, both passing and not passing, will have a stronger sense of self-efficacy with regard to mathematics.

# Part II: Pre-Test Information

**- Accuplacer**

The standardized Accuplacer exam was used for placement of students taking Math 101S, Math 102, Math 108 or Math 123 for the first time. The Academic Services Center managed the administration, proctoring, and maintenance of the online placement tests. Individual student score reports were available immediately after testing. These score reports were utilized by faculty advisors for correct student placement. Cut scores (benchmarks) were determined from previous testing of the incoming student populations.

In fall 2012, 171 Math 101S students (90%) took the Accuplacer for placement; only 20 students (10%) were classified as “repeaters,” as they that had previously enrolled in Math 101S and had not received a passing grade. (Repeaters had taken the Accuplacer in a previous semester).

In Math 102, 36% of the students took the Accuplacer for placement. Another 25% were repeaters, and the rest (39%) were students that had successfully passed Math 101S in a previous semester. No students were placed into Math 102 without the proper prerequisites.

In Math 108, 37% of the students were placed via Accuplacer scores, and 31% were students that successfully passed Math 101S in the previous semester. 15% were students that transferred in the proper math prerequisite. 5% were repeaters from the previous semester. 12% of the students were misplaced with incorrect Accuplacer scores or did not take the Accuplacer exam.

In Math 123, 22% of the students were placed via Accuplacer scores, 5% were repeaters and 11% transferred in the proper math prerequisite. 56% were students that successfully passed Math 102 in a previous semester and 6% as the students did not take the Accuplacer exam.

**-Pre-Test Diagnostic**

Additionally, during the first week of class and after the students’ successful completion of the orientation exercises in MyMathLab, students in both Math 101S and Math 102 were required to take a pre-test diagnostic exam. Results of the pre-test diagnostic exam were used to establish a starting point for differential instruction in both Math 101S and Math 102. Results are also used to verify and confirm correct placement of students into pre-foundational courses. These results for all students are shown in the Excel spreadsheets found in the appendices.

# Part III: Post-Test Information

All students in both Math 101S and Math 102 were asked to take the diagnostic post-test in MyMathLab, prior to taking the Final Exam. Students’ lack of participation was not a factor; the majority of students took the post-test diagnostic to prepare for the final. For those students that did not participate, their results were not included for statistical analysis purposes. Results of these scores are in the Excel spreadsheet found in the appendices.

**Part IV: Outcomes**

**Math 101S**

**- Grade Distribution**

Please note that all outcomes and statistics for Math 101S are for all eight sections of the course combined except where stated on page 10 of this report.

The pie chart to the right reflects the grade distribution of the Math 101S classes. A mastery grading system was used; hence there were no passing grades lower than a “C” recorded. In order to pass, the students were required to earn at least a minimum grade of 72%.

This semester had four different instructors (2 full-time; 2 adjuncts) teaching eight sections of Math 101S. 53% of all students that registered for this course passed (grades of A, B and C). 47% did not pass (grades of F, FQ and W). Those receiving a final grade of “F” completed the course through the final exam. Students receiving a final grade of “FQ” did not complete the course because they had stopped attending (quit) the course prior to the end of the semester without formally withdrawing. Those with a final grade of “W” formally withdrew from the course.

A “new” troubling factor is the significant number of students that failed the course due to quitting (FQ). The number of students quitting the course doubled from the previous tracked fall semester.

Overall, of those students that stayed in the course the entire semester and **took the final**, 87% successfully passed the course. (See chart to the right). This is a **25% increase** from last fall semester. While this may be a statistic that is not looked upon favorably or for the most part, even regarded as it ignores a significant number of students (those students withdrawing or ceasing attendance), it does need to be viewed in context for future planning with sequential courses. For example, how many sections of the next sequential math course are needed for Math 102, Math 108 and Math 109 without being able to realistically refer to a statistical number from a trend?

Nationally, the pass rates hover between 35 – 45% depending on the article that you may be reading. NCAT (National Center for Academic Transformation) puts the national pass rate at 42%.

Cleveland State C.C. (2009) and Jackson State C.C. (2010) both have won the prestigious Bellwether Award (the Bellwether Awards have been compared to college football’s Heisman Trophy because they are competitively judged by peers in the community college space) for their achievements in course redesign within their mathematics departments for developmental math.

The pass rate for Cleveland State C.C. was 72% and for Jackson State C.C. it was 63%.

These are the schools that are the models for redesigning developmental math – they are both mentioned at nearly every conference – they are referred to in many peer reviewed articles. The Bill and Melinda Gates foundation hold them as the example for the rest to model after.

Trinity’s pedagogical model for Math 101S can be replicated with similar success across different instructors. Our pass rates include three sections taught by two adjuncts – adjuncts that have not had the benefit or training from the various conferences or membership in NADE (National Association of Developmental Educators) and their publications.

Currently our pass rates are higher than any other school that is teaching a similar course –regardless of demographics and/or placement scores.

**-Retention Numbers**

Of all students that were registered for Math 101S for the Fall 2012 semester, 84%, regardless of the grade they received in the class, re-registered for the following semester, Spring 2013, as seen in the circle graph to the right.

Math 101S is clearly NOT the barrier course for incoming freshman at Trinity.

The objectives for re-writing the Math 101S course content and curriculum in its entirety during the summer of 2010 was to (1) improve retention, (2) maintain math course content integrity and (3) improve and build the student’s self-efficacy.

This objective has clearly been met two years in a row as the Fall 2011 to Spring 2012 retention registration was 79%.

**-Percent of Students Registered for Math 101S for Spring 2013**

Math 101S, Introductory Algebra has a significant impact on the success (or failure) for the vast majority of incoming freshman to Trinity. Most students bring with them either hatred or a fear of math. These feelings are changed by the end of the semester for most of the students.

The incoming class of 2016 (Red Class) showed that 66% of the entire class (n = 259) tested into Math 101S with their Accuplacer scores. The remaining 35% of the class registered in math courses other than Math 101S.

Of the 66% of the Red class that were enrolled in Math 101S (171 students) for the fall semester, 84% of them (161 students) have re-registered for the Spring 2012 semester.

**Comparison of the Final Overall Grade to the Final Exam – Math 101S**

The line graph above shows a comparison of each student’s grade in the course to their Final Exam grade. The raw data may also be found in the Excel spreadsheets in the appendices. Data shows that there is no significant difference between a student’s overall course grade and the final exam grade. Any variance  2.00 would show that the exam was inconsistent with the course content and that the exam was either too easy with a positive variance or too difficult with a negative variance.

The variance for this semester was +0.3. Last semester, the variance was +1.008. Both years, with the same exam five different instructors shows that the variance stays within the margins This course is not reliant on the personality of the instructor as much as it is with the pedagogy and the method of presenting the material. This also shows that the course can be duplicated and presented by other instructors.

