September 18, 2017

Magda Magradze
Chief Executive Officer
Millennium Challenge Account – Georgia

Dear Ms. Magradze,

Please find enclosed herewith the Academic Course Delivery Report for the 2016-17 Academic Year, a deliverable for the Provision of Degree Accreditation and Institutional Support Initiative for Science, Technology, Engineering, and Mathematics, as required per the contract.

Per the terms of the agreement, please provide review comments within 10 business days.

Please feel free to contact me if you have any questions.

Sincerely,

Kenneth D. Walsh, Ph.D.
Dean, SDSU-Georgia

SAN DIEGO STATE UNIVERSITY

Georgia

Academic Course Delivery Report for Academic Year 2016-2017

September, 2017

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1 INTRODUCTION

1.1 Project Overview

The SDSU-Georgia program was initiated in July of 2014 under a 15-month contract to cover those activities prior to the enrollment of students. This period was referred to as the "pre-enrollment period." The first cohort of students was enrolled in September of 2015. This report is a requirement of the subsequent contract, initiated in October of 2015, which covers the remaining 45 months of the project.

1.2 Purpose of this document

This document is intended to provide a summary of the academic activities and outcomes during the project. It contains metrics and narrative description of the courses conducted in a given semester and the related student outcome achievement, material that will ultimately be incorporated in accreditation reports. The report is a regularly submitted document that is expected to be submitted after each academic semester, a reasonable time after the end of the semester.

2 Enrollment

2.1   Program Enrollment

During the Fall semester of 2015, the first cohort of students began their studies, with a total of 81 students enrolled in the Fall. As documented in past reports, some changes occurred, with a few students changing majors, universities, or becoming academically disqualified, and also some new students arriving via mobility. In the Fall of 2016, the second cohort was added and began their studies. The second cohort admission consisted of 126 students: subsequently one student accepted a study abroad opportunity outside Georgia and deferred her start date. Thus, there were a total of 125 new students enrolled in the Fall 2016. For Spring 2017 one new student transferred and three students left the program. At the end of Spring 2017 six students were disqualified from the second cohort and one from the first cohort, and two students from cohort 1 and one from cohort 2 departed voluntarily. The breakdown of students by major for Spring 2017 is presented in Table 2-1. Note this data does not include the five exchange students from San Diego who studied at SDSU-G during the Spring semester. One student from cohort 1 changed major to Computer Science as of Spring 2017.

Table 2-1: Student Enrollment in SDSU-G by Major, Spring 2017

Major	Number of Students							
	1st cohort	2nd cohort	TSU	ISU	GTU	Women	Int'l	S/S
Electrical Engineering	15	17	22	7	3	2	3	4
Computer Engineering	43	30	56	14	3	24	7	12
Chemistry	17	34	51			33	1	10
Computer Science	1	43	43			15	1	8
Totals (semester start)	76	123	172	21	6	74	12	34
Disqualifications at end of semester	1	5	5	0	0	1	1	1
Voluntary departures at end of semester	2	1	1	2	0	1	0	0
New expected totals for Fall 2017	73	117	166	19	6	72	11	33

S/S=Social support, students with official government status in a social support category
TSU=enrollment via Tbilisi State University as partner university
ISU=enrollment via Ilia State University as partner university
GTU=enrollment via Technical University as partner university

2.2   Course Offerings

SDSU-G uses a cohort model for student enrollment, with the goal of achieving high 4-year graduation rates. Thus, student schedules were centrally generated from the Dean's office. As students move forward with their studies and additional elective content becomes available in Georgia, we may begin migrating toward a student-selected scheduling model.

Based on the major academic plans (MAPs) for these STEM degrees, there are critical courses a student must complete at a given time to complete their degrees within a 4-year time horizon. For Engineering and Computer Science majors, Calculus 1 (Math 150) is such a course. For Chemistry Majors, General Chemistry (Chemistry 200) is such a course. Both courses require satisfactory performance on a placement test, and if such performance is not achieved the student must take a pre-requisite course – Math 141 and Chemistry 100, respectively. In order to allow students to complete their majors within the 4-year time period and avoid relying heavily on summer classes, we have been splitting semesters into two halves for some courses. This allowed us to make sure all

students could get on the four-year track by taking both the prep course and the first semester major course in their first semester.

However, two findings have changed our thinking about this. First, the split semester concept has been unpopular with students, who feel it is overly compressed and difficult, and it also has been a matter of concern by instructors in the follow-on courses that the students may not have achieved adequate depth in those subjects, for the same reasons. Second, at the completion of the Spring 2017 semester, we conducted an experiment in deploying several courses in a summer period, without significant complaint or concerns being raised. Based on all of this, for the future we intend to terminate the split semester practice for most cases. The academic calendar for Spring 2017 is presented in **Error! Reference source not found.** Course titles and other details for all courses are presented Table 2- for the Spring 2017 semester. Course descriptions for each course are available in the SDSU General Catalog (http://arweb.sdsu.edu/es/catalog/curriculumIndex.html).

