

February 17, 2017

Magda Magradze Chief Executive Officer Millennium Challenge Account – Georgia

Dear Ms. Magradze,

Please find enclosed herewith the Academic Course Delivery Report for the Fall 2016 Academic Semester, 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

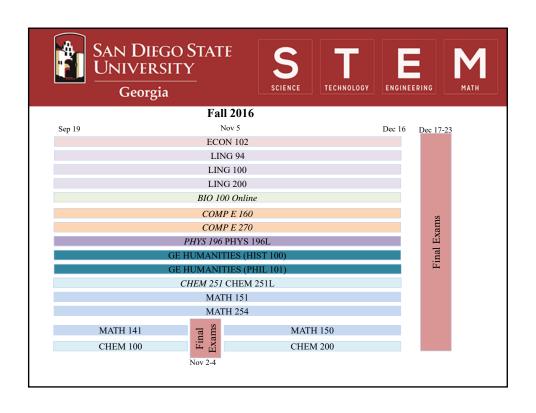
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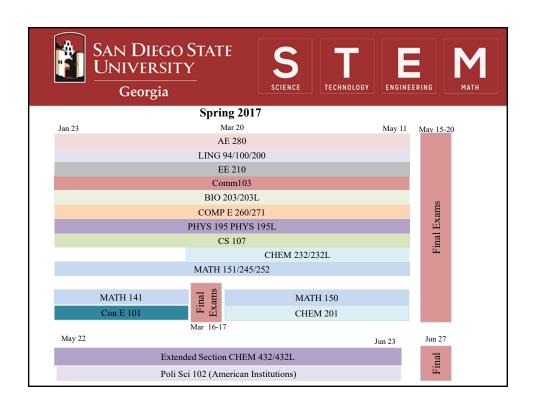


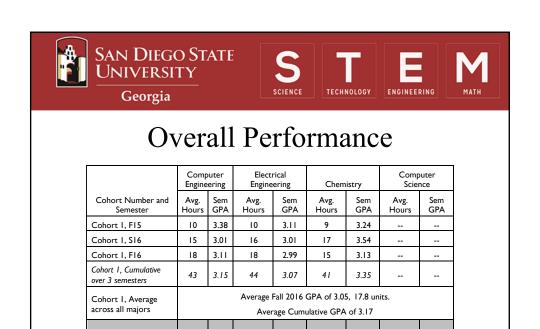


# "Big Picture"

- Academic Performance
- Recruiting
- Marketing/Outreach
- · Capacity Building
  - Renovations
  - Design Work for Renovations and Construction at ISU
  - ABET
  - Faculty Visits







2.68

Average Fall 2016 GPA of 2.88, 12.4 units.

2.67

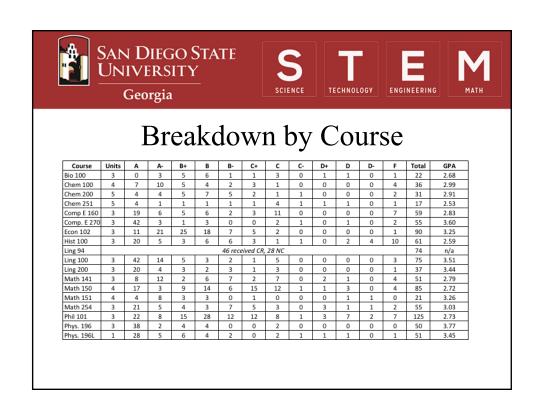
3.23

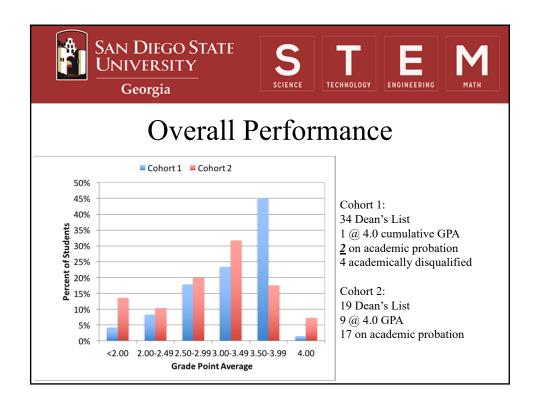
Cohort 2, FI6

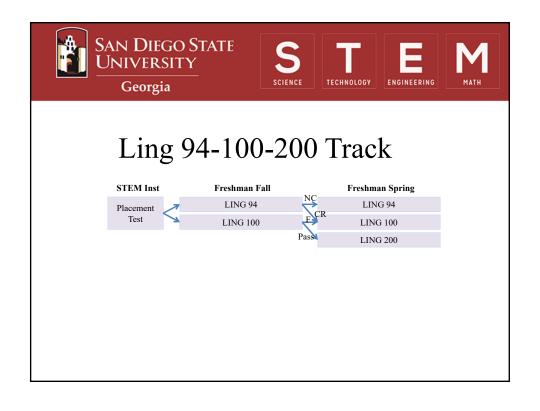
across all majors

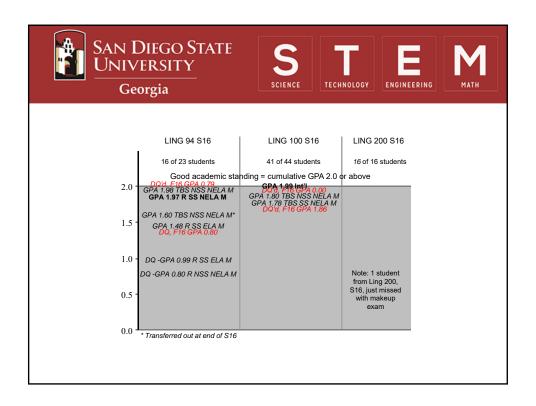
Cohort 2, Average

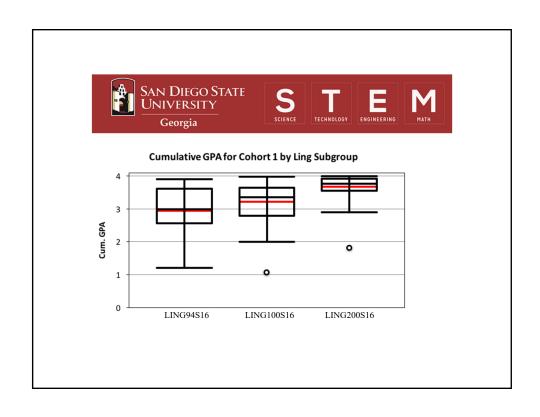
12 3.14

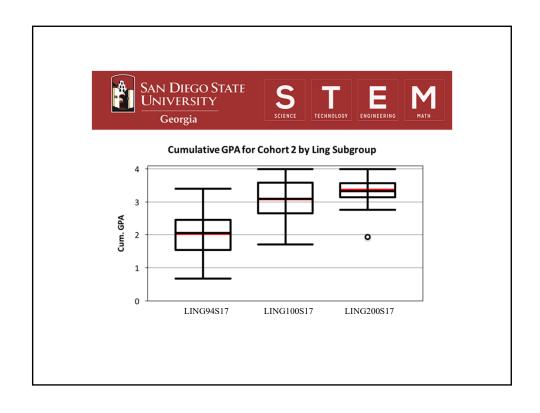


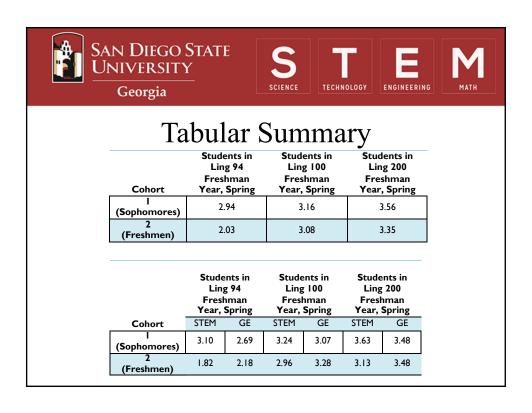






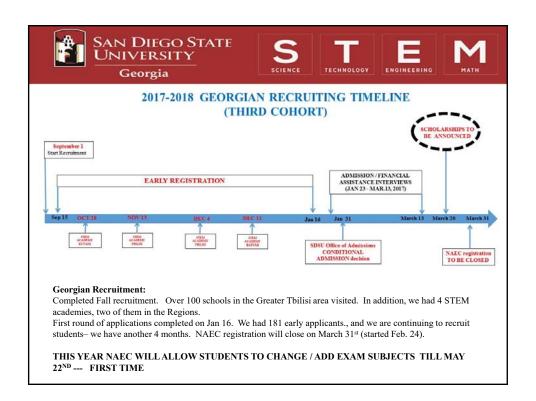


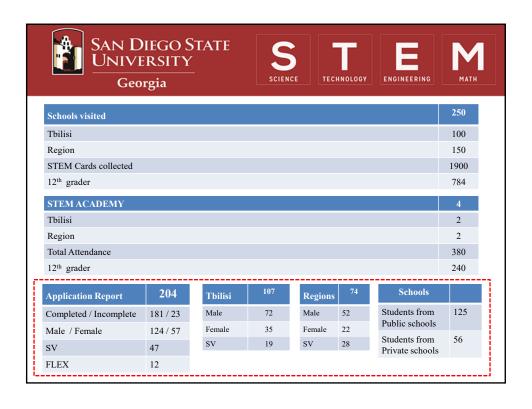


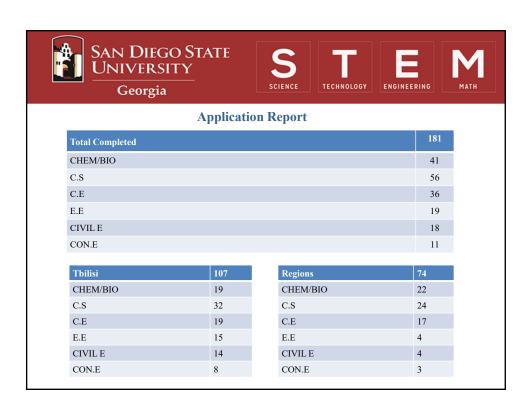


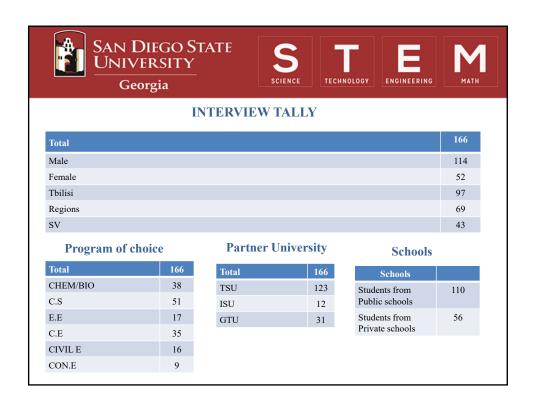


Cohort	Fall 2016 GPA	Cum. GPA	Women Cum. GPA	Men Cum. GPA	SS Cum. GPA	Non-SS Cum. GPA
ı	3.05	3.17	3.43	3.10	3.25	3.19
2	2.88	2.88	2.96	2.83	2.87	2.89