This statistic shows that the final exam is consistent with the course content as presented in lectures and differentiated learning models throughout the semester. Students’ overall grades prior to the final exams show no significant changes. To ensure test integrity, six separate exams were given during the week of finals.

**MyMathLab Diagnostic Test Results – Math 101S**

The use of differentiated instructional methods, along with MyMathLab, is clearly shown to be very successful in the above line graph. With no exceptions, every student that completed the course made significant progress in their mathematical abilities regardless of their entry point into the course and their grade in the course.

.

Instructional strategies were based on the assessed needs of each student. Monday Mathematics assisted students lacking both basic skills and confidence. A Math Computer Lab, initiated during the Fall 2010 semester, was continued and staffed by student lab assistants (work study students).

Daily and weekly quizzes were studied in detail to find and correct students’ faulty logic and frustration with mathematics. Tiered grouping assignments were arranged based on examination of quizzes, student interest, and students’ previous experiences in algebra. While this is a standardized course, quizzes (daily and/or weekly) and group in-class assignments are left to each instructor.

All students, except 4 (4% of all students), had exceeded the base standard (using the pre-test average as the base standard) by the end of the semester. The average increase for all students in all Math 101S classes was 32.3%.

**- Math 101 Instructors**

Four different instructors taught Math 101S for the Fall 2012 Semester.

A breakdown of the Pass, Fail and Withdrawal rate for each is provided in the graphs below.

Overall there were 8 sections, n = 191.

Instructor A taught three sections, n = 72

Instructor B taught two sections, n = 47

Instructor C taught one section, n = 26

Instructor D taught two sections, n = 46

**Math 102**

## - Grade Distribution

The pie chart to the right reflects the grade distribution of the Math 102 class. Overall, of the students that stayed in the course the entire semester and took the final exam, 83% successfully passed the course. Three students who took the final received a failing grade. One student that took the final received an F due to cheating.

All students in the class had the proper prerequisites.

What is interesting in this class is that there is an even distribution with the passing grades between students that placed into the course via Accuplacer and those that took Math 101S. However all the students that received a grade of D or F had previously taken Math 101S and all of them, with no exception received the minimum passing grade of C in that course. The repeaters (2 students) had taken the course more than twice and both withdrew again.

**Comparison of the Final Overall Grade to the Final Exam – Math 102**

The line graph below shows a comparison of the student’s grades in the course to their Final Exam grades. The raw data may also be found in the Excel spreadsheets in the appendices. Data shows that there is no significant difference between a student’s overall course grade and the final exam grade. Any variance  2.00 would show that the exam was inconsistent with the course content and that the exam was either too easy with a positive variance or too difficult with a negative variance.

The variance for this semester was +1.00

This statistic shows that the final exam is consistent with the course content as presented in lectures and differentiated learning models through the semester. Students’ overall grades prior to the final exams show no significant changes. To ensure test integrity, four separate exams were given during the week of finals.

**MyMathLab Diagnostic Test Results – Math 102**

The graph above clearly shows that the use of both differentiated instructional methods and MyMathLab are very successful. Every student made significant progress in their mathematical abilities regardless of their entry point into the course.

By the semester’s end, all students, with one exception, had exceeded the base standard, and the average for all students in Math 102 rose 30.6%.

**Math 108**

 **- Grade Distribution**

The pie chart to the right reflects the grade distribution of the “new” Math 108 class. There were three different instructors for this course and the statistics for the three courses are combined, except where noted later on in this report.

Math 108 was written during the summer of 2011 and was first taught during the spring semester 2012. Math 108 was created to primarily serve our students majoring in the Life and Health Sciences fields.

As with any new course, close tracking of the outcomes need to be examined in depth. One unfavorable trend that emerged is the significant number of students that were either misplaced (10%) into Math 108 and to a lesser extent, slipped through and did not take the placement exam (2%).

Differences between students that placed into the course with Accuplacer and those that took Math 101S as a prerequisite showed a trend favoring students that took Math 101S. A trend that needs to be monitored closely as the cut-off scores for Accuplacer may need to be adjusted for the next incoming freshman class.

To accommodate those students that placed into the course with Accuplacer, a differentiated learning model of instruction (similar to what is used in the Math 101S pedagogy) was used to “catch” students up with the curriculum and to move them forward with the material.

Three different instructors taught Math 108 for the Fall 2012 Semester.

A breakdown of the Pass, Fail, and Withdrawal rate for each is provided in the graphs below.

Overall, four sections, n = 89

Instructor A taught one section, n = 31

Instructor B taught two sections, n = 41

Instructor C taught one section, n = 17

There was no significant different between pass/fail rates among the three different instructors. One instructor had a 7% withdrawal rate, which was only 2 students – the other two instructors did not have any withdrawals. Again, this is not a significant difference.

Math 108 is not a standardized course. All instructors are using the same course content summary and similar “shell outlines” in MyMathLab, but all instructors have the academic freedom to incorporate their own pedagogy and transfer of knowledge methods that they wish to use.

Further analysis of this course is ongoing and will rely on statistics and feedback from the Nursing (TEAS) program and the Education (Praxis) program.

**Part V Longitudinal Outcomes**

 **- Math 101S**

 **Comparison of Fall 2009 - Fall 2012 – All Students**

Comparing statistics from Fall ’09, the first semester using MyMathLab and an aggressive instructional pedagogy, to Fall ’12 is difficult, as the entire course was rewritten during the summer of 2010.

At the end of the Spring 2010 semester, the Math Department chose a new textbook for Math 101S. The new text was more in-depth and provided more examples across the spectrum (a key item with the use of differentiated instruction – the more problems, the better) of the topics to be covered, but it also provided a thorough review of pre-algebra topics so that students scoring lower on their placement exam would still be able to “catch up.”

All daily lesson plans, Power Points, tests and final exams were re-written. Starting in the Fall 2010 semester, with the exception of each Specialist’s personality in the classroom, every aspect of the course was exactly the same. Courses are now standardized so that if a student misses her 9:00 am lecture on Monday, that exact same lecture is available on Tuesday afternoon with another class.

One more final change was incorporated this fall and that is the use of Mastery Grading on Tests 1 and 2. We have used Mastery Grading on all homework assignments, meaning students must achieve a grade of 72% on every assignment – now we were going to up the ante and force all students to also prove Mastery Learning on the first two tests. Previously, students could mathematically pass the course with an overall average of 72% or higher. Some students would fail badly the first or second test of the semester, but their overall average was passing. This standard was not high enough to ensure students could pass the final exam, or, more importantly, retain the knowledge for the next sequential mathematics course.

The negative consequence of this change was that the number of students abandoning or quitting the course doubled from the previous 3 years. Some students did not acculturate to to being held accountable to a Mastery Grading and Mastery Learning system over both their homework grades and their test grades.