Figure 2-3. Academic Calendar for Spring 2017

Table 2-2 Course Titles and Units for Spring 2017 Courses

Course Title	Number of Units	Major Credit?	Majors Enrolled	Notes
Math 141 Precalculus	3	N	Chem	
Math 150 Calculus I	4	Y	Chem	
Math 151 Calculus II	4	Y	Engr'g/C.S.	
Math 245 Discrete Mathematics	3	Y	Engr'g	
Math 252 Calculus III	3	Y	Chem/Engr'g	
Physics 195 Principles of Physics	3	Y	All	
Physics 195 Lab Principles of Physics Laboratory	1	Y	All	
Biology 203 Principles of Cell and Molecular Biology	3	Y	Chem	

Course Title	Number of Units	Major Credit?	Majors Enrolled	Notes
Biology 203 Lab Principles of Cell and Molecular Biology Laboratory	1	Y	Chem	
Chemistry 201 General Chemistry	5	Y	Chem	With Lab
Chemistry 232 Organic Chemistry	3	Y	Chem	
Chemistry 232 Lab Organic Chemistry Laboratory	1	Y	Chem	
Chemistry 432 Organic Chemistry	3	Y	Chem	
Chemistry 432L Organic Chemistry Laboratory	1	Y	Chem	
Comp E 260 Data Structures and Object Oriented Programming (OOP)	3	Y	Engr'g	
Computer Engineering 271 Computer Organization	3	Y	Engr'g	
Electrical Engineering 210 Electrical Network (Circuit) Analysis Part 1	3	Y	Engr'g	
Electrical Engineering 300 Computational and Statistical Methods for Electrical Engineers	3	Y	Engr'g	
Computer Science 107 Introduction to Programming	3	Y	C.S.	
Aerospace Engineering 280 Methods of Analysis	3	Y	Engr'g	
Construction Engineering 101 Construction Engineering	3	Y	Engr'g/Chem	GE
Communication 103 Oral Communication	3	Y	All	GE
Linguistics 94 Developmental Writing for International or Bilingual Students	3	N	All	CR/NC
Linguistics 100 English Composition for International Students	3	Y	All	GE
Linguistics 200 Advanced English for International Students	3	Y	All	GE
Political Science 102 Introduction to American and California Government and Politics	3	Y	All	Am Inst

Engr'g=Engineering majors
EE = Electrical Engineering majors
Chem = Chemistry majors
C.S = Computer Science majors
GE = course taken as part of general education program
Am Inst = course taken as part of American Institutions requirement
CR/NC=course taken as credit/no credit, not for letter grade

3 OVERALL ACADEMIC PERFORMANCE

3.1 Course and Overall Performance

For all courses other than Linguistics 94, grades were assigned on a scale ranging from A to F, where A is 'outstanding achievement' and F is 'failing'. Instructors in these courses could elect to assign + and – grades as well. The Spring 2017, outcomes for each course are presented in Table 3. Average loads by cohort and major, and average GPA outcomes, are presented in Table 3-2 for each semester.

Table 3-1. Course Outcomes for Spring 2017 Courses

Course	Units	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F	Total	GPA
AE 280	3	20	-	-	11	-	-	23	-	-	-	0	1	55	2.89
Bio 203	3	10	1	3	1	1	1	0	0	0	0	0	0	18	3.48
Bio 203L	1	14	1	3	0	0	0	0	1	0	0	0	0	19	3.75
Chem 201	5	4	7	3	11	0	2	4	0	0	0	0	0	31	3.14
Chem 232	3	5	0	0	10	0	0	3	0	0	1	0	0	19	3.00
Chem 232L	1	12	0	0	4	0	1	2	0	0	0	0	0	19	3.49
Chem 432 (ext	3	6	0	1	2	0	0	4	0	2	0	2	1	18	2.52
Chem 432L	1	12	0	4	2	0	0	0	0	0	0	0	0	18	3.73
Comm 103	3	37	32	14	14	5	6	3	2	2	3	2	4	124	3.21
CompE 260	3	8	12	0	8	0	0	11	0	0	0	0	2	41	2.99
CompE 271	3	24	4	3	7	2	1	4	1	0	1	1	0	48	3.35
CS 107	3	20	7	3	3	4	2	2	1	0	0	0	0	42	3.47
Con E 101	3	4	13	13	18	8	7	3	1	3	2	0	5	77	2.76
EE 210	3	13	0	3	6	0	0	17	0	0	11	0	0	50	2.50
EE 210 (ext)	3	1	0	0	1	0	0	3	0	0	4	0	0	9	1.89
EE 300 (ext)	3	20	3	2	3	3	1	1	1	0	0	0	3	37	3.18
Ling 94	3				16 received CR, 8 received NC									24	N/A
Ling 100	3	32	7	3	0	1	0	1	2	0	0	0	2	48	3.58
Ling 200	3	49	9	3	1	3	0	5	1	0	0		2	74	3.55
Math 141	3	1	3	2	2	1	0	0	0	0	0	0	4	13	2.34
Math 150	4	15	7	7	3	4	0	6	0	1	0	0	1	44	3.23
Math 151	4	28	3	2	17	5	2	22	0	0	0	0	1	80	3.04
Math 245	3	16	4	2		3	0			0	0	0	1	42	3.10
Math 252	4	8	7	2	5	0	0	8	0	0	0	0	0	30	3.18
Phys 195	3	78	10	4	2	1	4	1	1	0	0	0	3	104	3.69
Phys 195L	1	29	15	16	1	2	0	2	2	0	0	1	3	71	3.39