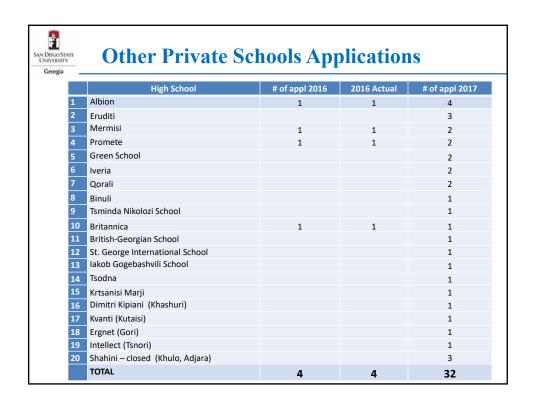








	Feeder Schools Applications			
	High School	# of appl 2016	Actual	# of appl 2017
1	American Academy - GZAAT	2	2	1
2	Buckswood International School	2	2	0
3	Logos	1	1	0
4	Demirel College	4	5	7
5	Servantes GESS	1	0	9
6	Newton School	1	1	2
7	European School / American H. (IB)	2	2	1
8	New School (IB)	1	1	0
9	QSI (MOU)	1	1	0
10	School of Tomorrow (MOU)	0	0	1
11	Robert Schumann European School	2	1	0
12	Georgian American High School-Kutaisi		1	3
13	Vekua #42	8	7	10
14	Komorov #199	8	4	15
15	Kutaisi Math & Physics School #41	4	3	4
16	#1 First Experimental	3	3	1
17	#1 Gymnasium	1	2	1
	TOTAL	40	33	55





14 target countries were identified:

Turkey, Iran, Azerbaijan, Kazakhstan, Ukraine, China, India / Pakistan, Nigeria, Gulf States (Dubai, Kuwait, Bahrain, Abu Dhabi, Qatar) & Jordan, Vietnam, Russia Federation, Iraq (north), Tajikistan.

Currently there are 16 international applicants who applied and paid CSU Mentor application fee:

- 8 from Iran
- 3 from China
- 3 from India (Gulf countries)
- 1 from Kazakhstan
- 1 from Egypt



#### **International Recruitment Activities (Spring 2017):**

**Qatar:** Visit took place at the end of January 2017.

Armenia: A STEM Academy is held beginning of February.

**Azerbaijan**: A STEM Academy is planned for beginning of April.

**Iran:** Three seminars has been organized by our Iranian representative at the Tehran Institute of Technology, on 23rd, 25th and 30th of December 2016.

**Turkey:** A series of promotions in different cities are underway / planned.

**Kazakhstan**: A STEM Academy is planned for Spring 2017 in Almaty, KZ. **Iraq (Erbil):** Our agent in Erbil will arrange seminars with the Ministry of

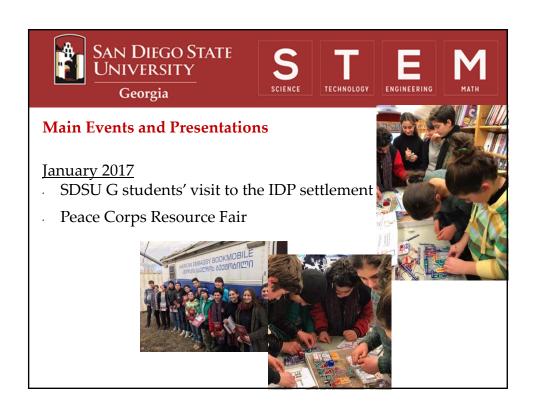
Higher Education in March 2017, for prospective students.

Jordan: It is planned to attend the first EducationUSA Undergraduate

Outreach Opportunity: Amman, Jordan - April 1-7, 2017.











# Media Coverage

In the period of Nov 1, 2016 – January 31, 2017 SDSU Georgia was featured in the media 38 times. 28% of the coverage was neutral, and 73% - positive. (Source: IPN Media Monitoring)

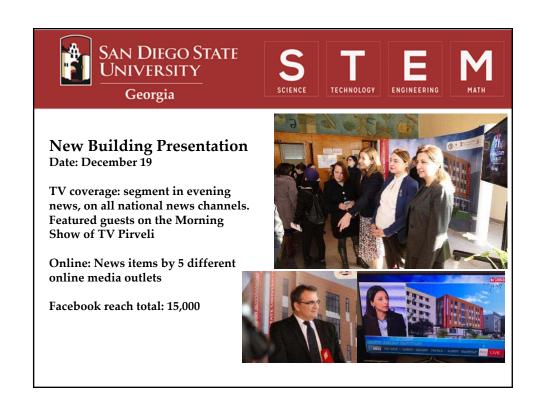
Average reach 30% of the populating of Georgia

The biggest media coverage was received by the following 3 events:

- Launch of the Public Private Partnership Fund
- Presentation of the Building at Ilia State University
- NAPP Mobile App developed by SDSU Georgia students

Facebook posts featuring SDSU G students' success stories have shown considerable outreach results.











#### RENOVATION AND CONSTRUCTION SUMMARY

- •Renovations in TSU Buildings II and XI
- •Design of New Building at ISU
- •Design of Renovations in TSU Buildings II an XI for 2017



# 2016 Renovations in TSU Buildings II and XI $\,$

- 995 m<sup>2</sup>
- Renovations Complete
- Fume Hood Delivery Challenge
- Gas Permit
- Variation Orders



# TSU BUILDING II RENOVATIONS – Organic Chemistry Lab

- 14 Fume Hoods
- Additional Supporting Equipment







#### TSU BUILDING II RENOVATIONS – Men's & Women's Toilets







#### TSU BUILDING XI RENOVATIONS – Electrical







# TSU BUILDING XI RENOVATIONS – Library/Lounge













#### ISU – New Building

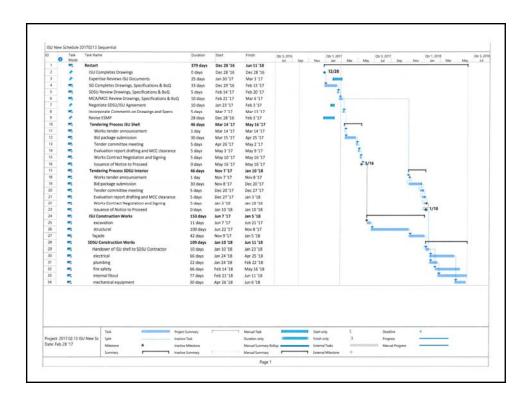
- 4890 m<sup>2</sup>
- 4 Stories plus Underground Parking
- Construction and Civil Engineering Labs
- Electrical, Electronic, and Computer Engineering Labs
- Classrooms and Lecture Hall
- Student Activities

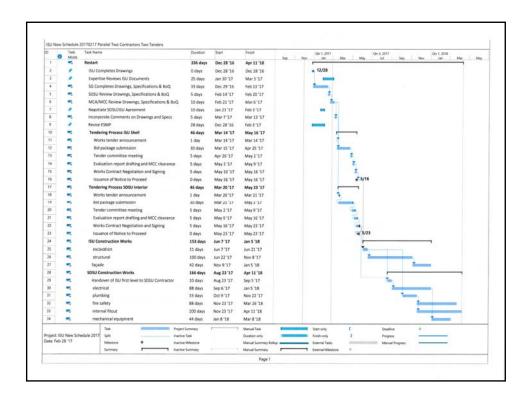


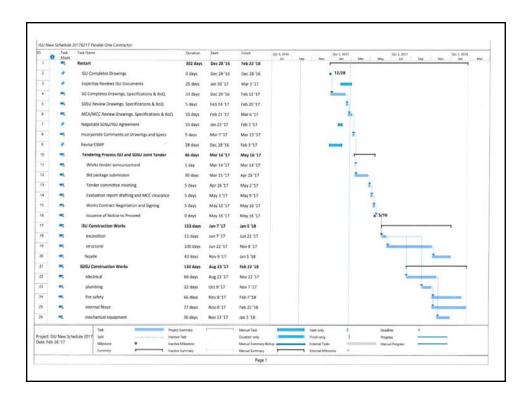
# ISU – New Building

- 100% Construction Documents Submitted
- SDSURF/ISU Agreement Drafted
- Tendering Strategy Under Discussion

	Summary		
lo l	Description	Price	
1 Reinforced concrete		1,891,268.46	100%
2 Façade		1,164,818.03	100%
3 External Utilities		127,713.11	100%
4 Yard		229,892.91	100%
5 Increase capacity of existing	transformer	80,000.00	100%
6 Fit-Out		1,223,115.05	100%
7 Electricity		625,667.57	100%
8 Plumbing		273,242.47	100%
9 Fire water supply		597,211.90	100%
10 Heating, cooling and ventila		1,326,554.15	100%
11 The elevator shaft and the e	levator	269,320.27 7,808,803.92	100%
Previous Estimate		7,752,788.00	
Previous Estimate		7,752,788.00	
Unused amount/Carry Forw	ard Amount	(56,015.92)	
		3,493,692.51	
Ilia State University San Diego University		4,315,111.41	
		4,315,111.41	









## 2017 Renovations in TSU Buildings II and XI

- 1018 m<sup>2</sup>
- Construction Documents 70% Complete
- \$318,000



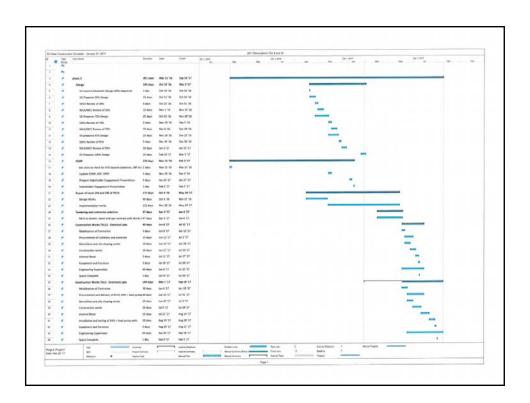
# 2017 Renovations in TSU Building II

- Biochemistry Lab
- Biochemistry Prep Room
- Analytical Chemistry Lab
- Analytical Chemistry Instrumentation Lab NMR



# 2017 Renovations in TSU Building XI

- Electrical, Electronic, and Computer Engineering Labs
- Computer Classroom
- Classrooms and Lecture Halls
- Offices





### **ABET progress:**

#### Based on CY2 ABET report, September 15, 2016

- Facilitate accreditation of existing Georgian language engineering and computer Science programs, what we've called "second track"
- To pursue, as planned, with the accreditation of SDSU-delivered programs, "first track"

In retrospect, this is likely a distinction without a difference. Now working on harmonizing these as different maturity models.