In addition to incorporating the Mastery Grading to Tests 1 and 2, students were allowed to re-test if they failed either of these tests. The requirements were strict in order to re-test. All failing students were to complete a differentiated test review that was based on the most missed questions from the exam and the re-testing would only take place on designated Mondays (as part of our Monday Mathematics program) at 5:00 pm. Students were advised of this change in the syllabus and asked to plan accordingly if they happened to fall into the group that needed to re-test.

The response was overwhelming as 112 re-tests were administered. To ensure course content integrity, completely separate exams were written for the re-testing program.

The positive outcomes were that pass rates skyrocketed to 53%, an increase of 14% from the previous fall semester and that withdrawal rates deceased 9% and failure rates decreased 16%.

**Comparison of Fall 2009 - Fall 2012 - Students that Completed the Course**

Additionally, students that completed the course passed at an astounding rate of 87%. That figure coupled with the high retention rate noted earlier in this report clearly shows that the last change to the course pedagogy of adding Mastery Grading (along with re-testing opportunities) to the first two exams is a success.

**Math 123**

For Math 123, Fall 2012 showed an overall pass rate of 89% this is up from Fall 2011which showed a 72% pass rate.

Students were placed into Math 123 by either successfully passing Math 102, transferring in the appropriate math course or with the prerequisite score on the Accuplacer exam.

There is no difference in the pass rates between those students having the prerequisite score on the Accuplacer exam and those that took Math 102 – both sets of students were properly prepared.

Two students withdrew from this course.

Of the students that failed the course, one student was properly placed through her Accuplacer score, and the other student was a repeater that failed the course again.

One student was placed into Math 123 without the proper prerequisites and this student struggled to earn a grade of “D.”

**Part VI: Recommendations**

**Follow-Up and Tracking of Previous Recommendations**

* **Continue support of MyMathLab using Differentiated Instruction**

MyMathLab coupled with an aggressive differentiated instructional model works for those students that complete the course. Math 101S was rewritten in the Summer of 2010 and is now standardized. Both Math 102 and Math 123 were rewritten in the Summer of 2011. During the rewrite, both courses switched to a textbook that better meets the needs of students prior to pre-calculus and for pre-calculus. Math 123 incorporated MyMathLab during the Fall 2011 semester. Math 108 was started in Spring 2012 and rewritten for the Fall 2012. Pearson’s MyMathLab works for our student population when coupled with the daily quizzes, the Friday Labs and Monday Mathematics. No single component would work alone, and all are needed to reach the diverse student population that we have. STATUS: Outcomes assessment is ongoing.

* **Aggressive follow-up on attendance**

Mandatory attendance was incorporated into the syllabus of Math 101S for Spring 2010. Outcomes of this policy still cannot be substantiated. Data is inconclusive, and the use of a daily quiz (that cannot be made up) drives student attendance with an extrinsic value. STATUS: Remain Open

* **Creation of a Math 100 course paired with MyMathLab and a Lab component**

Statistics from the pre-test diagnostic provides evidence that there are basic skills that students are lacking. Such skills include being able to multiply fractions, multiply negative integers, solve equations with one variable, divide fractions, subtract negative integers, and simplify fractions. A Math 100 course could serve to boost the pass rate of Math 101S and, consequently, reduce the withdrawal and failure rates in Math 101S.

We have found that the Math 101S lab component is already effective in strengthening skills and reducing student reliance on the calculator.

The additional level of a pre-foundational course adds a semester to the students load and increases the amount of debt they will incur before graduation. Therefore, it is more advantageous to the University and to the students to not add Math 100. STATUS: Closed

* **Benchmarks**

 Benchmarks as currently set are solid; these numbers have been distributed and are being utilized. Benchmarks should continue to be re-examined with each incoming freshman class so that Trinity stays current with the proficiency and skill levels of these students and that we adjust to accommodate them. With the addition of the Math 108 Finite Mathematics course, an in-depth analysis should be made over Summer 2012 to examine any trends that may need to be adjusted. STATUS: Remain Open

* **Proper Placement**

 Students were improperly placed for the Fall 2012 semester in Math 108 and Math 123 with negative effects on the students overall grade. The “zero exception” policy needs to be strengthened. STATUS: Continue to monitor and track

* **Adopt a grade option of “R” for Math 101S**

Previous reports had request the alternative use of a grade of “R” for students that complete the course but did not pass. The addition of Mastery Grading on the first two exams, coupled with opportunities to re-test in Math 101S have alleviated this concern to use an “R.”

STATUS: Closed

* **A Permanent Home for Monday Mathematics**

 The Provost has continuously approved Monday Mathematics to be held in the Library Seminar room. STATUS: Closed

* **Withdrawal Survey**

 It had been previously reported for three years that the withdrawal rate had not decreased and that a survey was needed to address this issue. The addition of Mastery Grading on the first two exams, coupled with opportunities to re-test in Math 101S have alleviated this problem. STATUS: Closed

* **Mid-Term Survey**

 Students receive mid-term grades to give them an idea of where they currently stand in the class grade-wise. Some also receive “early alerts” so they can sit down with their academic advisors and make adjustments to their study habits or skills to become successful at the semester’s end. It has been recommended in the last few staff reports that we add a mid-term evaluation on Moodle for students to also give the faculty some feedback at this point in the semester.

For first year freshman this is very important and the questions can be geared around that group. Some students at mid-term still do not know where the Academic Services Center is located, and some are still struggling with the academic vocabulary (Dean, Provost, Drop/Add period, Registration, Academic Probation, Satisfactory Academic Performance, etc.).

The survey would need questions that could focus on what can be done (by all interested parties) between now and the end of the semester to improve instructors’ ability to provide student support and allow students the opportunity to provide some constructive feedback and possibly a space to vent some, if need be. STATUS: Open

* **News Release**

Developmental Mathematics and its success/pass rates, and retention rates are hot topics currently in not only the academic world and its publications, newsletters and websites but all across the country in the mainstream media as well. We have the data, we have the results, and, by every comparative analysis, it shows that Trinity is above the national trends. Let’s tell the world our story. STATUS: Open

* **Conference**

Recommend that we explore the possibility of bringing a Developmental Mathematics Conference to Trinity. STATUS: Open

**New Recommendations**

Monday Mathematics has proven to be a success, and, at times (in particular before exams), the number of students attending is overwhelming. Currently, two full time specialists and three student assistants (tutors) cover the two sessions. Consideration needs to be given to increase the number of student assistants on anticipated high volume dates.

**Part VII: Conclusions**

 Math 101S is where it was envisioned back in Fall 2009. It is a strong introductory course with math content; it builds students’ self-efficacy; the pass rates are high and the retention rates are equally high. For the most part, the course can be replicated by others. Two different mathematics specialists have taught the course, and two adjuncts as well as one full time tenure track faculty have also taught using this pedagogy. As the USA gymnastics team used to say to each other before performing a routine “just normal” and that resulted in a gold medal. “Just normal” for the next semester with Math 101S and all other math courses that follow it in the sequence.