Table 3-2. Average GPA's and Student Loads by Major and Semester

Cohort Number and Semester	Computer Engineering		Electrical Engineering		Chemistry		Computer Science	
	Avg. Hours	Sem GPA	Avg. Hours	Sem GPA	Avg. Hours	Sem GPA	Avg. Hours	Sem GPA
Cohort 1, F15	10	3.38	10	3.11	9	3.24	--	--
Cohort 1, S16	15	3.01	16	3.01	17	3.54	--	--
Cohort 1, F16	18	3.11	18	2.99	15	3.13	--	--
Cohort 1, S17	15	3.03	15	2.71	17	3.56	--	--
Cohort 1, ExtS17	6	3.11	5	2.79	7	3.15	--	--
Cohort 1, Cumulative over all semesters	*63*	*3.24*	*64*	*2.95*	*65*	*3.41*	*--*	*--*
Cohort 1, Average across all majors	Average Spring 2017 GPA of 3.03, 21.0 units (including ExtS17). Average Cumulative GPA of 3.20 (median 3.33)							
Cohort 2, F16	12	3.14	12	2.68	12	2.67	14	3.23
Cohort 2, S17	16	3.28	17	3.29	17	3.50	16	3.38
Cohort 2, ExtS17	3	2.82	3	3.38	3	3.32	3	3.14
Cohort 2, Cumulative over all semesters	*31*	*3.17*	*32*	*3.26*	*32*	*3.44*	*33*	*3.26*
Cohort 2, Average across all majors	Average Spring 2017 GPA of 3.19, 19.0 units (including ExtS17). Average Cumulative GPA of 3.09 (median 3.31)							

Figure 3-1 presents a histogram of GPA performance for the two cohorts. Cumulative GPA is shown on the vertical axis, which for cohort 1 accumulates across 4 semesters and the extended session, and for cohort 2 accumulates across 2 semesters and the extended session. A total of 30 students from cohort 1 and 58 students from cohort 2 achieved Dean's List status in the Spring semester, meaning that they completed at least 12 baccalaureate units with a GPA of 3.50 or above. One student from cohort 1 and five students from cohort 2 continue to maintain 4.0 cumulative GPA's.

Five (5) students from cohort 2 achieved a cumulative GPA under 2.0 as of the end of the Spring 2017 semester, and so were placed on academic probation. To maintain academic eligibility and work towards a return to good academic standing, a student must achieve a GPA above 2.0 in subsequent semesters, and must bring their overall GPA above 2.0 within 3 semesters. In the Spring semester, one student from cohort 1 and 5 students from cohort 2 who were on probation at the end of the Fall, 2016, semester were academically disqualified. A time history of probations, departures, and academic disqualifications with continuation rates is presented in Table 3-3 for both cohorts. There is a great deal of overlap between students who are placed on probation and those who ultimately leave. Figure 3-2 presents the outcome history for the students who have been placed on probation. Note that if a student reaches a cumulative GPA above 2.0, they are returned to good academic standing and are no longer on academic probation.
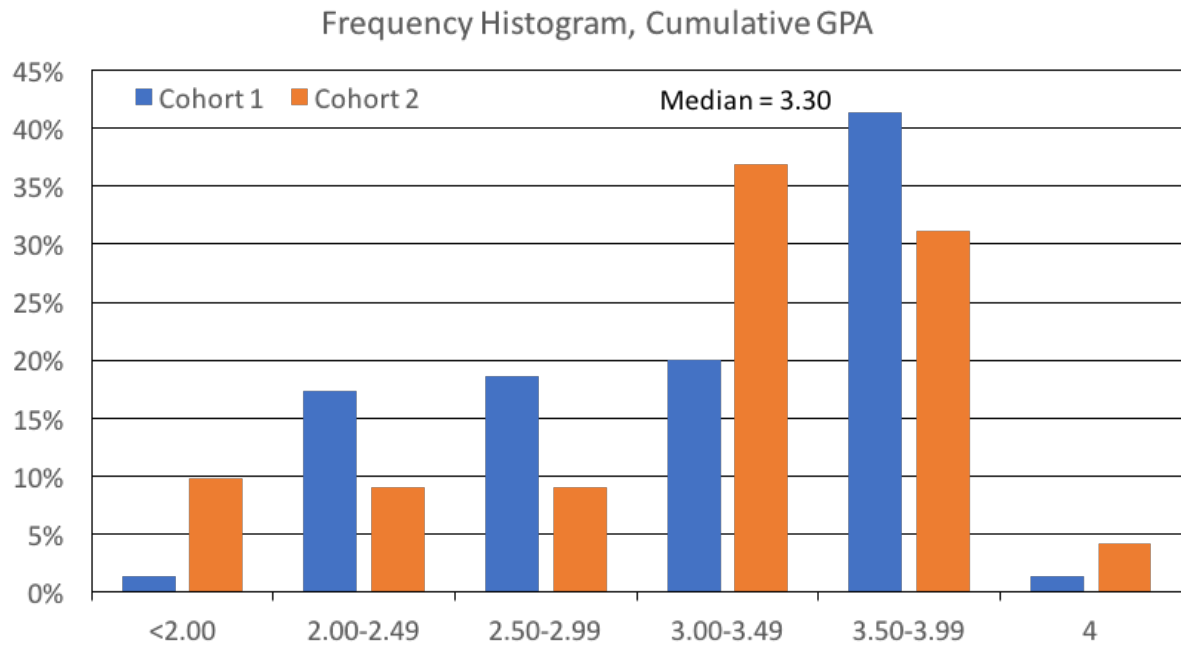
Frequency Histogram, Cumulative GPA

Figure 3-1: Histogram of Cumulative GPA performance for cohorts 1 and 2, Spring 2017