TSU – ABET update: Two existing programs are piloted for ABET accreditation (2<sup>nd</sup> TRACK)\* Electrical Engineering, Computer Science

#### Completed tasked at TSU

- ABET office has been furnished by SDSU Georgia
- Appointment of the ABET Facilitator
- Design curricula adapting the ABET requirements of the existing related degree programs
- Organizational Chart of ABET committee for each program
- Developing assessment systems and archiving relevant data
- Establishing external advisory board to obtain practitioner input for degree programs
- Establishing the Program Educational Objectives, in progress
- Preparation of the faculty ABET web page: http://abet.tsu.ge
- ABET Seminars for students in TSU

<sup>\*</sup> Possible 1st TRACK in Computer Engineering (in English) under consideration.



GTU – ABET update: Two existing programs are piloted for ABET accreditation: (2<sup>nd</sup> TRACK): Electrical Engineering, Civil Engineering

#### Completed tasked at GTU:

- ABET office has been furnished by SDSU Georgia
- Design curricula adapting the ABET requirements of the existing related degree programs
- Developing assessment systems and archiving relevant data
- Establishing external advisory board to obtain practitioner input for degree programs
- Establishing the Program Educational Objectives, in progress
- Preparation of the faculty ABET web page: in progress
- ABET Seminars for students: in progress

**ISU – ABET update:** Georgian Language Computer Engineering (with Microelectronics focus) is being discontinued. A new 1<sup>st</sup> TRACK Computer Engineering program is being planned\*.



<sup>\*</sup> Program approval from EQE is pending.

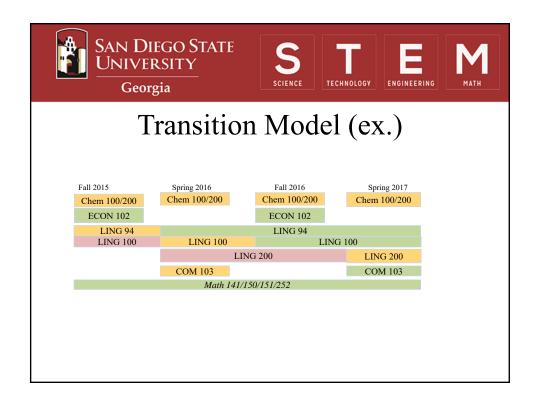


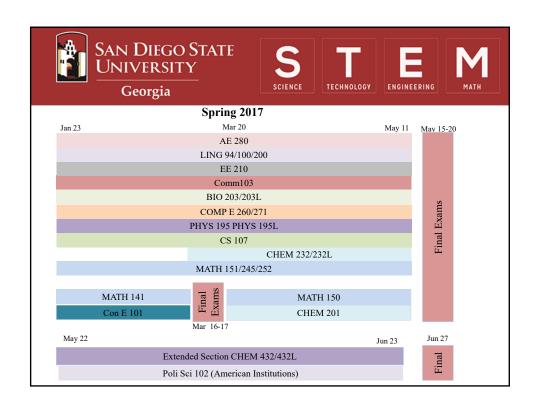
- 11 this academic year
  - Fall 2016 Spring 2017

    Physics Chemistry

    Biology Computer Science

    Computer Science Comp/Elec Engineering
    - Biology Computer Science
      Computer Science Comp/Elec Engineering
      Mathematics Electrical Engineering
      Gender Studies Linguistics
      Political Science (Am Inst)









February 3, 2017 SDSU 007-02-17

Magda Magradze Chief Executive Officer Millennium Challenge Account – Georgia

Dear Ms. Magradze,

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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

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# Faculty Development Report Fall 2016

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#### I INTRODUCTION

#### I.I 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 development activities for faculty from the partner institutions which occurred during the academic year. The report is a regularly submitted document that is expected to be submitted after each academic year.

#### 2 TRAINING AT SDSU MAIN CAMPUS

#### 2.1 Program Overview

The program to bring faculty from the partner universities to San Diego is a part of the capacity building strategy for this project. The objectives of the visit are to:

- Build general familiarity with SDSU
- Build awareness and familiarity of SDSU curricula, both overall and within specific courses
- Develop teaching skills within specific courses that the visitor might later assist or teach in Georgia
- Develop laboratory skills in cases with laboratory courses
- Develop an understanding of SDSU's assessment practices
- Build collaborations with SDSU faculty, both in terms of teaching and research
- Build awareness and familiarity with SDSU culture and function.

During their visits, each of the Georgian faculty members is paired with a faculty member in their discipline who they work closely with on delivery of courses needed in the SDSU-Georgia program. This SDSU host serves in a mentoring capacity, with the responsibility to help craft the visit to support the teaching and research interests of the visitor and to guide the overall experience of the visitor. Teaching-related training is focused on approaches used for instruction at SDSU, including both academic content and pedagogy. The visitors observe instruction, required course materials (focused on expectations of accreditation agencies for syllabi, course schedules, program and course student learning outcomes, exams and homework, course and student assessment, advising, etc). Visitors are given opportunities to observe interactions between SDSU professors and students in advising and course-related capacities. By observing advising, visiting faculty gain the opportunity to develop more familiarity with SDSU curricula. By observing course-related interactions (such as office hours), visiting faculty gain the opportunity to develop more familiarity with the range of pedagogical methods used in informal settings.

Training on accreditation-related assessment instruments (both direct and indirect) is also provided. The training also includes use of online tools, such as BlackBoard (course management system) and WEAVE (assessment archiving system), which are used in the SDSU-Georgia program. Some professors have also gained experience with asynchronous videocasting platforms used at SDSU, which will support their participation in co-teaching in different modalities once they begin instruction.

Where appropriate (e.g. in Engineering disciplines), visiting faculty also receive training in ABET accreditation standards. All visiting Georgian faculty also meet with SDSU Department Chairs and Deans. Georgian visitors with administrative appointments met with the SDSU Provost and other administrators at SDSU for discussions about administrative structure and shared governance involving administrators, faculty, staff, and students.

A number of experiences are built into their visit for the purpose of developing an understanding of the American university culture and facilities. For example, in the Spring semester the list of such experiences to which the faculty was invited includes:

- A two-day Student Research Symposium (http://srs.sdsu.edu)
- College of Sciences Discovery Slams (http://sci.sdsu.edu/slams/what/)
- Learning Glass Studio Tour (https://youtu.be/CWHMtSNKxYA)
- Explore SDSU (http://explore.sdsu.edu)
- SDSU Science and Engineering Sampler (http://sci.sdsu.edu/sampler/)

- SDSU Library tour
- Meeting on College of Extended Studies and its role in the University
- Language Acquisition and Resource Center (LARC) Georgian language instruction
- The first group of Spring visitors participated in a lecture/discussion on the Future of Humanities in the Digital Age which included Vint Cerf, from Google (http://newscenter.sdsu.edu/sdsu newscenter/news story.aspx?sid=75958)
- The second group of Spring visitors participated in the Kyoto Prize Laureate Lecture (http://kyotoprizeusa.com)

In addition to these training experiences, each of the faculty members gave a one-hour seminar in the department they were visiting, highlighting their research interests. Visiting faculty were made aware in advance of their visits that they would have the opportunity to make a presentation related to their research interests, as well as to conduct at least one classroom session for lecture subjects and (if relevant) one laboratory session for laboratory subjects, with observation by the regular instructor and/or the SDSU host/mentor. Annexed to this report are welcome/orientation meeting agendas as well as the reference materials provided to campus in preparation for their visits.

#### 2.2 Program Participants

Thus far, six cohorts of faculty from Georgia have visited SDSU for training. The Georgian visitors included faculty and administrators from Tbilisi State University, Ilia State University, and Georgian Technical University. The first group of faculty visited in the Summer session of 2014, the second group of faculty visited SDSU during the Fall, 2014, semester and the third cohort of faculty visited SDSU during the Spring, 2015, semester. Two additional cohorts visited during the Spring, 2016, semester. The sixth cohort visited SDSU during the Fall, 2016, semester. The dates and visitors are summarized in Table 1.