**Part VIII: Appendix**

**Math 101S Introductory Algebra**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Overall Final Grade | Final Letter Grade | Comments | Spring 2013 | Final Exam Grade | Grade Prior to Final | Home- work Grade | Diagnostic Pre-Test | Diagnostic Post-Test | GPA | Accu-placer Arith | Accu- placer Algebra |
| 1 | 96.7 | A |  | Math 108 | 97.8 | 95.8 | 99.9 | 41.7 | 82.2 | 1.6 | 32 | 42 |
| 2 | 83 | B |  | Math 108 | 82.1 | 82.7 | 92.8 | 18.9 | 90.8 | 1.72 | 24 | 24 |
| 3 | 81.1 | B- |  | Reg - No Math | 89.6 | 77.8 | 93.8 | 77.8 | 81.9 | 1.57 | 28 | 26 |
| 4 | 80.2 | B- |  | Math 108 | 79.1 | 77.9 | 95.5 | 31.7 | 63.3 | 2.35 | 30 | 21 |
| 5 | 74.2 | C |  | Math 109 | 70.1 | 74.6 | 89.9 | 43.3 | 72.5 | 2.43 | 21 | 37 |
| 6 |  | FQ |  | Math 101S |  |  |  |  |  | 0.3 | 36 | 44 |
| 7 |  | W | Repeat | NR - Fin Hold |  |  |  |  |  | 0.69 |  |  |
| 8 | 88.9 | B+ |  | Math 108 | 92.5 | 87.3 | 98.5 | 18.3 | 82.8 | 2.49 | 25 | 43 |
| 9 | 60 | F  |  | Reg - No Math | 55.2 | 58.2 | 75.9 | 17.2 | 45.6 | 1.77 | 22 | 23 |
| 10 |  | FQ |  | Math 101S |  |  |  |  |  | 0 | 20 | 26 |
| 11 |  | FQ |  | NR - Fin Hold |  |  |  |  |  | 0.51 | 24 | 31 |
| 12 |  | W |  | Math 101S |  |  |  |  |  | 1.15 | 223 | 21 |
| 13 | 73.4 | C |  | Math 109 | 74.6 | 70.8 | 82.2 | 21.7 | 58.9 | 2.77 | 43 | 36 |
| 14 |  | W |  | NR - Fin Hold |  |  |  |  |  | 0 | 32 | 23 |
| 15 |  | FQ | Repeat | NR - Fin Hold |  |  |  |  |  | 0 |  |  |
| 16 |  | W |  | Math 101S |  |  |  |  |  | 0 | 24 | 32 |
| 17 | 87.4 | B+ |  | NR - Fin Hold | 86.6 | 86.5 | 98.5 | 32.2 | 72.2 | 1.65 | 23 | 29 |
| 18 | 80.7 | B- |  | Math 109 | 88.1 | 77.5 | 86.6 | 38.6 | 54.4 | 2.7 | 36 | 36 |
| 19 |  | W |  | Reg - No Math |  |  | 85 |  |  | 2.52 | 24 | 27 |
| 20 | 64.6 | F  |  | Math 108 | 50.7 | 65.1 | 90.4 | 35.6 | 56.7 | 1.31 | 23 | 26 |
|  | Overall Final Grade | Final Letter Grade | Comments | Spring 2013 | Final Exam Grade | Grade Prior to Final | Home- work Grade | Diagnostic Pre-Test | Diagnostic Post-Test | GPA | Accu-placer Arith | Accu- placer Algebra |
| 21 |  | W |  | Math 101S |  |  |  |  |  | 0.8 | 42 | 35 |
| 22 |  | FQ |  | Not Reg |  |  |  |  |  | 0 | 29 | 21 |
| 23 | 76.1 | C |  | Math 109 | 76.1 | 73.3 | 92.2 | 40 | 68.1 | 3.08 | 32 | 32 |
| 24 | 89.7 | A- |  | Math 102 | 91 | 88.1 | 98.5 | 52.2 | 68.1 | 3.06 | 37 | 46 |
| 25 | 86.4 | B |  | Reg - No Math | 79.1 | 87.7 | 88.5 | 25 | 63.9 | 2.65 | 30 | 31 |
| 26 | 75.1 | C |  | Math 108 | 79.1 | 72.9 | 89 | 43.3 | 78.3 | 2.46 | 72 | 42 |
| 27 |  | FQ |  | Math 101S |  |  |  |  |  | 0 | 30 | 42 |
| 28 |  | FQ |  | Reg - No Math |  |  |  |  |  | 1.89 | 27 | 21 |
| 29 | 79.9 | B- | Repeat | Reg - No Math | 81.3 | 77.2 | 95.6 | 23.3 | 33.3 | 2.63 |  |  |
| 30 | 92.6 | A |  | Math 102 | 97 | 90.3 | 99.8 | 58.9 | 74.4 | 2.8 | 33 | 50 |
| 31 |  | FQ |  | Not Reg |  |  |  |  |  | 0 | 26 | 39 |
| 32 |  | FQ | Repeat | NR - Fin Hold |  |  |  |  |  | 0.51 |  |  |
| 33 | 81.1 | B |  | Math 109 | 79.1 | 80.1 | 95.7 | 27.2 | 68.3 | 2.37 | 21 | 27 |
| 34 |  | FQ |  | Math 102 |  |  |  |  |  | 0.46 | 28 | 34 |
| 35 |  | FQ |  | NR - Fin Hold |  |  |  |  |  | 0.85 | 31 | 27 |
| 36 | 88.7 | B+ |  | Math 108 | 85.1 | 89.1 | 96.1 | 63.9 | 74.4 | 3.01 | 42 | 21 |
| 37 |  | FQ |  | Reg - No Math |  |  |  |  |  |  | 45 | 40 |
| 38 | 80.7 | B- |  | Math 108 | 82.1 | 80.1 | 95.1 | 63.1 | 75.6 | 2.34 | 23 | 30 |
| 39 | 86.9 | B+ |  | Reg - No Math | 86.6 | 85.6 | 92.8 | 39.4 | 67.2 | 3.2 | 45 | 53 |
| 40 |  | W |  | Math 101S |  |  |  |  |  | 3.13 | 43 | 31 |
| 41 | 79.6 | B- |  | Math 102 | 82.1 | 78 | 75.2 | 45.6 | 62.2 | 2.56 | 54 | 43 |
| 42 | 73.6 | C |  | Math 108 | 67.2 | 72.9 | 84.6 | 27.8 | 60.3 | 0.67 | 20 | 37 |
| 43 | 82.1 | B- |  | Math 108 | 79.9 | 81 | 99.3 | 31.7 | 71.7 | 2.61 | 25 | 30 |
| 44 | 82.5 | B |  | Math 108 | 76.1 | 83.6 | 91.6 | 33.9 | 67.2 | 2.93 | 25 | 46 |
|  | Overall Final Grade | Final Letter Grade | Comments | Spring 2013 | Final Exam Grade | Grade Prior to Final | Home- work Grade | Diagnostic Pre-Test | Diagnostic Post-Test | GPA | Accu-placer Arith | Accu- placer Algebra |
| 45 | 70.7 | F |  | Math 108 | 59.7 | 72.4 | 85.5 | 19.2 | 49.2 | 0.99 | 25 | 22 |