Table 3-3. Continuation Rates by Cohort

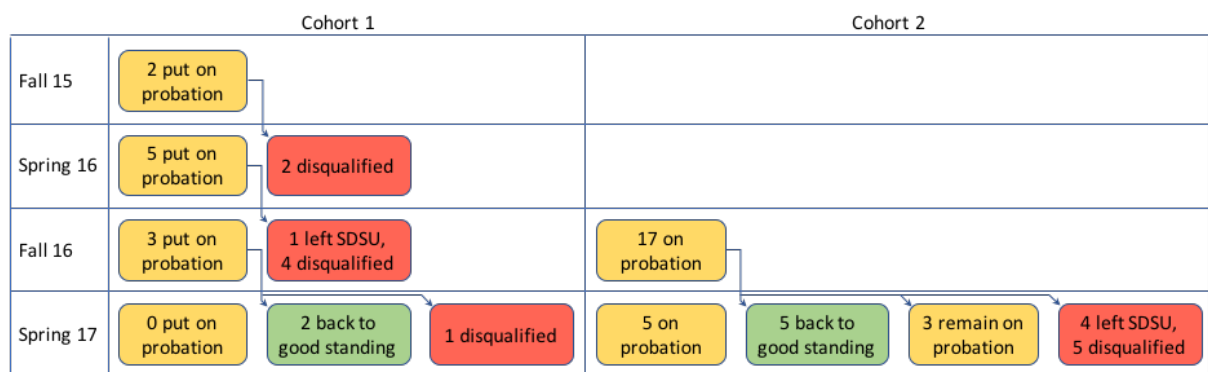|	Cohort	Start of Academic Year	New students Added	Probation	DQ	Left	End of Academic Year	Continuation Rate
15/16	1	81	4	2 Fall, 5 Spring	2	2	81	81/85=95.3%
16/17	1	81	0	3 Fall, 0 Spring	5	3	73	73/81=90.1%
	2	125	1	17 Fall, 5 Spring	5	4	117	117/125=93.6%

Figure 3-2: Probation Outcomes by Semester and Cohort

In addition to overall performance statistics, subgroup performance was evaluated to determine if there are differences by gender or social support status (Table 3-4). For cohort 1, In the Fall of 2015, there was no statistically significant difference observed, either for social support status or gender. For the Spring of 2016, there was once again no statistically significant difference between the performance of students who qualify for social support versus those who do not. However, there was a statistically significant difference between the performance of men and women. Starting in the

Fall of 2016, this difference was no longer statistically significant. For the Spring of 2017, there was no statistically significant difference between the performance of either the gender or social support subgroups for either cohort. In short, statistically speaking, there is no difference in performance as measured by GPA between men and women, or between those who qualify for social support and those who do not.

Table 3-4. Average GPA Performance by Gender and Social Support subgroups

Cohort	Spring 2017 GPA	Cum. GPA	Women Cum. GPA	Men Cum. GPA	SS Cum. GPA	Non-SS Cum. GPA
1	3.03	3.20	3.34	3.15	3.32	3.17
2	3.19	3.09	3.21	3.00	3.04	3.10

It is useful to benchmark these data against the outcomes on the main campus. Academic performance compares favorably to main campus when considering both GPA and continuation rates. The first-time freshmen average GPA on main campus ranges around 2.92, with a small "achievement gap" between students of color as compared to all others. SDSU has made very significant strides in reducing this gap over the last several years. Comparing Table 3-4 and Table 3-5, SDSU-G student performance as measured by GPA is strong. Continuation rates on campus are also lower than those noted in Table 3-3.

Table 3-5. Average Outcomes after Year 1 by Gender and Ethnicity on Main Campus

	Overall Average Year 1	Women Year 1	Men Year 1	Students of Color Year 1	All Others Year 1
GPA	2.92	3.01	2.80	2.83	3.02
Cont. Rate	87.5%	87.5%	87.4%	87.6%	87.4%

The number of students changing majors in Georgia is quite small, with only a handful of major changes having occurred to date. This is substantially different than in main campus. Recent data show that of the starting cohort of students in San Diego, only 37% graduated with a degree from the same department in which they entered the university, and only 42% from the same College in which they entered. This suggests that the majority of students make changes to their entry major, and is likely one part of the reason that a minority students complete their studies in San Diego in four years. Graduation rates after 4, 5, and 6 years in San Diego are 34%, 65%, and 74%, respectively.

4   PERFORMANCE ANALYSES

4.1   Introduction

The overall GPA results presented in Section 3 continue to be encouraging about the capabilities of the Georgian cohorts. Further, the GPA results of the two cohorts are now quite similar; after the Fall of 2016 cohort 2 showed a lower GPA performance as compared to cohort 1. As noted, students in Georgia show overall performance on par with, or above, their colleagues on the main campus. For example, the rate of students scoring D/F grades in challenging courses including the calculus sequence and the chemistry courses was substantially below the rate on main campus. In this section, some additional analyses are presented in which the data were examined in more depth to continue evaluating the impact of English language fluency.

4.2   English Language

In the report for the Fall semester of 2015, initial results suggested that incoming English competency was related to academic performance. Data from the Spring semester suggested that this effect persisted. Recall that there was a threshold score on the English subtest of the NAEC exam required, and then students were further assessed using a language placement exam. The placement test is used to determine the appropriate level at which to start student engagement with the Communications and Critical Thinking capacity within the University's General Education curriculum. Figure 4-1 shows the flow chart for the linguistics course sequence that results from this placement testing. By SDSU policy, students for whom English is not their first language are directed into a course sequence in Linguistics, starting with the 3-unit Linguistics 100, English Composition for International Students. Students who do not score high enough on the placement test must first enroll in Linguistics 94, Developmental Writing for International or Bilingual Students. This is also a 3-unit course, but these are pre-baccalaureate units. Ling 94 is taught Credit/No credit (CR/NC). Students must achieve Credit (Cr) in this course to move to Ling 100. To obtain credit, they should reach the equivalent of a grade C. Students who do well enough on the placement test are directed into Linguistics 100. At the end of the Fall semester, students who complete Ling 94 with CR are then advanced to Linguistics 100, while students who achieve NC repeat Linguistics 94. Students who pass Linguistics 100 are advanced to Linguistics 200, while students who fail that class would repeat Linguistics 100. Thus, there are in effect three groups of students going into the Spring semester of the Freshman year. In this section, the performance of these three groups is presented, for both cohorts. This means that for cohort 1, students were grouped based on where students were in the Spring of 2016, and for cohort 2, students were grouped based on where they were in the Spring of 2017. These three groups are effectively a categorization by incoming fluency, with the lowest incoming English fluency students remaining in Ling 94 through the Spring, the highest incoming English fluency students advancing to Ling 200 in the Spring, and a middle group in Linguistics 100 in the Spring.
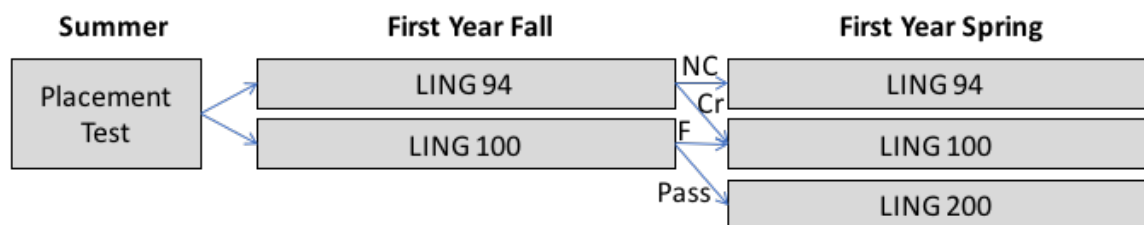