Table 1: Faculty Visitors to San Diego, Fall, 2016

Cohort and Dates	Participants
Fall I, 19 September – 17	Tchelidze, TSU, Physics
October, 2016	Dachanidze, TSU, Biology
	Melashvili, TSU, Gender Studies
	Mirtskhulava, TSU, Computer Science
	Avalishvili, TSU, Mathematics

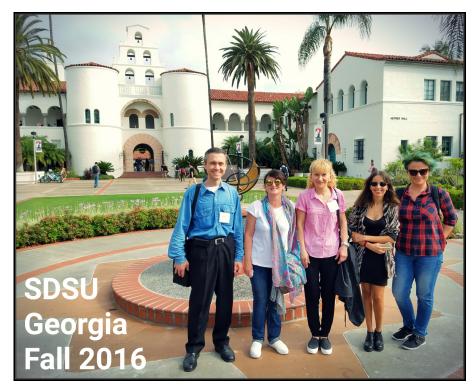


Figure 3: Fall 2016 Cohort I during Orientation Tour

The selection process for faculty who participated is as follows. Georgian faculty were eligible through both self-nomination and nomination by their colleagues or supervisors. Each university partner provided to the SDSU-Georgia Dean a list of nominees. The SDSU-Georgia Dean and/or representatives of the campus unit interviewed and selected appropriate faculty based on experience, background, research interests, and discipline. This selection also incorporated feedback from SDSU-San Diego about the availability of mentors within different discipline areas.

Some details about the activities of the individual visitors within their specific disciplines follow.

<u>Tamar Tchelidze</u> is an associate professor at TSU. She is affiliated with the Physics department at TSU, but her teaching and research interests are more related to electrical engineering. Tamar's research is in creating semiconductor properties and manufacture, but not from an experimental perspective. She was a Fulbright fellow at Notre Dame in 2011, and continues to collaborate to some extent with her colleagues there. Her recent research projects include "Investigation of luminescence blinking in nanostructure," "Excitatonic complexes in ZnO and GaN prospects of creation blue UV LEDs," and "Synthesis and investigation of transparent conductive oxides."

Tamar was mentored by Prof. Mahdu Gupta of the Department of Electrical and Computer Engineering. She discussed the course content and philosophy behind teaching the electrical engineering courses at SDSU and SDSU-G. Tamar attended all of Prof. Gupta's courses during her visit and served as a guest lecturer on two occasions, using course materials that Prof. Gupta had prepared in advance for her. She answered students' questions, and demonstrated problem solving methods, in those classroom face-to-face hours. Tamar also gained experience in assessing student learning by helping prepare and administer midterm exams in two of Prof. Gupta's courses. She also interacted with the graduate student graders to get experience in grading exams and assignments. During her stay, she had access to course materials through Blackboard and Prof. Gupta also provided her a copy of the textbook for her use in Georgia. Tamar and Prof. Gupta had a number of lengthy discussions on the classroom, students, their background and course pre-requisites, their required time commitment, the emphasis and approach followed in the course, resource materials for the course, and the challenges in teaching the course. Since her return to Georgia, Prof. Gupta and Tamar have continued their mentor/mentee relationship via email. She focused during her visit on the

courses EE340, Electrical and Magnetic Fields, and EE 434, Electrical Materials and Devices, although she was able to observe and participate in a wide variety of other courses in the department.

Natalia Dachanidze visited in the context of the courses in the biology and biochemistry arena. She was mentored by Profs. Stanley Maloy and Bob Pozos, Biology, and Profs. Kathy McNamara and John Love, Biochemistry. She was principally engaged in instruction training in regards to the courses BIO203L, the laboratory portion of Principles of Cell and Molecular Biology, CHEM560, General Biochemistry, and CHEM567, Biochemistry Laboratory.

Natalia completed her PhD at Medical University with research on cardiac muscle cells, studying the molecular mechanisms of stress. She teaches a general biochemistry course for biology majors and medical students. She also teaches short courses for medical students which involve two weeks for biochemistry of respiration, cardiovascular, renal, neural, digestives system. She has received grants from the Georgian NSF targeting promising young professors. This was her first time traveling to the United States.

While Natalia was here she interacted with multiple faculty and staff in the biology and chemistry departments. Besides her mentors, she worked closely with Prof. Ralph Feuer, Felise Wolven, and Naja Elm (BIO203L TA) and attended BIO203 lectures and labs to familiarize herself with the courses. In the chemistry department, Natalia was mentored by Prof. McNamara where she received training on the CHEM567 lab course. She learned techniques in protein purification, dialysis, phosphocellulose column chromatography, gel filtration chromatography, and preparation of SDS gel.

Apart from her coursework, Natalia had opportunities to visit and work in research labs. She worked on stopped flow spectroscopy in Prof. Solh's lab. She found learning this new method very useful experience because she studies enzyme kinetics in her research. She also visited Prof. Swairjo's research lab. Natalia also attended regular department meetings.

Natalia said the following about her experience: "I just wanted to say many thanks for the great experience I had in SDSU. It was very informative and enjoyable one month. During this one month, I've met lot of people who shared me their experience and I'm so thankful for this."

Tamta Melashvili visited in the context of the General Education (GE) program, with a specific focus on her interests in Women's Studies. This assignment is in keeping with her work as a researcher and teacher at the Institute of Gender Studies, Tbilisi State University. Her current research interests are women's and gender history, LGBT and feminist activism. She was mentored by Dr. Huma Ahmed-Ghosh, who also conducts a faculty-led summer program for SDSU students in Tbilisi. Dr. Ghosh supervised, facilitated and organized several activities with Professor Melashvili. Professor Melashvili met with Dr. Doreen Mattingly (Chair of the department and Faculty Senate member on GE) about the GE program at SDSU. She familiarized herself with the format and content of GE course syllabi, and also learned how to design and submit application materials in order to create a new undergraduate course. As part of this process, she began work on a Gender Studies course application in the SDSU format that can be given at TSU.

In addition, Professor Melashvili extensively used library resources which gave her the possibility to redesign her MA course "Writing Women's History: Theories, Methodologies, Archives" and improve it with new reading material. She used the library to access resources for writing her article on Georgian feminists' autobiographies. She attended lectures in various courses offered in the department in the Fall of 2016 to observe different pedagogical styles and student participation in classes. Finally, she provided an open forum lecture on her research and teaching interests regarding LGBT history, activism and politics in Georgia and in the region.

<u>Lela Mirtskhulava</u> is an associate professor of Computer Science at TSU. Her teaching and research interests relate to mobile technologies and application development and wireless systems, Java, computer system administration in both Windows and Linux, and she is also interested in climate change and global warming issues. Her recent work relates to mobile application development to reduce power consumption and modeling of telecommunication networks. She is particularly interested in curriculum development, and was eager to understand SDSU's curriculum and the use

of projects. She focused on instruction in CS 107, Introduction to Computer Programming, CS 108, Intermediate Computer Programming, and CS 646, iPad/iPhone Mobile Application Development.

Lela was mentored by Prof. Patty Kraft and Prof. Leland Beck. Lela met with Prof. Kraft to review the strategy and approach to teaching the introductory and intermediate programming courses. Lela was also able to observe the classroom lecture and student activities on a daily basis. She also attended regular Computer Science department meetings.

Lela met with faculty members Rob Edwards, Mahmoud Tarokh, Wei Wang, and Roger Whitney to discuss research interests and projects that they had in common. In addition, she met with Rob's research group of faculty and students for more detailed discussions. Lela also worked extensively with Wei on some research ideas for the future. Lela has drafted a Fulbright proposal, and Wei is hoping to host her visit to SDSU next year so that they can continue to pursue collaborative research.

<u>Gia Avalishvili</u> is an associate professor of Mathematics at TSU. In that context, he has taught all of the math subjects required in the engineering and science curricula for the SDSU-G programs. He particularly expressed interest in differential equations and was exposed to the version of this course taught in the College of Engineering. He also teaches and conducts research relating to numerical modeling. His research is in those areas and he is also interested in problems relating to the theory of elasticity.

During his visit to SDSU, Gia was mentored by Prof. Ricardo Carretero. He visited a couple of dozen classes in the Math-Stats department and also in the College of Engineering. There he participated with Dr. Allen Plotkin in discussions and observation of AE 280, Methods of Analysis. He sat in on Prof. Carretero's Calculus II class and together they discussed effective teaching techniques. He also observed some active learning techniques through Prof. Carretero's TA active learning recitation sessions. As far as curriculum is concerned, he discussed the syllabi and material for calculus courses, learning about the content, lab activities included in the "breakouts" used during active learning, homework and online options, midterm and final exam materials. He and Prof. Carretero discussed the difference between calculus content in Georgia as compared to that taught at SDSU. Gia also presented a talk on his research interests to the math-stats department. Gia and Prof. Carretero continue to be in touch via email and exchanging ideas and material for Calculus II. Gia also attended regular math-stats department meetings.

Table 2 presents an overall summary of the participants from all cohorts, showing representation by discipline areas and partner university.



Figure 4: Farewell Party at the Home of Dean Maloy

Table 2: Summary of SDSU Faculty Visitors to Date

Subject	GTU	TSU	ISU
Administrative/	Zedelashvili – Sum 14	Trapaidze – Sum 14	Murtskhvaladze – Sum14
Entrepreneurship			
Focus			
Physics	Sanaia – Sum14	Shengelaya – S16 I	Dalakishvili – Sum14
		Tsitsishvili – Sum 14	
Chem	Kvartskhava – Sum14	Kokiashvili – Sum14	
	Goletiani – F14	Bukia – S15	N/A
	Jincharadze – S14	Jibuti – S15	
English	Meskhishvili – Sum14	Nebieridze – Sum14	
	Matchavariani – F14	Jojua – Sum14	
Math	Meskhi – S16 I	Chelidze – F14	Manjavidze – S16 I
	Natroshvili – S16 II	Odishelidze – F14	Khimshiashvili – S16 II
		AVALISHVILI – F16	
EE	Nemsadze – F14	Ghvedashvili – S15	Chkhaidze – S15
	Mosashvili – S16 II	Gavasheli – S15	Kvavadze – F14
		Kakulia – S16 II	
		TCHELIDZE – F16	
Comp E	Gigilashvili – F14	Tsintsadze – S16 II	Basilaia – S 15
			Tutberidze – S16 I
Comp Sci		Davitashvili – F14	
	Rodonaia – S15	Midodashvili – S16 Ii	N/A
		MIRTSKHULAVA – F16	
Civil/Con	Kalabegishvili – S15	N/A	
General		Tavadze (HIST) – S15	Dalakashvili (Soc) – S16 I
Education		Murtskhvaladze (ECON)	
Program		– F14	
		Alania – (Bio) S16 I	
		Goguadze (Rel Studies)	
		S16 I	
		DACHANIDZE – (Bio) F16	
		MELASHVILI – (Gender)	
		F16	

Key: CAPS, ITALIC Fall, 2016 cohort.