| 46 | 85.4 | B |  | Math 102 | 73.9 | 87.5 | 92 | 37.2 | 75.6 | 2.54 | 30 | 23 |
| 47 | 83.5 | B |  | Math 108 | 85.1 | 82.2 | 89 | 20 | 67.5 | 3 | 28 | 24 |
| 48 |  | W | Repeat | Math 101S |  |  |  |  |  | 0.95 |  |  |
| 49 |  | FQ |  | Not Reg |  |  |  |  |  | 0 | 20 | 21 |
| 50 |  | W |  | NR - Fin Hold |  |  |  |  |  | 0 | 27 | 28 |
| 51 | 74.8 | C |  | Reg - No Math | 64.2 | 76.2 | 88.7 | 18.3 | 53.9 | 2.23 | 20 | 40 |
| 52 |  | W | Repeat | Not Reg |  |  |  |  |  | 1.78 | 28 | 41 |
| 53 |  | FQ |  | Math 101S |  |  |  |  |  | 1.97 | 40 | 42 |
| 54 | 81.4 | B- |  | Math 108 | 80.6 | 79.6 | 92.7 | 56.7 | 66.1 | 2.75 | 28 | 43 |
| 55 |  | FQ |  | Math 101S |  |  |  |  |  | 1.14 | 29 | 36 |
| 56 | 72.3 | C |  | Math 108 | 64.2 | 72.7 | 84.9 | 39.4 | 59.7 | 0.67 | 27 | 37 |
| 57 |  | W |  | Not Reg |  |  |  |  |  | 0 | 42 | 29 |
| 58 | 71.9 | C |  | Math 108 | 59.7 | 73.2 | 79.6 | 8.3 | 19.2 | 0.85 | 26 | 26 |
| 59 |  | FQ | Repeat | NR - Fin Hold |  |  |  |  |  | 1.26 |  |  |
| 60 | 90.6 | A- |  | Math 109 | 94 | 88.8 | 98.7 | 47.2 | 85.6 | 3.75 | 53 | 37 |
| 61 | 67.7 | F  | Repeat | Reg - No Math | 52.2 | 72.4 | 84.6 | 23.3 |  |  |  |  |
| 62 | 95.6 | A |  | Math 108 | 98.5 | 94.3 | 100 | 60.3 | 92.8 | 2.67 | 29 | 44 |
| 63 | 89.3 | A- |  | Math 108 | 88.1 | 88.6 | 98.4 | 37.2 | 77.5 | 3.56 | 22 | 31 |
| 64 |  | W |  | Not Reg |  |  |  |  |  | 0 | 31 | 34 |
| 65 | 91.1 | A- |  | Math 108 | 94 | 89.4 | 99.4 | 46.9 | 90 | 3.2 | 85 | 46 |
| 66 |  | W |  | Not Reg |  |  |  |  |  | 0 | 20 | 27 |
| 67 | 76 | C |  | Math 108 | 73.1 | 74.6 | 87.7 | 22.2 | 74.7 | 2.59 | 25 | 21 |
| 68 | 74.1 | C |  | Reg - No Math | 70.1 | 74.1 | 85.3 | 37.2 | 56.7 | 1 | 28 | 22 |
|  | Overall Final Grade | Final Letter Grade | Comments | Spring 2013 | Final Exam Grade | Grade Prior to Final | Home- work Grade | Diagnostic Pre-Test | Diagnostic Post-Test | GPA | Accu-placer Arith | Accu- placer Algebra |
| 69 | 85 | B |  | Math 108 | 73.1 | 87.3 | 96.8 | 53.1 | 69.4 | 2.01 | 34 | 36 |
| 70 | 78.5 | C+ |  | Math 108 | 74.6 | 78.7 | 92.6 | 18.9 |  | 2.53 | 21 | 35 |
| 71 |  | W |  | Math 101S |  |  |  |  |  | 0 | 60 | 29 |
| 72 |  | FQ |  | Reg - No Math |  |  |  |  |  | 0 | 46 | 38 |
| 73 | 74.6 | C |  | Math 108 | 73.1 | 72.8 | 90.9 | 15.8 | 62.8 | 2 | 36 | 21 |
| 74 | 82.6 | B | Repeat | Math 109 | 70.1 | 84.1 | 96.5 | 34.4 | 57.8 | 2.14 |  |  |
| 75 |  | FQ |  | NR - Fin Hold |  |  |  |  |  | 0 | 32 | 31 |
| 76 | 77.4 | C+ |  | Math 108 | 70.1 | 78.4 | 94.4 | 40 | 78.9 | 0.77 | 27 | 21 |
| 77 | 86.1 | B |  | Math 108 | 80.6 | 86.7 | 96.6 | 43.9 | 76.7 | 3.09 | 43 | 35 |
| 78 | 72.5 | C |  | Math 109 | 68.7 | 71 | 91.7 | 23.3 | 73.3 | 2.46 | 24 | 30 |
| 79 | 83.9 | B |  | Math 102 | 83.6 | 82.9 | 97.5 | 52.8 | 77.8 | 2.59 | 59 | 53 |
| 80 |  | FQ |  | Math 101S |  |  |  |  |  | 1.11 | 23 | 24 |
| 81 | 80.4 | B- |  | Reg - No Math | 65.7 | 82.2 | 95.7 | 19.7 | 61.4 | 1.93 | 44 | 44 |
| 82 | 73.5 | C | Repeat | Math 108 | 79.1 | 70.6 | 82.9 | 25 |  | 1.76 |  |  |
| 83 |  | FQ |  | Math 101S |  |  |  |  |  | 0.28 | 20 | 21 |
| 84 | 74.9 | C |  | Math 108 | 71.6 | 75.2 | 79.2 | 47.2 | 62.8 | 2 | 26 | 29 |
| 85 |  | FQ |  | Math 101S |  |  |  |  |  | 0 | 48 | 30 |
| 86 |  | FQ |  | Math 108 |  |  |  |  |  | 0 | 20 | 21 |
| 87 |  | W |  | Reg - No Math |  |  |  |  |  | 0 | 20 | 21 |
| 88 | 86.6 | B+ |  | Math 102 | 89.6 | 83.8 | 99.9 | 40 | 81.1 | 2.77 | 33 | 47 |
| 89 |  | W |  | Not Reg |  |  |  |  |  | 0 | 34 | 21 |
| 90 | 69.7 | F |  | Not Reg | 56.7 | 69.8 | 88.1 | 28.9 | 42.5 | 0.67 | 25 | 23 |
| 91 |  | FQ |  | Math 101S |  |  |  |  |  | 0 | 25 | 29 |
| 92 | 75 | C |  | Math 108 | 70.1 | 73.8 | 87.5 | 20.6 | 68.3 | 0.88 | 53 | 28 |
|  | Overall Final Grade | Final Letter Grade | Comments | Spring 2013 | Final Exam Grade | Grade Prior to Final | Home- work Grade | Diagnostic Pre-Test | Diagnostic Post-Test | GPA | Accu-placer Arith | Accu- placer Algebra |
| 93 | 72.6 | C |  | Math 110 | 69.3 | 75.9 | 94.1 | 33.3 | 58.9 | 2.38 | 24 | 23 |
| 94 | 84.5 | B |  | Math 109 | 82.1 | 83.3 | 95.3 | 31.1 | 65.6 | 2.33 | 30 | 45 |