Figure 4-1: Flow Chart for Student Progress in Linguistics Track Courses

Table 4-1 presents a summary of the average performance in terms of cumulative GPA for all students based on these subgroups.

Table 4-1: Average Cumulative GPAs at end of Fall, 2016 and Spring, 2017 semesters by Spring, Freshman Year, Linguistics Student Subgroups

Cohort	Students in Ling 94 Freshman Year, Spring		Students in Ling 100 Freshman Year, Spring		Students in Ling 200 Freshman Year, Spring	
	F16	S17	F16	S17	F16	S17
1 (rising Juniors)	2.94	3.04	3.16	3.14	3.56	3.60
2 (rising Sophomores)	2.03	2.10	3.08	3.34	3.35	3.39

Looking first within the cohorts, that is, horizontally across each row of the table, there is an apparent trend of increasing average GPA from left to right, with increasing incoming language fluency. Within each language group, there is also a trend toward increasing cumulative GPA's from semester to semester. Not all the differences observed are statistically significant, however. The statistically significant differences between the subgroups are as follows:

- In cohort 1, there is a statistically significant difference between the performance of the Ling 200 group and the other two groups. However, the Ling 94 and Ling 100 groups do not exhibit a statistically significant difference. Interestingly, the Ling 94 group started out well below the others, but has "caught up" to the middle group. As noted in the previous report, this is in part because the Ling 94 group disproportionately contained students who have since been academically disqualified, but also represents the continued language development of this group.
- In cohort 2, by contrast, there is no statistically significant difference between the Ling 100 and Ling 200 groups' cumulative GPAs, but the Ling 94 group shows a statistically significant difference between both groups.
- While both cohorts seem to show a trend of increasing GPA from the Ling 94 group to the Ling 200 group, there is nonetheless a difference between them. In cohort 1, from the very beginning, the Ling 200 group has shown better GPA results, and at this point there is no significant difference between the Ling 94 and Ling 100 groups. By contrast, for cohort 2, there is little difference between the Ling 100 and 200 groups, but the Ling 94 group shows lower GPA results.

Looking now between the cohorts, that is, vertically in the columns, it is clear from Table 4-1 that the performance of the subgroups of students in Linguistics 100 and Linguistics 200 are similar between cohort 1 and 2. The noted differences are small and not statistically significant. However, there is a statistically significant difference between the group of students in cohort 1 who were in Ling 94 in the Spring of 2016, and the students in cohort 2 who were in Ling 94 in the Spring of 2017. These data are presented in box and whisker format in Figure 4-2 and Figure 4-3, where the distribution of grades and their differences are more visually apparent.
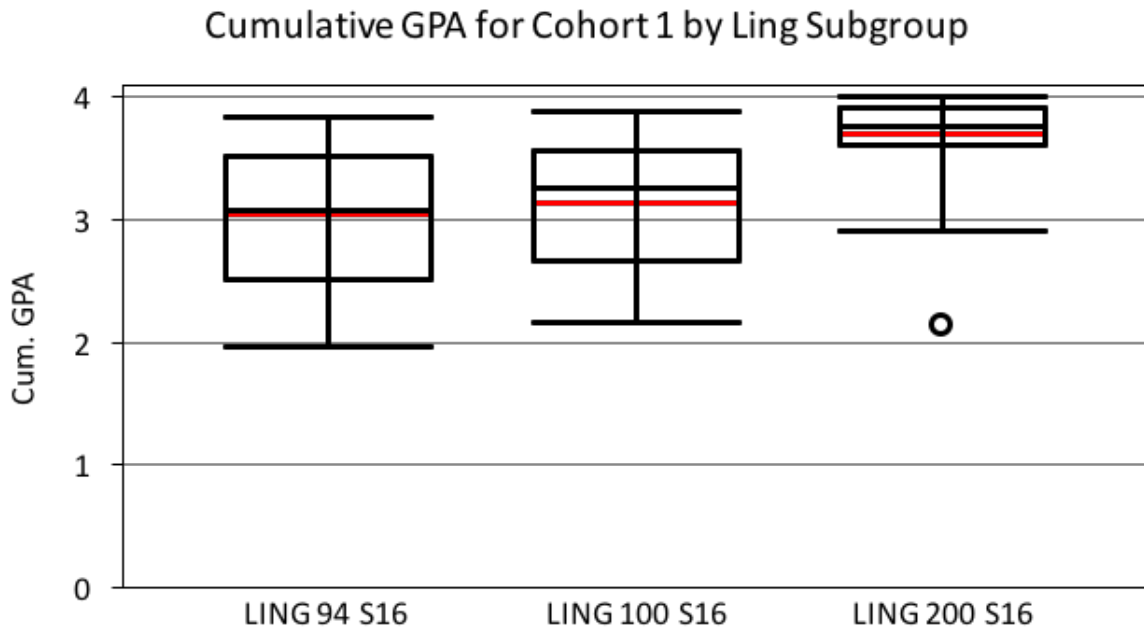
Cumulative GPA for Cohort 1 by Ling Subgroup