# 3 INVOLVEMENT IN COURSE DELIVERY IN GEORGIA

#### 3.1 Introduction

The model for faculty development in the SDSU-Georgia project relies on the experience in San Diego as a means to develop core understanding of the SDSU curriculum and to build familiarity with pedagogy and materials for a specific course or set of courses that the faculty member might teach for SDSU-G or for the partner university. Thus, deployment of those faculty into classes in some capacity after their return to Georgia is also an important part of the overall model. Starting with the 2015-16 Academic year, we began involving faculty from the partner universities in delivery in a range of capacities.

# 3.2 Specific Assignments

Table 3 summarizes the specific assignments of faculty from the partner universities in the delivery of courses over the last academic year. The capacity in which the Georgian faculty varied according to SDSU's assessment of their teaching experience and qualifications relative to the subject matter and SDSU's curricula and syllabi and their comfort in teaching in English. In foundational subjects taken by first year students (e.g. Calculus) we found a number of places where Georgian faculty could take primary responsibility for instruction directly. We anticipate that as the cohort of students moves into more advanced classes, the fraction of courses requiring a co-teaching mode for the initial delivery or deliveries will increase.

Table 3: Partner University Faculty Involvement in Course Delivery

Faculty Member, Partner	Course and Title	Capacity		
University		. ,		
Gia Avalishvili, TSU	Aerospace Engineering	Assigned for the Spring 2017 semester.		
	280, Methods of Analysis	Co-teaching with an SDSU faculty		
		member in hybrid modality.		
Magda Alania, TSU	Biology 100, General	In Fall 2016, assisted with hybrid delivery,		
	Biology	with primary responsibility for instruction		
		with an SDSU faculty mentor.		
	Biology 203/203L,	Assigned for the Spring 2017 semester.		
	Principles of Cell and	She will be assisted by Nato Dachanidze,		
	Molecular	who will be participating in the		
C:	Biology/Laboratory	laboratories.		
Giorgi Jibuti, TSU	Chemistry 100, Intro to	In Fall, 2015 and Spring, 2016, Laboratory		
	General Chemistry	instruction with guidance and mentorship		
	Chemistry 200, General	from SDSU faculty in residence in Georgia		
	Chemistry 201, General	who had responsibility for the lecture portion of the class. He was assisted by		
	Chemistry	Tinatin Bukia, a PhD student at TSU, who		
	Chemistry	manages the stock room for the		
		laboratory.		
		In Fall 2016 and Spring 2017, continued		
		involvement in Laboratory instruction, but		
		began taking additional responsibility as		
		co-teacher for the lecture portions,		
		working with SDSU faculty in residence in		
		Georgia.		

Faculty Member, Partner	Course and Title	Capacity
University	Course and Title	Capacity
Ana Goletiani, GTU	Chemistry 232/232L, Organic Chemistry	In Spring 2017, Laboratory instruction with guidance and mentorship from SDSU faculty teaching the lecture via hybrid modality, which Dr. Goletiani also will assist with. In the laboratory, she will be assisted by Tinatin Bukia.
Nino Kokiashvili, TSU	Chemistry 251, Analytical Chemistry	In Fall 2016, Laboratory instruction with guidance and mentorship from SDSU faculty teaching the lecture via hybrid modality, which Dr. Kokiashvili also assisted with. In the laboratory, she was assisted by Tinatin Bukia.
Mariko Nebieridze, TSU	Communications 103, Oral Communication	In Spring 2016, co-taught a section of the course with an SDSU faculty in residence in Georgia. In Spring 2017, primary responsibility for instruction with SDSU mentor in residence in Georgia.
Tinatin Davitashvili, TSU	Computer Engineering 160, Introduction to Computer Programming Computer Engineering 271, Computer Organization	In Fall 2016, assisted with hybrid delivery, with primary responsibility for instruction with an SDSU faculty mentor.  In Spring 2017, assisting with hybrid delivery, with primary responsibility for instruction with an SDSU faculty mentor.
Magda Tsintsadze, TSU	Computer Engineering 260, Data Structures and Object-Oriented Programming	In Spring 2017, assisting with hybrid delivery, with primary responsibility for instruction with an SDSU faculty mentor.
la Mosashvili, GTU	Computer Engineering 270, Digital Systems	In Fall 2016, assisted with hybrid delivery, with primary responsibility for instruction with an SDSU faculty mentor.
Bidzina Midodashvili, TSU	Computer Science 107, Introduction to Computer Programming	In Spring 2017, primary responsibility for instruction, with an SDSU faculty mentor.
Irakli Murtskhvaladze, TSU	Economics 102, Principals of Economics	In Fall 2015 and Fall 2016, primary responsibility for instruction, with two graduate students as assistants. An SDSU faculty mentor was assigned as a resource in Fall 2015.
Simon Nemsadze, GTU	Electrical Engineering 210, Circuit Analysis	In Spring 2017, primary responsibility for instruction, with an SDSU faculty mentor.
Leri Tavadze, TSU	History 100, World History	In Fall 2016, primary responsibility for instruction. An SDSU faculty mentor was assigned as a resource.
Nino Jojua, TSU	Linguistics 94, Developmental Writing for International or Bilingual Students Linguistics 100, English Composition for International Students	Primary responsibility for instruction in each course, with an SDSU faculty in residence in Georgia teaching other sections of the same course for guidance and mentorship.

Faculty Member, Partner University	Course and Title	Capacity
	Linguistics 200, English Composition for International Students	In Fall 2016, co-taught a section of the course with an SDSU faculty in residence in Georgia.
Nino Manjavidze, ISU and Giorgi Chelidze, TSU	Math 141, Precalculus	Primary responsibility for instruction. An SDSU faculty mentor was assigned as a resource.
Nino Manjavidze, ISU, David Natroshvili, GTU, and Giorgi Chelidze, TSU	Math 150, Calculus 1	Primary responsibility for instruction. An SDSU faculty mentor was assigned as a resource.
Nino Manjavidze, ISU, David Natroshvili, GTU, Giorgi Chelidze, TSU and Alexander Meskhi, GTU	Math 151, Calculus II	Primary responsibility for instruction. An SDSU faculty mentor was assigned as a resource.
Nana Odisheldize, TSU	Mathematics 245, Discrete Mathematics	In Spring 2017, primary responsibility for instruction, with an SDSU faculty mentor.
Giorgi Chelidze, TSU and Alexander Meskhi, GTU	Mathematics 252, Calculus III	Primary responsibility for instruction. An SDSU faculty mentor was assigned as a resource.
Giorgi Chelidze, TSU and Alexander Meskhi, GTU	Mathematics 254, Introduction to Linear Algebra	Primary responsibility for instruction. An SDSU faculty mentor was assigned as a resource.
Alexander Shengelaya, TSU, Giorgi Tsitsishvili, TSU, and Tamar	Physics 195, Principles of Physics	Office hours and face-to-face sessions to support offering taught by SDSU faculty in online mode.
Tchelidze, TSU	Physics 195L, Principles of Physics Lab	Primary responsibility for instruction. An SDSU faculty mentor was assigned as a resource.
Giorgi Tsitsishvili, TSU	Physics 196, Principles of Physics	Office hours and face-to-face sessions to support offering taught by SDSU faculty in online mode.
	Physics 196L, Principles of Physics Lab	Primary responsibility for instruction. An SDSU faculty mentor was assigned as a resource.

Faculty were compensated by SDSU-G for their instruction in the SDSU-G courses. This was in recognition of the increased difficulty and preparation time related to instruction in SDSU-G courses in English. Payment scales were developed in concert with university administrators, to balance the need to provide additional compensation against the potential for distortion of pay scales within the institution and the related potential for problems that might arise from such distortion.

#### 3.3 Development Pathways

The objective is to improve the performance of the individual instructors involved so far, and to expand the network of faculty that are involved over the life of the project, as additional teaching needs develop with the movement of the cohorts through their programs. Table 4 summarizes the development pathway for each faculty member involved in teaching or accreditation activities to date.

Table 4: Partner University Faculty Development Pathways								
Participant, Partner University	Visit to SDSU Main Campus	Co-teach or Assist, Hybrid	Co-teach or Assist, f2f	Primary Instruction, with Mentor	Primary Instruction, with SDSU resource	Participation in Accreditation Efforts		
Magda Alania, TSU	\$16	X		X		X		
Gia Avalishvili, TSU	FI6			X				
Tinatin Bukia, TSU	S15		X (lab)					
Giorgi Chelidze, TSU	FI4			X	X			
Nato Dachanidze, TSU	FI6	X						
Tinatin Davitashvili, TSU	FI4	X						
Tsismari Gavasheli, TSU	S15					X		
Giorgi Ghvedashvili, TSU	S15					Х		
Ana Goletiani, GTU	FI4	X						
Giorgi Jibuti, TSU	S15		X					
Nino Jojua, TSU	Sum I 4		X	X				
Davit Kakulia, TSU	S16					X		
Nino Kokiashvili, TSU	Sum I 4	X						
Nino Manjavidze, ISU	S16			X				
Bidzina Midodashvili, TSU	\$16			X				
la Mosashvili, GTU	\$16	X				X		
Alexander Meskhi, GTU	S16			X				
Irakli Murtskhvaladze, TSU	FI4			X	X			
David Natroshvili, GTU	\$16			X		X		
Mariko Nebieridze, TSU	Sum 14		X	X				
Simon Nemsadze, GTU	FI4			X		X		
Nana Odisheldize, TSU	FI4			X				
Vakhtang Rodonaia, GTU	S15					X		
Alexander Shengelaya, TSU	\$16	X		X				
Leri Tavadze, TSU	\$15			X				
Tamar Tchelidze	FI6	X		X				
Magda Tsintsadze, TSU	S16	X						
Giorgi Tsitsishvili, TSU	Sum 14	X		×				

# 4 Development of ABET Readiness

During the Spring semester Dr. Majid Hashemipour joined the SDSU-G staff in order to work with the partner universities on the development of self studies and ABET capacity building efforts. Committees were established at all three partner universities to raise awareness of ABET and to begin developing readiness reports. These efforts will be described in detail in a subsequent report. The membership of the committees is listed in Table 5.