| 95 |  | FQ |  | Math 101S |  |  |  |  |  | 0.94 | 28 | 31 |
| 96 | 31 | F  |  | Math 108 | 38.8 | 28.4 |  | 23.3 |  | 0.71 | 31 | 30 |
| 97 |  | W |  | Math 101S |  |  |  |  |  | 1.14 | 52 | 35 |
| 98 | 42.6 | F | Repeat | Not Reg | 37.3 | 44.2 | 46.9 | 28.3 |  | 1.79 |  |  |
| 99 |  | FQ |  | Math 101S |  |  |  |  |  | 0.99 | 56 | 42 |
| 100 | 77.1 | C+ |  | Not Reg | 73.1 | 76.3 | 90.5 | 26.7 | 30 | 1.73 | 47 | 37 |
| 101 |  | W |  | Math 101S |  |  |  |  |  | 0 | 28 | 21 |
| 102 |  | FQ |  | Not Reg |  |  |  |  |  | 0 | 20 | 30 |
| 103 | 81.4 | B- |  | Math 102 | 83.6 | 77.4 | 91.2 | 23.9 | 72.8 | 1.37 | 28 | 21 |
| 104 | 75.6 | C | Repeat | Math 109 | 79.1 | 72.2 | 88.3 | 30.6 | 52.5 | 2.18 |  |  |
| 105 | 60.8 | F |  | Math 101S | 50.7 | 61.1 | 77.4 | 26.7 |  | 0 | 22 | 32 |
| 106 | 79.6 | B- |  | Math 108 | 80.6 | 77.8 | 97.8 | 47.5 | 70 | 2.28 | 25 | 40 |
| 107 |  | FQ |  | Math 101S |  |  |  |  |  | 0 | 41 | 55 |
| 108 |  | FQ |  | Math 101S |  |  |  |  |  | 1.71 | 32 | 42 |
| 109 | 78.2 | C+ |  | Math 108 | 89.6 | 75.3 | 92.3 |  | 68.3 | 2.39 | 41 | 32 |
| 110 |  | FQ |  | Math 109 |  |  |  |  |  | 0.27 | 24 | 47 |
| 111 | 85 | B |  | Math 108 | 82.1 | 83.9 | 95.7 | 27.5 | 57.2 | 2.24 | 24 | 20 |
| 112 |  | FQ |  | Not Reg |  |  |  |  |  | 0 | 43 | 28 |
| 113 |  | W |  | Math 101S |  |  |  |  |  | 0 | 30 | 46 |
| 114 | 76.1 | C |  | Math 108 | 76.1 | 73.4 | 95.5 | 44.2 | 82.8 | 2.78 | 46 | 25 |
| 115 |  | W | Repeat | Math 101S |  |  |  |  |  | 2.32 |  |  |
| 116 |  | W |  | Math 101S |  |  |  |  |  | 1.71 | 22 | 32 |
|  | Overall Final Grade | Final Letter Grade | Comments | Spring 2013 | Final Exam Grade | Grade Prior to Final | Home- work Grade | Diagnostic Pre-Test | Diagnostic Post-Test | GPA | Accu-placer Arith | Accu- placer Algebra |
| 117 | 74.6 | C |  | Math 108 | 71.6 | 75.7 | 90.2 | 20 | 26.7 | 0.47 | 22 | 35 |
| 118 |  | W |  | Not Reg |  |  |  |  |  | 1.15 | 20 | 21 |
| 119 |  | W |  | Math 101S |  |  |  |  |  | 1.41 | 25 | 34 |
| 120 | 75.3 | C |  | Math 108 | 65.7 | 76.4 | 82.9 | 33.9 |  | 2 | 69 | 33 |
| 121 | 72.4 | C |  | Math 108 | 73.1 | 71.1 | 85.6 | 40 |  | 2 | 42 | 28 |
| 122 | 93.7 | A |  | Math 108 | 95.5 | 92.9 | 98.5 | 33.1 | 77.2 | 2.94 | 41 | 33 |
| 123 | 63.7 | F  |  | Math 102 | 61.2 | 62.5 | 83.8 | 49.7 |  | 2.06 | 71 | 46 |
| 124 |  | W |  | Math 101S |  |  |  |  |  | 0.99 | 40 | 39 |
| 125 | 68.2 | F |  | Reg - No Math | 64.2 | 67.3 | 82.7 | 31.7 | 80 | 1.64 | 33 | 26 |
| 126 | 82.4 | B- |  | Math 108 | 83.6 | 80.6 | 87 | 33.1 | 66.1 | 1.57 | 25 | 35 |
| 127 |  | FQ |  | NR - Fin Hold |  |  |  |  |  | 2.04 | 35 | 26 |
| 128 |  | W |  | Math 101S |  |  |  |  |  |  | 30 | 34 |
| 129 | 86.3 | B |  | Math 102 | 89.6 | 83.6 | 97.6 | 54.7 | 84.4 | 2.2 | 37 | 40 |
| 130 |  | FQ |  | Not Reg |  |  |  |  |  | 0 | 24 | 23 |
| 131 | 86.8 | B+ |  | Math 108 | 82.1 | 86.9 | 96.9 | 40.6 | 78.9 | 3.71 | 30 | 34 |
| 132 | 84.7 | B |  | Math 108 | 76.1 | 85.9 | 87.5 | 46.7 | 76.1 | 3.2 | 28 | 30 |
| 133 | 91 | A- |  | Math 108 | 89.6 | 90.6 | 99.5 | 25 | 73.6 | 3.46 | 48 | 48 |
| 134 |  | FQ | Repeat | Not Reg |  |  |  |  |  | 0 |  |  |
| 135 |  | FQ |  | Math 108 |  |  |  |  | 0.67 | 23 | 30 |
| 136 | 89.1 | B+ |  | Math 102 | 86.6 | 88.6 | 99.6 | 38.3 | 78.9 | 2.43 | 40 | 40 |
| 137 |  | FQ |  | Reg - No Math |  |  |  |  |  | 0.53 | 20 | 23 |
| 138 | 88.3 | B+ |  | Math 108 | 85.8 | 88.2 | 95.1 | 31.7 | 75.6 | 2.77 | 66 | 44 |
| 139 | 87.9 | B+ |  | Math 108 | 86.6 | 86.5 | 99.2 | 42.8 | 91.1 | 3.66 | 47 | 35 |
| 140 | 94.7 | A |  | Math 108 | 98.5 | 92.8 | 100 | 43.1 | 79.4 | 1.23 | 26 | 43 |
|  | Overall Final Grade | Final Letter Grade | Comments | Spring 2013 | Final Exam Grade | Grade Prior to Final | Home- work Grade | Diagnostic Pre-Test | Diagnostic Post-Test | GPA | Accu-placer Arith | Accu- placer Algebra |
| 141 |  | FQ |  | Math 123 |  |  |  |  |  | 1.69 | 35 | 37 |
| 142 | 89.9 | A- |  | Math 108 | 98.5 | 86.4 | 98.1 | 34.4 | 79.4 | 3.36 | 33 | 43 |
| 143 | 71.9 | C |  | Math 108 | 65.7 | 72.9 | 78 | 23.3 | 57.2 | 1.33 | 22 | 27 |
| 144 | 80 | B- |  | Reg - No Math | 82.1 | 80 | 93.9 | 42.2 |  | 1.98 | 55 | 43 |