Figure 4-2: Box and Whisker Chart of Cumulative GPA for Ling Subgroups, Cohort 1

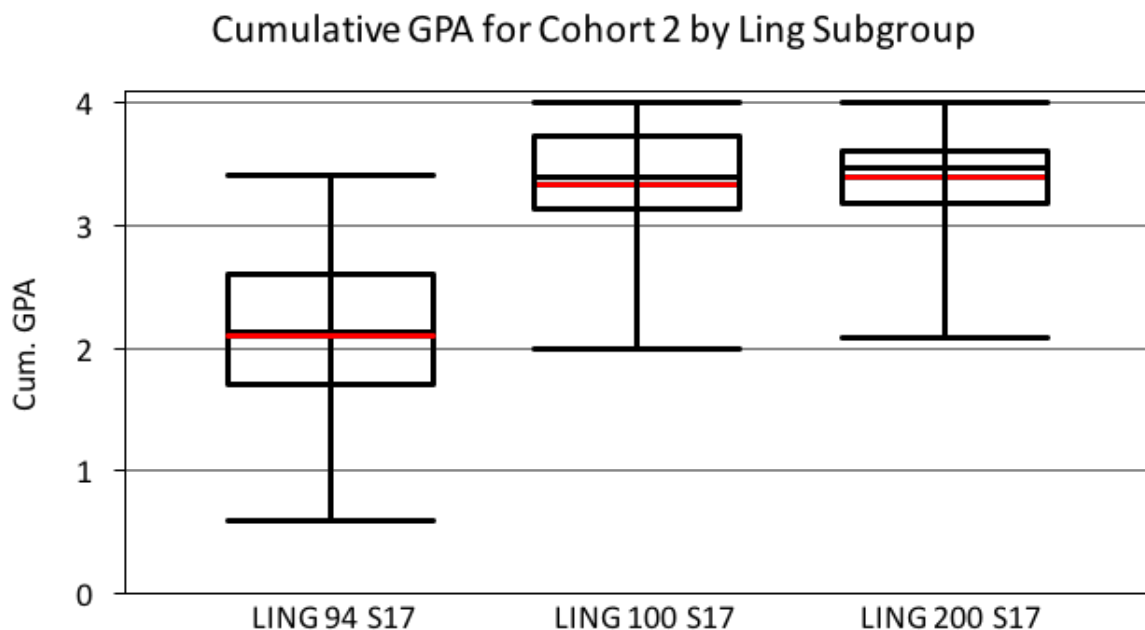## Cumulative GPA for Cohort 2 by Ling Subgroup

Figure 4-3: Box and Whisker Chart of Cumulative GPA for Ling Subgroups, Cohort 2

The average GPA of the Ling 94 subgroups includes a disproportionate fraction of the students who receive academic probation. This has been noted in previous reports as well. In Table 4-2, the history of students who receive probation is presented. In each row, the table shows the number of students in each cohort who are placed on academic probation at the end of that semester (the column titled "Total Prob." In the next column to the right, the number out of that total who are in the Ling 94 subgroup is presented. The next column, titled "Back to Good Stdg." shows the number out of those on probation in that subgroup who ultimately returned to good academic standing; that is, the number who were able to remove their probation after a subsequent semester. As shown in Figure 3-2, students who do not remove their probation ultimately leave the university.

Table 4-2: Probation Populations and Outcomes by Linguistics Subgroup

Semester	Cohort	Total Prob.	Ling 94	Back to Good Stdg.	Ling 100	Back to Good Stdg.	Ling 200	Back to Good Stdg.
Fall 2015	1	2	2	0	0	-	0	-
Spring 2016	1	5	3	0	2	0	0	-
Fall 2016	1	3	1	0	1	1	1	1
	2	17	14	2	2	1	1	1
Spring 2017	1	0	-	-	-	-	-	-
	2	8*	8	-	-	-	-	-
TOTALS**		32	25	2	5	2	2	2

Notes: *Of the 8, 3 continue probation from previous semester, 5 new probation

  **Totals count the 3 continuing students only once

It is very clear from Table 4-2 that the overwhelming majority of students who are placed on academic probation come from the Ling 94 group. Comparatively few students from the Ling 100 and 200 groups have been placed on academic probation. More importantly, only a small fraction of students from Ling 94 group who are placed on probation returned to good academic standing later – so far, only 2 out of the 25 have done so. By contrast, 2 out of the 5 students from the Ling 100 subgroup and 2 out of the 2 students from the Ling 200 subgroup have successfully returned to good academic standing.

These data are suggestive that:

(a) Students in the Ling 94 subgroup tend to have lower academic performance, at least at first, and are at much higher risk of academic probation leading to leaving the university either by choice or by disqualification. This observation motivated a change in practice in the Summer of 2017. This year, we conducted placement testing in early August, and placed students who tested into Linguistics 94 into an intensive summer English improvement program, covering five hours a day for five weeks. Placement testing will be repeated at the end of this program right before classes start. The objectives of this program are to identify students who need more English support sooner, and to improve English fluency before the start of learning in the disciplines.