Table 5: ABET Committee Membership by Partner University

Georgian Technical University	Ilia State University	Tbilisi State University
Otar Zumburidze	Davit Tarkhnishvili	Ramaz Botchorishvili
Nikoloz Abzianidze	Davit Aprasidze	Giorgi Ghvedashvili*
Levan Imnaishvili	Nino Dvalidze	Manana Khachidze
Simon Nemsadze*	Nino Zhvania	Tsismari Gavasheli*
Vakhtang Rodonaia*	Giorgi Veshapidze	Irina Khutsishvili
Giorgi Dzidziguri	Elene Zhuravlyova	Magda Alania*
Khatuna Mkheidze		Alexandre Gamkrelidze
Gia Arabidze		Koba Gelashvili
Zurab Tsveraidze		Davit Kakulia*
Iuri Lomidze		
Giorgi Abramishvili		
Tamar Lominadze		
Davit Natroshvili*		
la Mosashvili*		

<sup>\*</sup> Note: Participants in a visit to San Diego

As noted, ABET progress is reported in a separate report. However, a brief summary is provided below.

The SDSU Georgia ABET report completed in September 2016, provided recommendations that it may be possible to consider additional pathways, a "**second track**", to facilitate the accreditation of programs at the partner universities that do not bridge through the SDSU-delivered programs first.

The **ABET First-track** (i.e., to overlay SDSU's existing, and accredited, curricula onto the framework already provided by the partner institution), will be pursued as planned, or modified as appropriate based on the outcome of the ABET- second track. SDSU Georgia proposed to assist partner universities to obtain ABET accreditation for a few of their existing Georgian language engineering and computer science programs, for which they already have a number of graduates working in the industry.

SDSU Georgia has done a preliminary assessment of this idea during the CY2, and determined that it may be possible to complete ABET Readiness report for the pilot programs by CY5, AY 2018-19, and potentially complete ABET accreditation for pilot Georgian language programs in the AY 2020-21.

SDSU Georgia submitted an ABET report to the partner universities which provided a roadmap for second-track. An action plan and a framework for the tasks to be undertaken during the remaining part of CY2, and the CY3 (8 months budget: Nov I, 2016 - June 30, 2017) were also provided.

The ABET committees of GTU and TSU are working closely with SDSU-G, under the guidance of our ABET Officer, Dr. Hashemipour. The membership of the committees is listed in Table 5. ISU ABET committee is expected to be activated in Spring 2017 semester.

During the October - December 2016 timeframe, SDSU-G attempted to complete the following ABET-second track tasks. These efforts, summarized below, will be described in detail in a subsequent report.

#### **ABET Progress at TSU**

Overall: There were five committee meetings held in the ABET Office at TSU. The TSU Committee agreed that by the end of February, Electrical/Electronics Engineering (EE) and Computer Science (CS) departments will complete the following ABET criteria in the Preliminary Self-Study Report (PSSR): Criterion 1 (Students), Criterion 2 (Program Education Objectives), and Criterion 5 (Curriculum). ABET Officer provided sample charts and tables for preparation of the PSSR. The committee meetings took place every second Tuesday at the ABET office in the TSU building II.

Appointment of the ABET Facilitator at TSU: With the appointment of the new Rector and the new Dean, ABET process gained significant momentum. On November, 20th, 2016, TSU appointed an ABET facilitator, Mr. Nikoloz Melkadze, to coordinate ABET activities between the SDSU-G and TSU. The ABET facilitator's duties and responsibilities were defined as: Planning, preparing, and facilitating ABET committee meetings; gathering, analyzing and archiving of the ABET documents; assisting in preparation of the Self-Study report (PSSR), and the progress reports; participating in Student Survey and survey data analysis, and the translation of the documents and different forms throughout the accreditation process.

Developing assessment systems and archiving relevant data: Learning assessments will be applied that are consistent with accreditation requirements and comprise of an appropriate mix of direct and indirect assessments, with appropriate measurement tools. Sample folders were delivered to the departments to the heads of the programs. Folders included cover page and a table of content to guide professors while filling them with the necessary course documents such as; homework, examinations, class discussions and projects. Electrical/Electronic Engineering department at TSU agreed to provide at least 4 course folders filled by the end of the Fall semester (15th of February). Student Exit Survey was designed and adopted by each Department, and it will circulated among the final semester senior students before the end of the Fall semester.

Design curricula: Adapting the existing related degree programs to the ABET requirements: Electrical / Electronics Engineering Department in TSU has finalized its curriculum according to the ABET requirements. The Computer Science Department in TSU received comprehensive evaluation and agreed to continue working on the curriculum to make it coherent with ABET standards.

Form an External Industry Advisory Board to obtain practitioner input for degree programs: Electrical /Electronics Engineering Department in TSU has established an external Industrial Advisory Board to guide educational objectives and assessment strategies of Electrical/Electronics Engineering department. The first meeting is scheduled in the first week of February.

The faculty ABET web page: The ABET Committee in TSU has agreed that a website will be created for more clarity of the ABET and the committee works in general. The website will have general information about the ABET; progress made in TSU during the accreditation process; Committee meetings overview and the contact information. The website is expected to be ready and running by the end of February 2017.

<u>ABET Seminar for students in TSU:</u> A presentation on "What is ABET?" was given to the EE and CS students in TSU on 20<sup>th</sup> of December 2016. The presentation included the information about the origins and importance of the ABET in the international plane. The work of the TSU ABET Committee was also introduced to the students. Among other topics, the TSU students were particularly interested in creating student clubs in the University for these programs.

#### **ABET Progress at GTU**

Overall: There were two committee meetings held in the ABET Office at GTU with similar agendas as the TSU meetings.

Appointment of the ABET Facilitator at GTU: Planned

Developing assessment systems and archiving relevant data: Learning assessments will be applied that are consistent with accreditation requirements and comprise of an appropriate mix of direct and indirect assessments, with appropriate measurement tools. Sample folders were delivered to the departments to the heads of the programs. Folders included cover page and a table of content to guide professors while filling it with the necessary course documents such as; homework, examinations, class discussion and projects. Civil Engineering Department at GTU agreed to provide at least 4 course folders filled by the end of the Fall semester (15th of February). Student Exit Survey was designed and adopted by the Civil Engineering Department to circulate among the final semester senior students before the end of the Fall semester.

<u>Design curricula: Adapting the existing related degree programs to the ABET requirements</u>: Civil Engineering at GTU received comprehensive evaluation, and agreed to continue working on the curriculum to make it coherent with ABET standards.

Form an External Industry Advisory Board to obtain practitioner input for degree programs: Civil Engineering Department at GTU is working on establishing an external Industrial Advisory Board to guide educational objectives and assessment strategies of Civil Engineering Department. Electrical Engineering Department at GTU already established an Industrial Advisory Board.

The faculty ABET web page: Planned

ABET Seminar for students at GTU: Planned.

# Situation at ISU

Engineering programs at ISU are not suitable for second-track ABET accreditation. Moreover, Georgian Language Computer Engineering (with Microelectronics focus) is being discontinued. A new first-track Computer Engineering program is being planned; however the program approval from EQE is pending.



February 17, 2017

Magda Magradze Chief Executive Officer Millennium Challenge Account – Georgia

Dear Ms. Magradze,

Please find enclosed herewith the Academic Course Delivery Report for the Fall 2016 Academic Semester, 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

Kimitalde



# Academic Course Delivery Report for Fall 2016

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# I INTRODUCTION

# I.I 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 universities or becoming academically disqualified, and also some new students came 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 new 125 students enrolled in the Fall 2016. The breakdown of students by major for Fall 2016 is presented in **Error! Reference source not found.** 

Table 2-2: Student Enrollment in SDSU-G by Major, Fall 2016

Major	Num	Number of Students No at:					No. Int Studen	
	lst cohort	2nd cohort	TSU	ISU	GTU			
Electrical Engineering	16	18	23	8	3	2	3	4
Computer Engineering	43	34	60	14	3	25	7	13
Chemistry	17	35	52	0	0	34	2	10
Computer Science		39	39	0	0	13	I	7

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 will 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 in order to complete their degrees within a 4-year time horizon. For Engineering and Computer Science majors, Calculus I (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, both the pre-requisite courses and the required courses for the major were offered during the first half of the Fall semester, allowing the students to be able to complete the required courses on a schedule that would still allow a 4-year graduation period. The academic calendar for Fall 2016 is presented in **Error! Reference source not found.** Course titles and other details for all courses are presented Table 2-I for the Fall 2016 semester. **Error! Reference source not found.** Course descriptions for each course are available in the SDSU General Catalog.

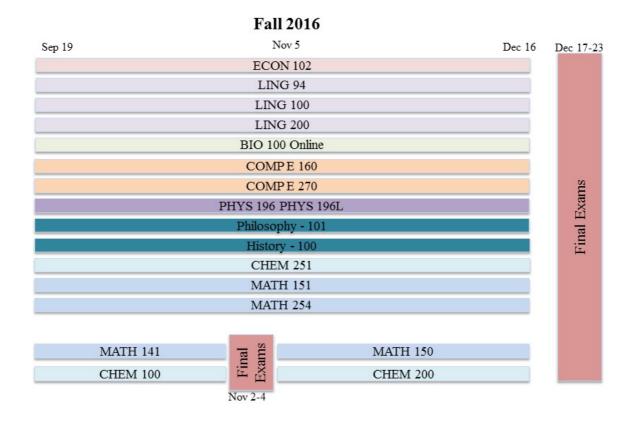


Table 2-1. Course Titles and Credits for Fall 2016 Courses

Course Title	Number of Units	Major Credit?	Majors Enrolled	Notes
	Fall, 2016			
Math 141 Precalculus	3	N	Engr'g/C.S.	
Math 150 Calculus I	4	Υ	Engr'g/C.S.	
Math 151 Calculus II	4	Υ	Chem	
Math 254 Introduction to Linear Algebra	3	Υ	Engr'g	
Chemistry 100 Intro to General Chemistry	4	N	Chem	With Lab
Chemistry 200 General Chemistry	5	Υ	Chem	With Lab
Chemistry 251 Analytical Chemistry	5	Υ	Chem	
Comp E 160 Introduction to Computer Programming	3	Υ	Engr'g	
Comp E 270 Digital Systems	3	Υ	Engr'g	
Phys 196 Principles of Physics	3	Υ	Engr'g	With Lab
Hist 100 World History	3	Υ	All	GE
Bio 100 General Biology	3	Υ	Engr'g	
Phil 101 Introduction to Philosophy; Ethics	3	Υ	All	GE
Economics 102 Principles of Economics	3	Υ	Engr'g/C.S.	GE

Course Title	Number of Units	Major Credit?	Majors Enrolled	Notes
Linguistics 94 Developmental Writing for International or Bilingual Students	3	N	All*	CR/NC
Linguistics 100 English Composition for International Students	3	Υ	All*	GE
Linguistics 200 Advanced English for International Students	3	Υ	All*	GE
Biology 100 General Biology	3	Υ	Engr'g	GE, Online

<sup>\*</sup>Placement in Linguistics 94 versus Linguistics 100 based on placement test in Fall.