| 145 | 87.6 | B+ |  | Math 108 | 91 | 85.5 | 90.8 | 50.3 | 72.2 | 2.88 | 53 | 40 |
| 146 | 84.5 | B |  | Math 108 | 82.1 | 83.3 | 97.2 | 50.6 | 82.5 | 2.93 | 47 | 27 |
| 147 | 90.5 | A- |  | Math 109 | 91 | 89.9 | 97.9 | 33.9 |  | 3.49 | 50 | 97 |
| 148 |  | W |  | Not Reg |  |  |  |  |  | 0 | 26 | 21 |
| 149 | 77.5 | C+ |  | Math 108 | 88.1 | 73.8 |  | 54.7 | 65.8 | 2.33 | 42 | 32 |
| 150 |  | FQ |  | Not Reg |  |  |  |  |  | 0 | 37 | 38 |
| 151 |  | FQ |  | Math 101S |  |  |  |  |  | 1.24 | 52 | 31 |
| 152 |  | FQ |  | Math 101S |  |  |  |  |  | 1.07 | 24 | 28 |
| 153 | 81.4 | B- | Repeat | Math 108 | 76.1 | 81.9 | 94.9 | 24.2 | 41.1 | 2.18 |  |  |
| 154 |  | W | Repeat | Reg - No Math |  |  |  |  |  | 3.22 |  |  |
| 155 |  | W |  | Math 101S |  |  |  |  |  | 0 | 20 | 28 |
| 156 | 92.8 | A | Repeat | Math 109 | 92.5 | 92.1 | 95.7 | 36.4 | 78.9 | 2.43 |  |  |
| 157 | 68.2 | F |  | Math 108 | 59.7 | 67.5 | 86.7 | 41.7 | 60.8 | 0.67 | 20 | 35 |
| 158 | 65.7 | F |  | Not Reg | 62.3 | 66.1 | 82.9 | 39.4 |  | 0 | 32 | 46 |
| 159 | 93.4 | A |  | Math 108 | 86.6 | 94.4 | 100 | 42.2 | 81.7 | 3.55 | 35 | 38 |
| 160 | 85.9 | B |  | Math 108 | 83.6 | 85.3 | 97.4 | 31.7 | 81.1 | 2.9 | 21 | 31 |
| 161 | 78.6 | C+ |  | Math 109 | 70.9 | 78.2 | 95.1 | 33.6 | 69.4 | 1.7 | 37 | 39 |
| 162 | 82.9 | B  |  | Math 108 | 86.6 | 82.5 | 92 | 28.3 | 66.7 | 2.63 | 48 | 38 |
| 163 | 79 | C+ |  | Math 108 | 68.7 | 79.3 | 95.8 | 28.3 | 59.4 | 0.77 | 33 | 32 |
| 164 | 84.2 | B |  | Math 108 | 79.1 | 85.5 | 99.2 | 28.3 | 77.2 | 2.87 | 21 | 31 |
|  | Overall Final Grade | Final Letter Grade | Comments | Spring 2013 | Final Exam Grade | Grade Prior to Final | Home- work Grade | Diagnostic Pre-Test | Diagnostic Post-Test | GPA | Accu-placer Arith | Accu- placer Algebra |
| 165 | 87.7 | B+ |  | Math 108 | 85.1 | 86.7 | 98.1 | 28.3 | 80.6 | 3.77 | 36 | 31 |
| 166 | 96.5 | A |  | Math 102 | 95.5 | 96.3 | 99.5 | 52.5 | 77.8 | 3.77 | 20 | 29 |
| 167 |  | W |  | Not Reg |  |  |  |  |  | 0.65 | 20 | 28 |
| 168 |  | FQ |  | Math 101S |  |  |  |  |  | 0.49 | 22 | 39 |
| 169 | 58.1 | F |  | Math 108 | 40.3 | 62.8 | 66.6 | 23.3 |  | 0 | 25 | 42 |
| 170 |  | FQ |  | Reg - No Math |  |  |  |  |  | 1.69 | 22 | 21 |
| 171 |  | W |  | Math 101S |  |  |  |  |  | 0 | 23 | 23 |
| 172 | 87.3 | B+ | Repeat | Reg - No Math | 86.6 | 86.1 | 99.8 | 37.8 | 67.8 | 2.51 |  |  |
| 173 | 63 | F |  | Math 108 | 55.2 | 64 | 85 | 38.3 |  | 0 | 27 | 32 |
| 174 | 92.7 | A |  | Math 102 | 91 | 92.1 | 100 | 37.2 | 78.9 | 3.66 | 41 | 37 |
| 175 | 86.5 | B+ |  | Math 108 | 81.3 | 86.4 | 99.5 | 36.7 | 78.9 | 3.25 | 82 | 36 |
| 176 | 91.9 | A- | Repeat | Math 108 | 98.5 | 89.6 | 99.5 | 48.9 | 50 | 3.05 |  |  |
| 177 | 89 | B+ |  | Math 109 | 86.6 | 88.8 | 98.9 | 43.9 | 81.7 | 3.44 | 34 | 28 |
| 178 | 92.6 | A |  | Math 108 | 95.5 | 90.6 | 100 | 17.5 | 77.8 | 3.46 | 47 | 24 |
| 179 |  | W | Repeat | Math 101S |  |  |  |  |  | 1.54 |  |  |
| 180 | 68.6 | F |  | Math 109 | 46.3 | 71.3 | 93.8 | 24.2 |  | 0 | 35 | 45 |
| 181 | 83.3 | B |  | Math 108 | 91 | 80.5 | 83.2 | 43.9 |  | 3.23 | 72 | 42 |
| 182 | 74.8 | C |  | Math 108 | 56.7 | 76.2 | 98.4 | 37.2 | 76.7 | 2.43 | 34 | 32 |
| 183 | 93.3 | A |  | Math 102 | 96.3 | 91.3 | 100 | 50 | 81.1 | 3.94 | 29 | 41 |
| 184 | 76.2 | C |  | Math 108 | 73.1 | 76.5 | 76.8 | 25.6 | 71.4 | 1.7 | 52 | 45 |
| 185 | 83.5 | B |  | Math 102 | 88.1 | 81.4 | 97.1 | 63.3 |  | 3.01 | 35 | 27 |
| 186 |  | W |  | Math 101S |  |  |  |  |  | 2.3 | 29 | 37 |
| 187 | 85.6 | B |  | Math 108 | 83.6 | 84.9 | 95.9 | 23.9 | 60.6 | 3.56 | 26 | 27 |
| 188 | 85.1 | B |  | Math 108 | 77.6 | 85.8 | 87.8 | 73.6 | 77.8 | 2.62 | 67 | 35 |
|  | Overall Final Grade | Final Letter Grade | Comments | Spring 2013 | Final Exam Grade | Grade Prior to Final | Home- work Grade | Diagnostic Pre-Test | Diagnostic Post-Test | GPA | Accu-placer Arith | Accu- placer Algebra |
| 189 |  | FQ |  | Math 101S |  |  |  |  |  | 0 | 48 | 43 |
| 190 | 86.5 | B+ |  | Math 109 | 73.1 | 89.2 | 91.5 | 47.2 | 78.9 | 3.08 | 66 | 37 |
| 191 |  | W |  | Math 101S |  |  |  |  |  | 0.67 | 20 | 37 |
|  | 80.3 |  |  |  | 77.7 | 79.7 | 91.8 | 36.1 | 69 | 1.7 | 35.2 | 33.5 |