(b) Students who require Linguistics 94 twice are at risk, and additional language support is needed for that group during the Fall semester.

4.3 Language Proficiency, Writing Proficiency Assessment, and General Education

4.3.1 Language proficiency

A series of variables relating to language proficiency measures were analyzed from two perspectives. First, we were looking for potential differences on those measures relating to gender, cohort group, and social vulnerability. Second, we isolated these measures by cohort group and were looking for differences within each group relating to gender and social vulnerability. The comparisons between the two groups in terms of grade average for the Spring 2017 semester is outlined and discussed in the previous section (4.2).

The following measures were included in the analysis:
  1) NAEC English score

    2) English Placement Test score
    3) Grades for Linguistics 94, 100, 200

The descriptive statistics on these measures are in Tables 4-3 for overall descriptive results, 4-4 for Cohort 1 and 4-5 for Cohort 2 below. For each perspective reported here, Independent Sample T-tests were applied.

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Table 4-3: Overall descriptive statistics on Language proficiency measures

Descriptive Statistics

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	N	Minimum	Maximum	Mean	Std. Deviation
NAEC English score	161	63	100	92.63	6.21
English placement test score	173	.17	94.33	66.09	18.10
Ling 94 grade	114	1.70	2.00	1.99	.05
Ling 100 grade	169	.00	4.00	3.44	.75
Ling 200 grade	125	.00	4.00	3.48	.88

As Table 4-3 shows, on average, students tend to pass (M=1.99) the Linguistics 94 courses. However, as the analysis discussed in section 4.2, those who do not pass 94 remain at risk during subsequent semesters. The table also shows that the average grade for the Linguistics 100 and 200 courses is an A- (M-3.44 and M=3.48, respectively).

Taking both cohorts together, the results show that female students did statistically significantly better than male students in the Linguistics 100 classes (t(167)=-3.64, p<.000) (Male: N=105, M=3.29, SD=0.81; Female: N=64, M=3.71, SD=0.54). On average, female students received an A+ while male student received an A-. The same pattern is noticeable in the Linguistics 200 classes (t(123)=-2.29, p<.05) (Male: N=80, M=3.34, SD=0.97; Female: N=45, M=3.71, SD=0.64).

As for social vulnerability differences, the results show no statistically significant differences in these measures, indicating that the socially vulnerable students come into the program with equally strong language skills and maintain equally good grades in the language classes.

Overall, Cohort 1 students did statistically significantly better on the English placement test (t(171)=4.07, p<.010) (Cohort 1, N=65, M=73.00, SD=12.55; Cohort 2, N=108, M=61.93, SD=19.65). In contrast, Cohort 2 received statistically significantly higher grades in Linguistics 100 (t(163)=-7.94, p<.000) (Cohort 1, N= 69, M= 2.98, SD=0.75; Cohort 2, N=96, M=3.79, SD=0.56), and in Linguistics 200 (t(120)=-2.45, p<.016) (Cohort 1, N=68, M=3.32, SD=0.84; Cohort 2, N=54, M=3.71, SD=0.89), and, as mentioned before, overall, gained a higher GPA by Spring 2017.

These results suggest that Cohort 2, although coming in with a significantly lower proficiency overall than Cohort 1, as the placement test results indicate, seem to have worked hard in the courses mentioned above to get a higher grade. In addition, many students engaged in extra-curricular activities in AY 2016/17, which may have positively influenced their language development as well. These extra-curricular activities fostered immersion even more and included, for example, film and other kinds of clubs that promoted discussions in English. The patterns in this result also suggest that the English placement test is an important and adequate measure to determine which Linguistics class the students should take, and may then help students become successful in those classes.

Further breakdown of scores as they relate to gender and social status are as follows.

Table 4-4: Descriptive statistics on language proficiency measures for Cohort 1

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
NAEC English score	66	63	100	91.64	7.35
English placement test score	65	43.50	94.33	73.00	12.55
Ling 94 grade	54	1.70	2.00	1.99	.04
Ling 100 grade	69	1.30	4.00	2.98	.75
Ling 200 grade	68	.00	4.00	3.32	.84

There are no statistically significant differences between male and female students in Cohort 1. As for social vulnerability, in Cohort 1, there is no statistically significant differences between the socially vulnerable and not vulnerable groups on these measures.

Table 4-5: Descriptive statistics on language proficiency measures for Cohort 2

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
NAEC English score	95	68	100	93.32	5.21
English placement test score	108	.17	94.31	61.93	19.65
Ling 94 grade	58	1.70	2.00	1.99	.05
Ling 100 grade	96	.00	4.00	3.79	.56
Ling 200 grade	54	.00	4.00	3.71	.89

Taking Cohort 2, results show that female students did statistically significantly better than male students in the Linguistics 100 classes (t(94)=2.06, p<.05) (Male: N=53, M=3.69, SD=0.69; Female: N= 43, M=3.91, SD=0.29) but not on any of the other language related measures.

As for social vulnerability, in Cohort 2, there is no statistically significant differences between the social vulnerable and not vulnerable groups on these measures.

4.3.2 Writing Proficiency Assessment (WPA) – Spring/Summer 2017

After Linguistics 200, the students are required to take a writing proficiency exam, called the Writing Proficiency Assessment (WPA). This timed test determines if the students' writing skills fulfill the Graduation Writing Assessment Requirement (GWAR). While there is no stated and/or direct relationship between the Linguistics 94, 100, and 200 courses and the WPA, these courses clearly prepare the students to do well on the WPA test. The students' writing samples are rated by two raters on a 5 point scale based on a rubric. The scores are added at the end of the evaluation, hence, a total of 10 points can be gained for each paper. Students who reach 10 need not take any more writing courses. Students who receive 8 or 9 need to take Linguistics 305W (or any other W designated upper division course), and those who score 7 or below will need to take two courses: Linguistics 281 in the case of second language learners and Linguistics 305W (or any other W designated upper division course). On average, data with thousands of data points throughout the years from the main campus show that generally, only 10 per cent of the students are released from taking more writing courses with 10 points, about 80% of the students reach at least 8 or 9, hence need to take one upper division writing course, and finally, 10% of the students gain 7 points or less needing two courses.

Among the Georgian students from Cohort 1, who took the WPA test in Spring/Summer 2017, about 50% gained 10 points, 48% gained 8 points and 2% gained 7 points or less; hence, proportionately, Georgian students did better on the test than those on the main campus. This result also indicates a strong support for positive language development throughout the program.

There were no statistically significant differences in the WPA scores between male (N=46) and female (N=18) students (M=8.43, SD=0.83, and M=8.56; SD=0.92, respectively), or in the social vulnerability aspect (M=8.77, SD=1.03 for socially vulnerable students [N=13], and M=8.39, SD=0.80 for not socially vulnerable students [N=51]).

4.3.3 General Education

Students in both Cohort 1 and Cohort 2 have taken multiple lower division General Education courses. The following courses have been offered so far besides the language-oriented Linguistics courses discussed above: Oral Communication for the Critical Thinking and Communication area, Economics for the Social Sciences area, History as one of the Humanities areas and Philosophy as the other one, as well as Construction Engineering 101 in the area of Art. While these courses are not specifically language development courses as Linguistics courses may be, they heavily contribute to the overall language development of the students as they are all in English and require extensive reading and writing as well as class discussions. Course grades were looked at in the following areas:
1) Oral Communication 103
2) Economics 102
3) History 100
4) Philosophy 110
5) Construction Engineering 101

First, we were looking for potential differences in grade point averages as they relate to gender, cohort group, and social vulnerability. Second, we isolated these measures by cohort group and were looking for differences within each group relating to gender and social vulnerability. In each case reported here, Independent Sample T-tests were applied as well as Pearson Correlation measures were examined.

Overall, statistically significant differences were found between male and female students in the Oral Communication classes. Female students received an A while male students received an A- (t(182)=-4.44, p.<.000; Male: N=115, M=3.16, SD=0.86; Female: N=69, M=3.67, SD=0.64). This pattern is strongly present in Cohort 1 as well as in Cohort 2. More specifically, in Cohort 1, on average, female students received an A and male students received an A- (t(67)=-2.11, p<.05, Male: N=49, M=3.12, SD=0.91; Female: N=20, M=3.29, SD=0.57). The same pattern is observed in Cohort 2 (t(109)=-3.70, p.<000; Male: N=63, M=3.18, SD=0.83; Female: N=48, M=3.68, SD=0.48). The results also indicate that there is more variation in the grades among the male students than among female student, as the standard deviation scores show.

As for social vulnerability, socially vulnerable students did statistically significantly better in the History course, gaining higher grades (A versus B-) (t(52)=2.62, p.<05) (Socially vulnerable N=10, M=3.9, SD= 0.15; not socially vulnerable N= 44, M= 2.88, SD=1.23).

We also found some important relationships across scores that are worth mentioning. Specifically, we were interested in the relationships between the grades in the different GE courses. Accordingly, we ran a Pearson correlation test, and found strong relationships between the Oral Communication grade and the Linguistics 100 grade (r = .64 indicating about 40% overlap), between the NAEC English score, the Non-STEM, and Cumulative GPAs (r= .53 and r= .53, respectively; both about 28% overlap). Interestingly enough, we have also found a strong relationship between History grades and the NAEC Math scores (r= .58, over 33% overlap). That is, those students who did well on the NAEC math test, systematically did well in the History class.

The most striking relationships with strong correlation measures were found between the Construction Engineering grades and other, non-Linguistics GE course grades (Oral Communication r= 0.64 – 40% overlap; Philosophy r=0.53 – over 28% overlap; History r=0.62 – over 38% overlap). These results show that there is a systematic relationship between all non-STEM GE classes in terms of the grades students get and some GE classes. At the same time, we have also found that there is

a significant relationship between STEM-GPA scores and non-STEM GPA scores (r=0.65, over 42% overlap). Students who do well in STEM systematically also do well in non-STEM GE.

In sum, the following patterns can be seen:

1. The English placement test seems to be an important test to determine which Linguistics class a student should take, as students seem to be successful in the classes into which they are placed.

2. Female students performed better in classes of oral and written communication than male students.

3. Socially vulnerable students performed better in the History class.

4. Georgian students did proportionately better on the WPA exam than students on the main campus.

5 CONCLUDING COMMENTS

Students in SDSU-Georgia continue to perform at or above the level of their peers on the main campus. At the end of the Fall semester, it appeared that Cohort 2 exhibited lower overall performance than Cohort 1, including average GPA, the number of students entering academic probation at the end of the semester, and the English placement test results, for example. By the end of the Spring semester, the differences had decreased for the top two language subgroups, and it now appears that the lower language group from Cohort 2 is lagging their peers.

Trends noted over the first academic year that English language fluency is an important component of student success were also noted in the second academic year. However, the lower language group for Cohort 1 has caught up to the middle group by the end of their second year. It appears that the group of students who require Linguistics 94 twice is at much higher risk of leaving the university. This year we will deploy a new strategy to identify these students and provide better support, earlier, in hopes of improving the retention and performance of this group. Nonetheless, students show strong language development, as evidenced by higher average scores on the WPA than observed on the main campus.