Engr'g=Engineering majors

EE = Electrical Engineering majors

Chem=Chemistry majors

Phys. 196

Phys. 196L

C.S = Computer Science majors

GE=course taken as part of general education program

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 Fall, 2016, outcomes for each course are presented in **Error! Reference source not found.**. Average loads by cohort and major, and average GPA outcomes, are presented in Table 3-2, for each semester. Note that the first semester performance of cohort I (Fall, 2015) was in general better than the first semester performance of cohort 2 (Fall 2016). Also, note that cohort I students have been asked to carry heavier academic loads in the semesters since their first semester, but there is no statistical evidence of a significant impact on GPA.

Course Units Total GPA Bio 100 2.68 Chem 100 2.99 Chem 200 2.91 Chem 251 2.53 Comp E 160 2.83 Comp. E 270 3.60 Econ 102 3.25 Hist 100 2.59 Ling 94 46 received CR, 28 NC n/a Ling 100 3.51 Ling 200 3.44 2.79 Math 141 Math 150 2.72 Math 151 3.26 Math 254 3.03 Phil 101 2.73

3.77

3.45

Table 3-1. Course Outcomes for Fall 2016 Courses

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

	Computer Engineering			Electrical Engineering		Chemistry		outer
Cohort Number and Semester	Avg. Hours	Sem GPA	Avg. Hours	Sem GPA	Avg. Hours	Sem GPA	Avg. Hours	Sem GPA
Cohort I, FI5	10	3.38	10	3.11	9	3.24		
Cohort I, SI6	15	3.01	16	3.01	17	3.54		
Cohort I, FI6	18	3.11	18	2.99	15	3.13		
Cohort 1, Cumulative over 3 semesters	43	3.15	44	3.07	41	3.35		
Cohort I, Average across all majors			ŭ		GPA of 3.0 ulative GPA		nits.	
Cohort 2, FI6	12	3.14	12	2.68	12	2.67	14	3.23
Cohort 2, Average across all majors	Average Fall 2016 GPA of 2.88, 12.4 units.							

Figure 3-I presents a histogram of GPA performance for the two cohorts. This presents cumulative GPA, which for cohort I accumulates across 3 semesters, and for cohort 2 is equivalent to the Fall 2016 semester because that is their only semester to date. A total of 34 students from cohort I and I9 students from cohort 2 achieved Dean's List status in the Fall semester, meaning that they completed at least I2 baccalaureate units with a GPA of 3.50 or above. One student from cohort I continues to maintain a 4.0 cumulative GPA; nine students from cohort 2 achieved a 4.0 GPA for the Fall semester.

A total of 3 students from cohort I and I7 students from cohort 2 achieved a cumulative GPA under 2.0 as of the end of the Fall 2016 semester, and so were placed on academic probation. In order 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 Fall semester, four students from cohort I who were on probation at the end of the Spring, 2016, semester achieved a Fall semester GPA below 2.0, and so were academically disqualified.

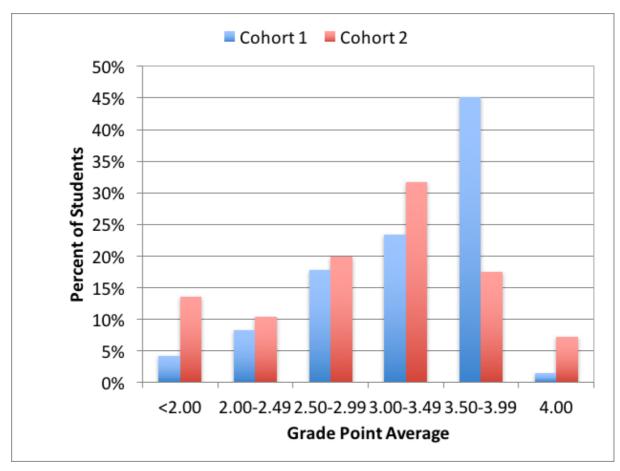


Figure 3-1: Histogram of Cumulative GPA performance for cohorts I and 2, Fall 2016.

In addition to overall performance statistics, subgroup performance was evaluated to determine if there are differences by gender or social support status (Table 3-3). For cohort I, 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. In this case, for the Fall 2016 semester, there continues to be a statistically significant difference in means for the cumulative GPA, at 3.43 for women versus 3.10 for men – however, this difference is not statistically significant. As previously, there is no statistically significant difference in the means between students who qualify for social support versus those who do not. For cohort 2, there was no statistically significant difference between the performance of either the gender or social support subgroups.

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

Cohort	Fall 2016 GPA	Cum. GPA	Women Cum. GPA	Men Cum. GPA	SS Cum. GPA	Non-SS Cum. GPA
I	3.05	3.17	3.43	3.10	3.25	3.19
2	2.88	2.88	2.96	2.83	2.87	2.89

# 4 PERFORMANCE ANALYSES

#### 4.1 Introduction

The overall GPA results presented in Section 3 continue to be encouraging about the capabilities of the Georgian cohort, even though the second cohort on average did not show performance at the sam GPA level as first cohort. Nonetheless, the students in Georgia did 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. English fluency has been raised in past reports as a key issue, and the data continue to reveal challenges in this regard.

## 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. Figure 4-1 shows the flow chart for the linguistics course sequence that results from this placement testing. 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. International 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 in order to move to Ling 100. To obtain credit, they have to 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 I, the performance will be presented based on where students were in the Spring of 2016, and for cohort 2, performance will be presented based on where they are starting 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.

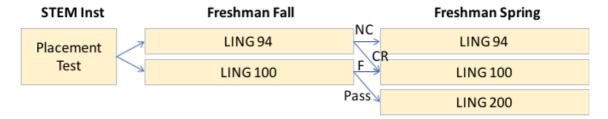


Figure 4-1: Flow Chart for Student Progress in Linguistics Track Courses

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 semester 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
I (Sophomores)	2.94	3.16	3.56
2 (Freshmen)	2.03	3.08	3.35

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. Note that these differences are statistically significant, except for the difference between Ling 94 and Ling 100 in cohort 1. The performance of the lower two subgroups in cohort 1 shows substantial improvement over Spring 2016. This is in part because poor performing students were disproportionately represented in the Ling94 subgroup and absent in the Ling200 subgroup. As a result, the students who were disqualified at the end of Spring 2016 remove the lowest values from the lower two groups.

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 are in Ling 94 now. Once again, poor performing students are disproportionately represented in the lower fluency groups. It was previously noted that 17 students in cohort 2 ended the Fall semester on academic probation. Of those 17 students, 14 (82%) are among the Ling 94 group, 2 (12%) are among the Ling 100 group, and only 1 (6%) among the Ling 200 group. These data are presented in box and whisker format in Figure 4-2 and Figure 4-3.

# Cumulative GPA for Cohort 1 by Ling Subgroup

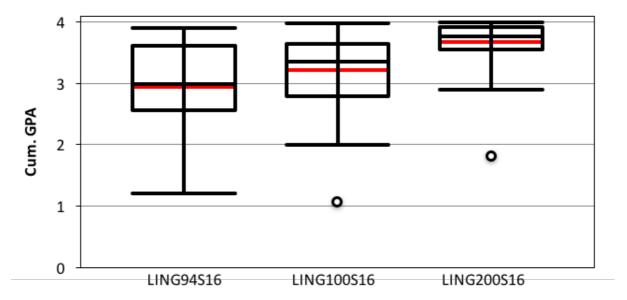


Figure 4-2: Box and Whisker Chart of Cumulative GPA for Ling Subgroups, Cohort I

# 4 3 2 0 0 LING94S16 LING200S16

# Cumulative GPA for Cohort 1 by Ling Subgroup

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

While the trends are suggestive, sample sizes are still relatively small and the progress of the cohorts is relatively short. Further analysis will be possible once the full academic year's data is available and will be presented in the June report. Some additional analyses seeking potential trends are presented in the next section.

# 4.3 Language Development/TOEFL Results

#### Comparison between the two cohort groups

This first analysis looks at potential differences (statistically speaking) between Cohort 1 and Cohort 2. Table 4-2 shows basic descriptive statistics (number of observations, mean, standard deviation) for the two groups. An Independent Sample T-test was run on a number of variables to test for potential statistically significant differences in the scores between the two groups and on the same measures. The candidate measures are:

- 1) National exam test scores for general aptitude
- 2) National exam test scores for English
- 3) National exam test scores for Math
- 4) SDSU-G English placement test (administered before start of studies)
- 5) TOEFL test scores taken the first time
- 6) Economics 102 grades (GPA)
- 7) Linguistics 94 grades when taken the first time (GPA)
- 8) Linguistics 100 grades (GPA)

Table 4-2: Descriptive statistics for Cohort 1 and Cohort 2 for the candidate measures

**Group Statistics** Ν cohort Mean Std. Deviation Std. Error Mean NAEC\_General Aptitude 1.00 76 66.8289 6.95584 .79789 2.00 105 65.0857 7.90340 .77129 NAEC\_English 1.00 76 91.5395 7.40350 .84924 2.00 105 92.5429 5.95501 .58115 NAEC Math 1.00 65 44.2923 7.84363 .97288 2.00 69 45.9855 8.12493 .97813 **SDSU English Placement** 1.00 85 70.8886 14.18475 1.53855 2.00 122 58.9883 21.18215 1.91774 TOEFL taken the first time 1.00 74 536.3919 68.28562 7.93804 2.00 105 533.0381 66.04222 6.44506 1.00 80 3.3913 .75694 .08463 Econ\_102 (GPA) 2.00 89 3.2506 .60248 .06386 2.3231 .95374 .11830 Ling 94 taken the first time 1.00 65 (GPA) 2.00 2.2394 71 .97782 .11605 Ling 100 GPA 1.00 79 2.8405 .93295 .10496 2.00 53 3.8396 .32186 .04421

As can be seen from Table 4-2, the two cohorts seem to be similar on most of the measures except for perhaps two: 1) on the English placement test (M = 70.89, SD = 14.18 for Cohort 1, and M = 58.99, SD = 21.18 for Cohort 2), and 2) on the Linguistics 100 grades (M = 2.84, SD = .93 for Cohort 1 and M = 3.84, SD = .32 for Cohort 2).

To further test similarities and differences, an Independent Sample T-Test was applied to all measures. No statistically significant difference was found on six of the eight measures. The areas where we found statistically significant differences between the two groups are highlighted in bold in Table 4-2. The breakdown for each measure is as follows.

#### 1) National exam test scores for general aptitude

The results show no statistically significant differences between the two groups' general aptitude scores. This means that Cohort 1 and Cohort 2 in our program have very similar general aptitude scores when they leave high school and for those for whom the exams are mandatory.

# 2) National exam test scores for English

The results show no statistically significant differences between the two groups' English as a Foreign Language scores on the National exam. This means that Cohort 1 and Cohort 2 in our program have very similar knowledge and skills in English (as measured by that test) when they leave high school and for those for whom the exams are mandatory.

#### 3) National exam test scores for Math

The results show no statistically significant differences between the two groups' math scores on the National exam. This means that Cohort 1 and Cohort 2 in our program have very similar math knowledge (as measured by that test) when they leave high school and where those exams are mandatory.

#### 4) English placement test (administered by our program)

With the regard to the SDSU-G program's Placement Test, the results show statistically significant differences between the two cohort groups with a t(205) = 4.520, p < .000.

This year, we administered three different tests to place students into the appropriate writing groups: A) a grammar test; B) two written essays; and C) an oral exam.

- A) The same 40-item Michigan Test of Grammar was administered this year as last year. Each item on the test was worth 1 point, totaling 40 points.
- B) This year, we asked students to write two essays instead of just one as we did last year. One of the essays was an argumentative essay where they could pick one of two themes presented to them, and the other asked them to write a descriptive, opinion essay on a given topic. In order to avoid a task-order effect on the results, the students were randomly put into two groups. Group 1 wrote the argumentative essay first and the descriptive/opinion one second, and Group 2 wrote the descriptive/opinion one first, and the argumentative second. Although we have no results as to which group did better on the argumentative essay (that was not the main focus of our study), we wanted to make sure that the order in which the tests were taken would not have an overall effect on the scores for the argumentative essay (that is, if we had done it only one way, we couldn't really tell what made the effect – the order, or the nature and difficulty of the assignment; the argumentative essay is much more difficult to write and needs careful planning). The evaluation of the argumentative essays was based on three measures: a) linguistic features (e.g., ratio between simple and complex sentences, ratio between major and minor grammatical and lexical errors, etc.); b) argumentation, and c) clarity. The total score for these three aspects was 15 (5 points for each area). This segment of the placement test was weighted three times in the overall score; that is, in the computation of the final score, it totaled 45 points (3x15).
- C) We tested each student orally for about 5-10 minutes by a) engaging them in a dialogue with the examiners, and b) asking them to present an idea for a couple of minutes. Each student gained scores on a 1-15 scale for their oral fluency for this performance.

In 2016, the scoring of the placement test was a bit different from 2015 as there was more emphasis on the discourse level features (argumentation and clarity) than giving too much weight to the linguistic features only.

The overall Placement Test score was 100 points total (A = 40, B = 45, C = 15 above). Students with an overall score of 75 or higher were placed in group Linguistics 100A, students with overall scores between 60 and 74 in Linguistics 100B, and the rest of the students were split into three additional groups of Linguistics 94 and depending on their scores they were in group A, B, or C.

What is interesting about the result here is that Cohort 2 had a lower score (M=58.9) on the placement test overall, and it was significantly lower than that of Cohort 1's score (M=70.9). While we asked students to write two relatively short essays rather than just one as IN 2015, only the argumentative essay was evaluated for the purposes of the placement test. The reason for that is that while grammatical accuracy is important for writing, the fact that students can make an argument in a coherent way is just as important. In fact, that the focus in our General Education goals and outcomes in the area of Critical Thinking and Communication. Therefore, we put more emphasis on these measures this year than last year. Cohort 2's scores indicates that students, in fact, lack skills and knowledge exactly in these areas and may need more practice prior to entering higher level critical thinking classes. Therefore, it is imperative and very useful that students are placed into the appropriate levels, and that they are taught these skills in Linguistics 94, 100 and 200.

5) TOEFL test (standardized test to measure proficiency in English as a Foreign or Second Language) taken the first time (either in Fall 2015 or in Fall 2016)

The results show no statistically significant differences between the two groups' TOEFL scores when taken the first time. This means that Cohort 1 and Cohort 2 in our program have very similar general English knowledge as measured by that test, when they entered the university and where they took this test.

#### 6) Economics 102

The results show no statistically significant differences between the two groups' grade point averages in the Economics 102 class. This means that Cohort 1 and Cohort 2 in our program performed similarly in that General Education course.

#### 7) Linguistics 94 taken the first time

The results show no statistically significant differences between the two groups' grades (Credit/No Credit) after taking Linguistics 94 for the first time. This means that Cohort 1 and Cohort 2 in our program have very similar skill levels in critical thinking and written communication by the end of their Linguistics 94 classes.

#### 8) Linguistics 100

With regard to the Linguistics 100 grades (when taken the first time), the results show statistically significant differences between the two cohort groups with t(130) = 7.495, p < .000. Cohort 1 had a significantly lower grade point average than Cohort 2 (2.8, about a B-, versus 3.8, about an A-, respectively) at the end of the semester in Linguistic 100 courses when they took it the first time. The Placement Test is crucial in grouping students into the appropriate level classes in order to ensure student success. While the Linguistics 94 grades (Credit/No Credit) are not part of the GPA, the Linguistics 100 grades are counted.

#### **Summary of Findings**

The results indicate that the changes we have implemented this year in the evaluation of the Placement Test not only allowed us to place students more accurately into their groups (94 or 100 classes - even though they were overall lower in their scores), it also promoted student success in classes where the grades count in their GPAs. The more accurate placement via the Placement Test helped students gain better grades in their GPA-related GE classes scoring a full grade average high at the end of the semester. While the professor teaching our classes last year had never taught on our campus, he was familiar with our system since he had had experience teaching writing and had a 4-day orientation on our campus. This orientation is taken by all of our instructors (new and returning). This academic year, however, we employed two lecturers to teach our classes in Georgia who had had prior experience on our campus teaching the very same courses as TAs. The positive outcome this year suggests that it may be more beneficial for the future to hire those who had already taught at least one semester or more on our main campus.

## On another note

There was one more change implemented this year versus last year to follow the main campus protocol. This was the implementation of a Portfolio assessment in Linguistics 94 versus an accumulation of the grades on the assignments throughout the semester as the final grade. Since there was no difference between Cohort 1 and Cohort 2 in their grades in Linguistics 94, it seems that this new kind of assessment is just as good a measure to evaluate student performance as the other, despite the potential negative feedback on such assessment in that context. In fact, a portfolio-based assessment probably helps students even more since it gives students a final opportunity at the end of the semester to revise all of their papers before they put them up for final evaluation – that is, to make all the modifications they were given feedback on before. This is in contrast with earlier practice where revisions are made before a final version, but once the final

version is done, it is the final score on that paper and that counts towards the accumulation of the final grade. It will be interesting to see whether those who took a portfolio assessment in Linguistics 94 will also get higher final grades in the Linguistics 100 classes by the end of the Spring 2017 semester.

# 5 CONCLUDING COMMENTS

Students in SDSU-Georgia continue to perform at or above the level of their peers on the main campus. Some indications suggest that Cohort 2 exhibits lower overall performance than Cohort I, including average GPA, the number of students entering academic probation at the end of the semester, and the English placement test results, for example. However, this trend is not consistent as, for example, students in Cohort 2 performed better in Linguistics 100 than did those students taking Linguistics 100 in the Fall of 2015. No statistically significant differences in performance were noted owing to gender or social support categories, with the exception that the women in cohort I continue to show a statistically significant performance advantage over the men. This result was not observed for cohort 2, however.

Trends noted over the first academic year that English language fluency is an important component of student success were also noted in the Fall semester of 2016. The highest achieving language group in each cohort experienced better academic outcomes, and the lowest achieving group in each cohort experienced weaker academic outcomes. Students who completed the semester below good academic standing were disproportionally from the low and middle language groups.

While language fluency did seem related to performance, it was also noted at the end of the 2015-16 academic year that weakest language group was able to improve both language fluency and overall academic outcomes. This trend continues, with the lowest language group in cohort I now showing no statistically significant difference in cumulative GPA as compared to the middle group. Admittedly, this is in part attributable to the loss to disqualification of the weakest members of that group. Cohort 2 experienced a higher rate of students entering academic probation as compared to Cohort I. The deployment of math and science help desk and the English Language Development Center are targeted at improving overall outcomes, but are likely to be especially important to the retention and overall success of those students with lower language fluency.

Trends observed to date are based on the outcomes of a relatively limited sample – only the performance of this group on a relatively small number of courses. Conclusions must be interpreted in that light, and will be subject to continued observation and analysis in future semesters. Additional monitoring of student outcome achievement will also be conducted future semesters.