**Math 102 Intermediate Algebra**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Overall Final Grade | Final Letter Grade | Comments | Final Exam Grade | Grade Prior to Final | Home- work Grade | Quiz Grade | Diagnostic Pre-Test | Diagnostic Post-Test | Accu-placer Arith | Accu- placer Algebra |
| 1 | 76.4 | C | Accuplacer | 65.6 | 77.3 | 98.9 | 92.4 | 33.2 | 57.6 | 62 | 65 |
| 2 | 79.5 | B- | Math 101S | 75.6 | 79.4 | 92.4 | 83.6 | 35 | 81.9 |  |  |
| 3 |  | FC | Repeat |  |  |  |  |  |  |  |  |
| 4 | 87.9 | B+ | Accuplacer | 75.6 | 91.7 | 98.3 | 87.2 | 31.8 | 57.2 | 23 | 61 |
| 5 | 59.6 | F | Math 101S | 46.7 | 60 | 87.4 | 86.7 | 17.1 | 60.5 |  |  |
| 6 | 75.8 | C | Math 101S | 60 | 79.6 | 93.7 | 83.5 | 10.7 | 39.5 |  |  |
| 7 | 67.6 | D+ | Math 101S | 63.3 | 66 | 99.8 | 61.2 | 38.2 | 64.5 |  |  |
| 8 | 86.5 | B+ | Accuplacer | 81.1 | 87.5 | 98.1 | 82.5 | 22.5 | 68.5 | 48 | 63 |
| 9 | 78.1 | C+ | Math 101S | 72.2 | 78.1 | 93.3 | 87.6 | 36.8 | 70.3 |  |  |
| 10 | 82.9 | B | Math 101S | 76.7 | 85.3 | 90.2 | 67.8 | 18.2 | 32.2 |  |  |
| 11 | 92 | A- | Accuplacer | 85.6 | 93.4 | 100 | 96.1 | 36.1 | 81.9 | 94 | 55 |
| 12 | 78.6 | C+ | Repeat | 67.8 | 81.3 | 93.9 | 76.4 | 28.6 | 47.8 |  |  |
| 13 | 98.7 | A  | 109/110 | 97.8 | 99.3 | 98.4 | 93.4 | 31.4 | 69.2 |  |  |
| 14 | 74.6 | C | 109 | 67.8 | 74.3 | 97.4 | 81.7 | 20.4 | 83.3 |  |  |
| 15 | 93.1 | A | Repeat | 85.6 | 95.3 | 99.4 | 94.5 | 21.8 | 52.9 |  |  |
| 16 | 84.4 | B | 109/110 | 68.9 | 88.7 | 99.8 | 86.5 | 24.4 | 64.9 |  |  |
| 17 | 68.5 | D+ | Repeat | 64.4 | 69.7 | 82.4 | 47.9 | 31.4 | 36.2 |  |  |
| 18 | 59 | F | Math 101S | 44.4 | 61.7 | 79.1 | 72.5 | 41.1 | 64.9 |  |  |
| 19 | 79.7 | B- | Repeat | 90 | 76.1 | 86.3 | 59.1 | 17.1 | 42.8 |  |  |
| 20 | 56.6 | F | Math 101S | 34.4 | 63.2 | 90.5 | 26.5 | 19.6 | 26.8 |  |  |
| 21 | 98 | A | 109/110 | 100 | 96.8 | 100 | 94.1 | 43.6 | 86.7 |  |  |
| 22 | 85.8 | B | Math 101S | 76.7 | 87.5 | 98.3 | 80.9 | 17.9 | 47.8 |  |  |
|  | Overall Final Grade | Final Letter Grade | Comments | Final Exam Grade | Grade Prior to Final | Home- work Grade | Quiz Grade | Diagnostic Pre-Test | Diagnostic Post-Test | Accu-placer Arith | Accu- placer Algebra |
| 23 | 95.3 | A | Placed | 100 | 91.6 | 100 | 94.9 | 44.3 | 65.2 | 48 | 51 |
| 24 | 67.2 | D+ | Placed | 61.1 | 65.8 | 90.8 | 88.3 | 13.2 | 35.9 | 45 | 65 |
| 25 |  | W | Placed |  |  |  |  |  |  | 49 | 57 |
| 26 |  | W | Repeat |  |  |  |  |  |  |  |  |
| 27 |  | W | Repeat |  |  |  |  |  |  |  |  |
| 28 |  | W | Math 101S |  |  |  |  |  |  |  |  |
|  | 79.4 |  |  | 72.2 | 80.4 | 94.3 | 79.4 | 27.6 | 58.2 |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |