

Georgia

SDSU 104-06-2017

June 30, 2017 SDSU-Georgia

Magda Magradze Chief Executive Officer Millennium Challenge Account – Georgia

Dear Ms. Magradze,

Please find enclosed herewith the following documents as deliverables for the Provision of Degree Accreditation and Institutional Support Initiative for Science, Technology, Engineering, and Mathematics, as required per the contract:

- Capacity Enhancement Report
- Sustainability Plan
- Enrollment Report and Budget
- Annual Work Plan.

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,

Kinnetall

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

THE CALIFORNIA STATE UNIVERSITY: BAKERSFIELD: CHICO: DOMNIGUEZ HILLS: FRESNO: FULLERTON: HAYWARD: HUMBOLDT: LONG BEACH: LOS ANGELES: MARITIME ACADEMY MONTEREY BAY: NORTHRIDGE · POMONA · SACRAMENTO · SAN BERNARDINO · SAN DIEGO · SAN FRANCISCO · SAN JOSE · SAN LUIS OBISFO · SAN MARCOS · SONOMA · STANISLAUS





Georgia

CAPACITY ENHANCEMENT REPORT

TABLE OF CONTENTS

Introduction	2
Background:	3
ABET Accreditation	3
Objectives of the CY3 ABET Initiative	4
ABET Progress at TSU	7
ABET Progress at GTU	9
ABET Progress at ISU	11
ABET Timeline by Program	12
Legislative and Policy related initiatives	16
Recommended Tasks for CY3	16
Overall Observations and Recommendations	16
	Introduction Background: ABET Accreditation Objectives of the CY3 ABET Initiative ABET Progress at TSU ABET Progress at GTU ABET Progress at ISU ABET Timeline by Program Legislative and Policy related initiatives Recommended Tasks for CY3 Overall Observations and Recommendations

Appendix 1: Independent Review of ABET Progress at Partner Universities

Appendix 2: Membership of the ABET committees

Appendix 3: GTU Industrial advisory board

Appendix 4: Tempus project: MathGeAr

Appendix 5: Status update of Computer Engineering of Bachelor Program at ISU

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1. Introduction

Georgia has a critical shortage of science, technology, engineering and mathematics (STEM) professionals, educated to current international standards, graduating from their institutions of higher education. To address this problem, the Georgian government through the Millennium Challenge Account-Georgia, with funding from the U.S. Millennium Challenge Corporation (MCC), contracted with San Diego State University (SDSU) to provide an American university education in Georgia focused on STEM disciplines that would improve human capital in the Georgian labor force. This type of preparation is intended to increase the number of high quality scientists and professionals for companies operating in Georgia, contribute to economic growth in Georgia, and enhance employment in companies requiring market-driven STEM skills.

SDSU is approaching this project in partnership with Tbilisi State University, Ilia State University, and Georgian Technical University – the three premier public universities in Georgia – to provide regionally and professionally accredited US Bachelor's degrees in the country of Georgia initially by SDSU and subsequently transferred to one of the Georgian partner universities. Using the facilities at these three universities, SDSU-Georgia has focused on providing STEM education initially by SDSU and subsequently by the Georgian partner universities to train an advanced workforce to meet the growing needs of Georgia. This program meets SDSU standards for curriculum, faculty training, and accreditation. As with all SDSU Bachelor's degrees, this program also includes general education to provide students with breadth in the liberal arts so necessary for an advanced workforce that will enhance the economy of the country. SDSU is be responsible for admissions (although within the NAEC umbrella), curriculum, quality of instruction, renovation of facilities, updating equipment and implementation of the program. In addition, SDSU-Georgia (SDSU-G) is responsible helping build capacity at the partner universities in STEM fields, including designing and managing construction of facilities, purchasing equipment, training faculty, and helping the partner universities in pursuit of relevant professional accreditation.

This report summarizes the work accomplished in pursuing ABET-related initiatives undertaken by SDSU at the partner universities during CY3. Additional aspects of capacity enhancement for the project include renovation and construction of facilities (described in the Facilities Development Report) and faculty development initiatives (described in the Faculty Development Report). This report will focus on the ABET activities. Note that ACS accreditation will move forward at a later point once SDSU's reaccreditation vist is completed.

The objectives of the ABET initiative of SDSU-G in CY3 were: To determine progress made by the partner universities since the SDSU-G ABET report completed in September 2016. The report provided recommendations that it may be possible to consider additional pathways, a "second track", that do not bridge through the SDSU-delivered programs first, and to facilitate the accreditation of programs at the partner universities. The report delineates and identifies the steps and timeline, for possible ABET accreditation of programs at partner universities. As a result of work done in CY3, SDSU-G identified potential second-track programs (2 second track programs at TSU and two at GTU) for ABET accreditation. Electrical Engineering and Civil Engineering programs at GTU and Electrical Engineering and Computer Science programs at

TSU are suitable for ABET second-track accreditation. ISU computer engineering program is not suitable for second-track ABET accreditation. However, a first track Computer Engineering program can be initiated in all three partner universities.

2. Background

In February, 2013, the Millennium Challenge Account Georgia contracted with the ABET Foundation to provide consultancy services in order to assess STEM Programs and Design of Investment to Build Capacity for ABET Accreditation of Georgian universities. The purpose of the contract was to assess the capacity needs of relevant Georgian programs of study to deliver high quality accredited STEM bachelor degrees.

In December, 2013, the ABET Foundation provided information relative to the readiness of STEM programs at four Georgian universities for a review by ABET for possible program accreditation. Under preliminary evaluation by the ABET Foundation, Georgian degree programs were found to exhibit: 1) A lack of consistent assessment of student learning; 2) A lack of sufficient General Education; 3) A lack of modern teaching and laboratory equipment in many discipline areas.

In response to the ABET Foundation's report, the core methodology proposed by SDSU to facilitate the accreditation of the partner institutions in the 45-month contract was to overlay SDSU's existing, and accredited, curricula onto the framework already provided by the partner institution.

The projection was that by the time the partner institution programs are eligible for consideration (e.g., have at least one graduate), nearly all of the first group of SDSU-Georgia programs will be transitioned to partner-institution instruction only, and thereby be appropriate to be submitted under a Request for Evaluation (RFE). It was projected that some programs could potentially be eligible and prepared to submit the RFE as soon as the end of CY5. Hence, by 2020 these programs should be in the process of applying or approaching being ready to apply for ABET or ACS accreditation. Some programs may have required a longer transition period depending on the speed of capacity building within that program.

ABET Accreditation

In brief, ABET accreditation requires consideration of the programs according to several criteria, which have been specifically targeted by the proposed curricula, including:

Students – the qualifications of the students that are accepted and the monitoring of their performance against graduation requirements.

Program Educational Objectives – the mission of the program and its consistency with the institution's mission, and the achievement of these objectives. This criterion requires a working relationship with industry and an Industry Advisory Board in order to establish objectives and to assess the degree to which graduates achieve them in practice after graduation.

Program Outcomes – program outcomes must be established to achieve the program's educational objectives, and performance must be assessed against them. This assessment is made via metrics that are established with both direct and indirect assessments. Culminating experiences are also incorporated in the assessment strategy.

Continuous Improvement – Metrics must be monitored over time and used to improve the curriculum in general.

Curriculum – program curriculum is defined to achieve the program outcomes, and the details of this connection must be established and maintained.

Faculty – the, qualifications, size and the composition of the faculty to meet the needs of the curriculum.

Facilities – the physical resources (classrooms, labs, offices) available to support the needs of the program.

Support – financial resources to allow faculty development and support services of the Departments providing these programs.

At least every six years, programs submit a self-study document detailing the performance of the program against the criteria stated above. Subsequently, a visit is organized by ABET with a team of independent evaluators who make their own assessment of the accuracy of the self-study and make a recommendation for continued accreditation. The self-studies must include evidence of monitoring against all these criteria throughout the intervening period.

Accreditation at SDSU is an institutional priority with management responsibilities falling directly with the chairs of the relevant departments, overseen by the Deans of the colleges, and, ultimately, by the Provost of the university. SDSU maintains accreditation in all the proposed degrees and is an active partner with ABET and ACS (the accrediting and certifying organizations, respectively, relevant to the current group of degrees) in a process of continuous improvement not only to maintain accreditation, but also to improve student learning and student capacity to enter the job market in their chosen fields.

In all cases, learning assessments will be applied that are consistent with accreditation requirements and consist of an appropriate mix of direct and indirect assessments, with appropriate measurement tools. For example, direct assessment includes homework, examinations, class discussion and projects. Indirect Assessment includes qualitative student surveys that assist in adjusting the pace and focus of class lectures and homework, ensuring adequate progress and full compliance in learning outcomes for the students.

3. Objectives of CY3 ABET initiative

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. In this context, the ABET First-track is defined as the process of overlaying SDSU's existing.

and accredited, curricula onto the framework already provided by the partner institution. The ABET Second-track is defined as the accreditation of existing Georgian language STEM programs at the partner universities.

In September 2016 SDSU-G proposed to assist partner universities to obtain ABET Second-track accreditation for a few of their existing Georgian language STEM programs ("pilot programs"), for which they already have a number of graduates working in the industry. Based on a preliminary assessment of this idea during the CY2, SDSU-G determined that it may be possible to complete ABET Readiness report for the pilot programs (second-track) by CY5, AY 2018-19, and potentially complete ABET accreditation for pilot Georgian language programs in the AY 2020-21.

SDSU-G submitted an ABET report to the partner universities which provided a roadmap for the second-track ABET accreditation of the potential pilot programs. 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 1, 2016 - June 30, 2017) were also provided. A roadmap for ISU has not been proposed as ISU does not have any programs that can be piloted as second track. ISU is commencing a new English language Computer Engineering program in Fall 2017, which lends itself to the first-track accreditation. Similarly, TSU wants to initiate a new Computer Engineering program (under consideration for Fall 2018) which will lend itself to first-track accreditation. GTU is also contemplating an English language Computer Engineering program focusing on Big Data for Fall 2018.

Table 1 shows the proposed first-track and second-track programs which can be prepared for ABET accreditation in each partner university. SDSU-G will pursue the first-track ABET accreditation as planned, or modified as appropriate, based on the outcome of the ABET- second track.

	First – track programs	Second – track pilot programs
TSU	Computer Engineering	Computer Science Electrical Engineering
GTU	Computer Engineering	Civil Engineering Electrical Engineering
ISU	Computer Engineering	

Table 1. First-track and Second-track ABET programs at partner universities.

During the Fall 2016 and Spring 2017 semesters, the ABET committees of GTU and TSU worked closely with SDSU-G, under the guidance of our ABET Officer, Dr. Hashemipour, to fulfill the first-track and second-track tasks. ISU ABET committee is expected to be activated in Fall 2017 semester to work on a first-track program in Computer Engineering.

MCA-Georgia has signed a contract with a Consulting Firm, which will provide ABET Accreditation Readiness Assessment of STEM Programs for the SDSU-G partner universities in September 2017. The itinerary of the consultants is provided in Appendix 1.

The membership of the ABET committees at the partner universities is listed in Appendix 2. The objectives of the ABET initiative of SDSU Georgia in CY3 were:

- Design curricula adapting the ABET requirements of the existing related degree programs
- Reviewing all EE and CS course syllabi in the format of ABET standards at TSU
- Reviewing all EE and CIVE course syllabi in the format of ABET standards at GTU
- Organizing ABET faculty meeting
- Setting up of ABET rooms in the two universities
- Preparation for ABET website
- Establishing an Industrial Advisory Committee
- Organizing meeting and seminar with students
- Organizing Alumni committee for GTU and TSU
- Preparing folders to collect and display the materials for pilot courses
- Establishing a process for Review of Program Educational Objectives
- Establishing relationship of Student Outcomes to Program Educational Objectives
- Conducting satisfaction survey of employers for EE, CS and CIVE graduates
- Capstone Team Project preparation: Guidelines for proposals and assessments
- Self-assessment of courses meeting ABET outcomes a-k
- Assessing and Monitoring Student Participation in Engineering Laboratory
- Development of preliminary ABET self-study for each program.

During the October 2016- Jun 2017 timeframe, SDSU-G attempted to complete the following ABET-second track tasks. To this end, SDSU-G attempted to accomplish the following ABET-second track tasks during CY3:

Task 1.1: Reviewing all syllabi in the format of ABET standards

Task 1.2: Conducting exit survey reports for graduates of GTU and TSU

Task 1.3: Organize a series of workshops for the relevant faculty and staff of each University.

Task 1.4: Mapping of EE, CS and CE courses to program outcomes

Task 1.5: Determining actions as appropriate, including refinements to the assessment and evaluation processes for the pilot courses.

Task 1.6: Developing direct and indirect assessment systems and archiving relevant data **Task 1.7**: Adapting the VALUE Rubrics to ABET Outcomes a-k

Task 1.8: Preparation of preliminary ABET self-study for Assessment by the designated consulting firm in September 2017

The following sections summarize the completed tasks for the Georgia Technical University (GTU), Tbilisi State University (TSU) and IIa State University (ISU) during CY3.

4. ABET Progress at TSU:

On April 27, 2016, an initial meetings was organized at TSU to discuss the progress made since the last ABET Foundation visit in 2013. Subsequently, a Decision (Decree) of the Rector, to authorize formation of TSU's ABET Committee was sought and received on Jun 10, 2016. In various meeting, it is proposed to have the following existing TSU Georgian language STEM programs be considered for piloting the ABET second-track at TSU:

- 1. Electrical Engineering
- 2. Computer Science

ABET related initiatives and meetings at TSU started during the Fall 2016 semester. Various meetings held at TSU during the 2016-2017 AY are tabulated in the table below:

Date	Торіс	Handout
December 13	Curriculum Standards	Sample Curriculums
December 16	ABET website and exit survey reports	Sample of exit survey reports
December 20	Meeting With Students "Why ABET" Workshop	Power Point Presentation
January 17	Syllabus and Course Files	Samples of Syllabus and Course Files
February 14	Finalizing the Curriculums	Revised Curriculum for electrical engineering and computer science
February 28	Resource Allocation and Grading System	
March 1	Industrial Advisory Board establishment	Guide for educational objectives
March 17	Industrial Advisory Board Meeting	Recommendations, refinement and improvements to the electrical engineering program
April 24	Preparation of Preliminary Self-Study Report	Samples of Self-Study Reports
June 1	Assessment Systems	Samples of Assessment Documents
June 8	Capstone Team Project	Guide lines for proposals and Assessments

<u>Overall</u>: There were eleven committee meetings held in the ABET Office at TSU. The committee meetings took place every second Tuesday at the ABET office in the TSU building II. The TSU Committee agreed that the subject department (i.e., Electrical/Electronics Engineering (EE) and Computer Science (CS) departments) will complete, by the end of February, 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.

<u>Appointment of the ABET Facilitator at TSU:</u> With the appointment of the new Rector and the new Dean, the 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.

<u>Resource Allocation and Grading System</u>: In February, the committee had a meeting about the Resource Allocation and Grading system. The committee agreed to pass their opinion to the Rector for necessary changes in grading system and better allocating resources for the departments.

Developing assessment systems and archiving relevant data: Learning assessments will be applied that are consistent with accreditation requirements and comprised of an appropriate mix of direct and indirect assessments, with appropriate measurement tools. Sample folders were delivered to the departments, and 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 every Fall and Spring semesters. A Student Exit Survey was designed and adopted by each Department, and it was circulated among the final semester senior students before the end of the Fall and Spring semesters.

Design curricula adapting the ABET requirements of the existing related degree programs: Electrical / Electronics Engineering Department in TSU has finalized its curriculum according to the ABET requirements. The curriculum appears to have enough engineering topics, but it is not clear whether there is a major design experience The Computer Science Department in TSU received comprehensive evaluation and agreed to continue working on the curriculum to make it coherent with ABET standards.

Forming an External Industry Advisory Board to obtain practitioner input for degree programs: The first meeting of the External Industrial Advisory Board of the Electrical/Electronic Engineering Department took place in April 2017. The Chair of the Advisory Board explained to the members of the board that: a) the changes required to the TSU program by the ABET; and b) why TSU is seeking the support of the board members to obtain feedback of the industry. Feedback is sought primarily regarding the readiness of the graduates in the workforce. Members of the Advisory Committee Mr. Zaridze, Mr. Kakulia, Mr. Shubitidze and Mr. Bit-Babik supported the opportunity to participate and contribute to the amending the program and expressed their readiness to fill in the questionnaires. The board will meet at least once a year to review the department's activities and to make appropriate recommendations. <u>ABET Seminar for students at TSU:</u> A presentation on "What is ABET?" was given to the EE and CS students at TSU on 20th 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 students were particularly interested in creating student clubs in the University for these Programs. Dr. Hashemipour offered assistance to students in establishing student clubs and raise awareness about ABET amongst other students of the two programs.

<u>The faculty ABET web page</u>: TSU created an ABET faculty website. The website provides general information about ABET; progress made at TSU during the accreditation process; Committee meetings overview and the contact information. Link: <u>http://abet.tsu.ge</u>

<u>ABET Office at TSU:</u> Currently a room has been designated for meetings of the ABET committee as well as archiving and display of accreditation documents by the TSU. The meeting room was furnished by SDSU-G. A sample data collection folder for display of materials was prepared.

<u>Computer Engineering</u>: First-track: It was decided to add Computer Engineering as an ABET first-track program. This was strongly supported by the Rector's Office, however, so far there is no progress in setting up this department /program. It can be housed in either Electrical Engineering or the Computer Science Department. Our observation is that the climate for establishing a first-track Computer Engineering program at TSU is not ready – at least for this year.

A "to do" list of tasks that need to be completed by TSU, for both the electrical engineering and the computer science programs, have been provided by Dr. Hashemipour for the preparation PSSR before the end of August 2017.

5. ABET Progress at GTU:

In various meetings with the ABET committee, the Rector and others, it is proposed to have the following existing GTU Georgian language engineering Programs be considered for piloting ABET second-track at GTU:

- 1. Electrical Engineering
- 2. Computer (Informatics) Engineering
- 3. Civil Engineering

There had been little to no work accomplished since Fall by the Computer (Informatics) Engineering Department. This program may require a longer transition period, depending on the speed of capacity building within this program. Therefore, realistically this program will not be ready for the Preliminary Self-Study Reports for ABET Accreditation Readiness Assessment of STEM Programs by the designated consulting firm in September 2017.

<u>Overall</u>: There were ten committee meetings held in the ABET Office at GTU with similar agendas as the TSU meetings.

<u>Developing assessment systems and archiving relevant data</u>: 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, and 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). A 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 ABET requirements of the existing related degree programs</u>: On October 4, 2017, Civil Engineering at GTU received a comprehensive evaluation, and agreed to continue working on the curriculum to make it coherent with ABET standards. In preliminary evaluation, it was decided that the curriculum of Electrical Engineering and Civil engineering programs, is adequately prepared and consist of elective courses culminating in a major engineering design experience. However, the curriculum must devote adequate attention and time to improve the mathematics, basic sciences and general education contents of the curricula.

Form an External Industry Advisory Board to obtain practitioner input for degree programs: On March1, 2017, a decision was made by the GTU ABET Committee to establish an external Industrial Advisory board for the Civil engineering program. The board will serve to support and guide educational objectives and assessment strategies of the Civil Engineering program. The first meeting of the industrial advisory board was held on March 1, 2017 at the ABET office of GTU. Industrial Advisory Board members of GTU Civil Engineering Department are given in Appendix 3. Also, the agenda of the first meeting is also given. A set of Program Educational Objectives that satisfy the definition in the ABET criteria was established and documented by consulting and obtaining input from the advisory board members. The board will make recommendations for refinement of the curriculum, as well as recommendations for improvements to GTU's Civil engineering program. It was decided that the board members will meet twice a year and will include alumni and the employers of GTU's civil engineering program. Industrial Advisory Board of the Electrical Engineering Department at GTU was already established during the CY2.

<u>ABET Office at GTU</u>: Currently two rooms have been designated for meetings of the ABET committee as well as archiving and display of accreditation documents by the GTU. Furniture for the meeting rooms was provided by SDSU-G. A sample data collection folder for display of materials was prepared.

<u>Modernization of Math Syllabi, Tempus project:</u> GTU undertook a Tempus project to improve its mathematics curriculum. The principal objective of the Tempus MathGear project was to improve the quality of STEM education in Georgia by modernizing and improving the curricula and teaching-learning methods in the field of Mathematics by applying new Technology-Enhanced Learning (TEL) tools and new pedagogic approaches. The overview of the project and

recommendations are describe in Appendix 4. This project is expected to help GTU satisfy the ABET's Math requirements too.

The faculty ABET web page, ABET Seminar for students at GTU, and Appointment of the ABET Facilitator at GTU: Planned

A "to do" list and tasks that need to be complete by GTU Electrical Engineering and the Civil engineering programs for the preparation of the PSSR before the end of Augusts 2017, was provided to GTU by Dr. Hashemipour.

6. ABET Progress 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. In June 2017, we had a planning meeting with the ISU Dean of School of Natural Sciences and Engineering, Prof. David Tharkhnishvili. In this meeting, it was agreed to initiate the ABET meetings in the Fall 2017 and also include ISU in the September 2017 ABET consultants visit. Also, a status update of the Computer Engineering Bachelor Program at ISU was requested and received from ISU; Elene Zhuravliova status update report is given in Appendix 4.

7. ABET timeline by program

The anticipated timeline for getting first and second track ABET accreditation for the partner university programs shown in Table 1 are given in the in the following tables:

ABET process/timeline	2018	2019	2020	2021	2022	2023
Commencing of the program	X					
Outcome Assessment Plan		X				
Continuous Improvement Plan			x			~.
Outcome Assessment Plan		···		x		
Continuous Improvement Plan			······		x	
First Graduate of this program					x	
Preparation of final SSR					X	
ABET Response and questions						x
ABET On-site review						X

TSU first-track program: Computer Engineering

TSU and GTU Second-track programs: Civil Engineering, Electrical Engineering and Computer Science

ABET process/timeline		2017		2018			2019					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	\Q2	Q3	Q4
Preparation of PSSR		x	X									
Visit of ABET Consulting Firm	····		X									
Revision of initial PSSR				X								
Outcome Assessment Plan				X								
Continuous Improvement Plan					x							
Readiness Review (RR) Report						x						
Submission of RR							X					
ABET response to RR								X				
Outcome Assessment Plan								X				
Continuous Improvement Plan									x			
Submit a request for Evaluation				-					x	a a saran - Ta		
Preparation of final SSR					• •·····					x		
Submission of SSR											X	
ABET Response and questions											X	
ABET On-site review		· ·										X
Post-visit activity												X
ABET approval July 2020												

Q1: January, February and March Q2: April, May and Jun Q3: July, August and September Q4: October, November and December

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Preparation of PSSR: Preparation and improvement of Preliminary Self-Study Report for both programs until September.

Visit of ABET Consulting Firm: The ABET Accreditation Readiness Assessment of the two Programs by the designated consulting firm in September 2017.

Outcome Assessment Plan:

Establishing:

- i. Student outcomes consistent with ABET
- ii. Relationship between student outcomes and program educational objective
- iii. The contribution of various courses in meeting student outcomes
- iv. Capstone design reports
- v. Process for Attainment of Student Outcomes and Data collection at the end of every semester

Continuous Improvement Plan:

- I. Program Educational Objectives (PEO) Assessment Metrics and Cycle
- II. Feedback Channels

Readiness Review (RR) Report:

Is a qualification process, which screens a given program's PSSR prior to the program entering the formal accreditation review process

Submission of RR:

An institution will notify ABET of intent to seek Readiness Review (RR)

ABET response to RR:

ABET conducts Readiness Review

Submit a request for Evaluation:

Request for evaluation by January 31 of the year of your program's On-Site Visit

Preparation of final SSR:

Complete and submit Self-Study Report by July

ABET Response and questions:

The review team assigned to your program begins reviewing the Self-Study Report

ABET On-site review:

Finalize the visit schedule, arrange student and faculty interviews, and, finally, set up rooms with display materials for the review team. You should begin planning and preparation months in advance

Post-Visit activities:

Due Process is the major post-visit activity before the commission confers the final accreditation decision. The institution will have 30 days to respond to the shortcomings identified in each program's section of the Draft Statement. This back-and-forth response period between the institution and ABET is called 30-Day Due.

2018	2019	2020	2021	2022	2023
x					
	X				
		X			
			X		
				X	
				X	
				X	
					X
					X
	X	X X X X	X X X <td>Z010 Z019 Z020 Z021 X X X X X</td> <td>Z010 Z013 Z020 Z021 Z022 X X Image: state sta</td>	Z010 Z019 Z020 Z021 X X X X X	Z010 Z013 Z020 Z021 Z022 X X Image: state sta

GTU first-track program: Computer Engineering (Big Data)

ISU first-track program: Computer Engineering

ABET process/timeline	2017	2018	2019	2020	2021	2022
Commencing of the program	X					v_ ///////////////////////////////
Outcome Assessment Plan		X				
Continuous Improvement Plan			X			
Outcome Assessment Plan	-			X	L-1997	
Continuous Improvement Plan					X	
First Graduate of this program					X	
Preparation of final SSR			· · ·		X	
ABET Response and questions	-					X
ABET On-site review						X

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8. Legislative and Policy related initiatives

During the CY3, SDSU-G did not perform any tasks related to any policy changes (at institutional level) or legislative changes at the national level (e.g., grading system changes in the Georgian Higher Education Law) that may be needed to implement ABET at the partner universities. This activity will be advanced in the next year.

9. Recommended Tasks for CY4

Outcome Assessment Plan:

Establishing:

- i. Student outcomes consistent with ABET
- ii. Relationship between student outcomes and program educational objective
- iii. Assessment and Evaluation of Student Outcomes at Course Level
- iv. Assessment / Evaluation Tools for Capstone design reports
- v. Process for Attainment of Student Outcomes
- vi. Data collection at the end of every semester
- vii. Formation of an Industrial Advisory board for Computer Science program

Continuous Improvement Plan:

- i. Program Educational Objectives (PEO) Assessment Metrics and Cycle
- ii. Feedback Channels; Alumni, employer and faculty surveys.
- iii. Preparation of Readiness Review (RR) Report

10. Overall Observations and Recommendations:

The ABET process at the partner universities is moving very slowly. A key reason for this seems to be a lack of motivation and enthusiasm of the faculty members. Partner university faculty and staff should have incentives to follow through ABET related initiatives. The process will require that all faculty members participate enthusiastically in the effort required.

Currently, the ABET program coordinators teach SDSU-G students in addition to their normal annual workload which exceed over 20 hours of teaching load per week. SDSU-G recommends that a stipend be allocated to each program ABET coordinator at the partner universities and their teaching work load reduced.

In addition, a clear system of direct and indirect assessment has to be in place. The Course Files should be systematically gathered and analyzed for midterms, quizzes and finals for improvement of the program delivery. For indirect assessment the students, faculty members, alumni and industry should be systematically surveyed to keep the curriculum relevant and industry oriented.

Other observations and recommendations, specific to each institution, are given below:

GTU

- GTU's Rector, Prof. Prangishvili, and senior staff at GTU, are very supportive of ABET initiative. GTU is energized and motivated to undertake the ABET-second track initiative. SDSU-G believes that GTU can utilize ABET as a vehicle to build capacity, as a tool for change. However, one has to be cautiously optimistic knowing the existing status quo at GTU, and the related problems.
- 2. The ABET accreditation process requires teamwork for continuous evaluation; currently, only the two program coordinators are motivated and eager in this process.
- 3. It is essential for the Dean, the heads of the departments, faculty members and students to contribute efficiently to the ABET accreditation process.
- 4. The direct and indirect assessment systems and archiving relevant data process should be put into practice before October 2017.
- 5. Currently, there is no course code assigned to department courses. An appropriate course code scheme should be adopted.
- 6. The guidelines for proposals and assessments of Capstone Team Project preparation should be finalized before the Fall 2017 registration period.
- 7. Shortage of sufficient students in SDSU-G-GTU program offerings, rules out ABET-first-track.
- 8. Appointing an ABET Facilitator to Plan, prepare, and facilitate ABET committee meetings; gathering course folders, analyzing and archiving of the ABET documents is highly recommended.

TSU

- 1. TSU's Rector, Prof. Sharvashidze, his senior staff and the new Dean of Exact Sciences as well as the previous Dean are all very supportive of ABET initiative. TSU is energized and motivated to undertake the ABET-second track initiative.
- 2. The direct and indirect assessment systems and archiving relevant data process should put into practice before October 2017.
- 3. Currently, there is no course code assigned to department courses. An appropriate course code scheme should be adopted.
- 4. The guidelines for proposals and assessments of Capstone Team Project preparation should be finalized before the Fall 2017 registration period.
- 5. It is essential for the Dean, the heads of the departments, faculty members, and students to contribute efficiently to the ABET accreditation process.
- 6. There is no CGPA requirement for graduation. A student can graduate with CGPA as low as of 1.3 (C)". A GPA and CGPA structure for the duration of study needs to be introduced.
- 7. The ABET accreditation process requires teamwork for continuous evaluation; currently only the two program coordinators are motivated and eager in this process.

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8. At TSU, an instructor (professor) does not have access to student grades after submission. He/she cannot see particular students' grades, which makes it hard to monitor students' progress and act appropriately. We recommend adoption of a system where even if professors do not enter the grades to the system manually, they can at least check and control students' progress.

ISU

- 1. ISU's existing Georgian language computer engineering program does not lend itself for ABET-second track.
- 2. Failure to secure EQE accreditation for its new computer engineering program makes progress of ABET related initiatives difficult, and uncertain, at ISU.
- 3. At ISU, SDSU-G will attempt to implement its ABET-first track proposal (i.e., to overlay SDSU's existing, and accredited, curricula onto the framework already provided by the partner institution). However, the significant drop in the number of students who selected ISU engineering programs in the second cohort puts this proposal at risk too.
- 4. Another deficiency observed at ISU is lack of depth in full-time engineering faculty members; both in teaching and research staff (ISU needs to build capacity in engineering disciplines). It is hoped that the initiative to start the new building construction at ISU will reinvigorate the effort there.
- 5. ISU needs to put more faculty members with engineering background on its ABET Committee. Particularly, those engineering faculty members who were trained at SDSU home campus need to take an active role in ISU's ABET push.

Appendix 1. Independent Review of ABET Progress at Partner Universities

The MCA-Georgia has signed a contract with a Consulting Firm, which will provide ABET Accreditation Readiness Assessment of STEM Programs for the SDSU-G partner universities in September 2017. The itinerary of the consultants.

ITINERARY OF ABET EXPERTS: JOE TURNER, FRANC NOEL AND BILL HIGHTER

Sunday, 17 Sep: Leave US for Tbilisi

Monday, 18 Sep: Arrive in Tbilisi

Tuesday, 19 Sep: Meet with MCA-Georgia, SDSU-Georgia, and Ministry of Education officials

Wed-Fri, 20-22 Sep: Review GTU programs (CE and EE, possibly ConstE)

Sat, 23 Sep: Bill Highter returns home

Mon-Wed, 25-27 Sep: Franc and Joe review CS and EE programs at TSU

Thur, 28 Sep: Franc Noel returns home

Thur-Fri, 28-29 Sep: Joe conducts various workshops for GTU,TSU, ISU, and EQE, and reports to MCA-Georgia and MoEd

Sat, 30 Sep: Joe returns home or Mon, 2 Oct: Joe visits ISU Tues, 3 Oct: Joe returns home

APPENDIX 2. ABET Committee Membership by Partner University

Georgian Technical University	Ilia State University	Tbilisi State University
Nikoloz Abzianidze* <i>Simon Nemsadze*</i> <i>Vakhtang Rodonaia*</i> Gia Arabidze Lali Khuntsaria Tamaz Kupatadze Janiko Khuntsaria Alexander Bagration- Davitashvili Irma Inashvili, Konstantine Bziava, David Gurgenidze , Dean Marina Javakhishvili, Mirian Kalabegishvili Lia Balanchivadze, Nugzar Rurua	Davit Tarkhnishvili Davit Aprasidze Nino Dvalidze Nino Zhvania Giorgi Veshapidze Elene Zhuravlyova	Ramaz Botchorishvili Giorgi Ghvedashvili* Manana Khachidze Tsismari Gavasheli* Irina Khutsishvili Magda Alania* Alexandre Gamkrelidze Koba Gelashvili Davit Kakulia*

* Note: Participants in a visit to San Diego

APPENDIX 3. List of External Advisory Board Members of GTU Civil **Engineering Department**

Industrial Advisory Board Members:

Rusudan Sanikidze

Georgian Water & Power Company (GWP) Head of Department of Human Resources Development

Tamaz Shalikadze

Institute of Scientific Research and Production Technology of Highway Construction **General Director**

Nino Chkhaidze

Georgian Railway Head of Department of Human Resources Development

Advisory Committee Industrial Advisory Board Meeting

Agenda

Monday; March 6, 2017; 10:00 am - 1:00 pm

Faculty Attendees:

David Gurgenidze - Dean of Civil Engineering Faculty Marina Javakhishvili -- Head of Quality Assurance Cervice of the Faculty Alexander Davitashvili - professor of GTU Irma Inashvili - professor of GTU Mamuli Grdzelishvili - professor of GTU Majid Hashemipour -

Agenda:

Chair's welcome State of the CIVE program Update on ABET Accreditation Assessment status of the CIVE program Recommendations Other topics

APPENDIX 4. Tempus project: MathGeAr (543868-TEMPUS-1-2013-1-DE-TEMPUS – JPCR) December, 2014 – February, 2017

Prepared by: prof. David Natroshvili

European and Caucasian universities involved in the project

European Universities:

Saarland University (Saarbrucken, Germany) - Project Coordinator University Claude Bernard Lyon 1 (Lyon, France) Tampere University of Technology (Tampere, Finland) Technical University of Chemnitz (Chemnitz, Germany)

Georgian partners:

Georgian Technical University - Tbilisi University of Georgia - Tbilisi Akaki Tsereteli Ttate University - Kutaisi Shota Rustaveli State University - Batumi & National Center for Educational Quality Enhancement – NCEQE

Armenian partners:

State Engineering University of Armenia - Yerevan Armenian State Pedagogical University - Yerevan Institute for Informatics and Automation Problems of NAS - Yerevan &

Armenian National Quality Assurance - ANQA

The most principal objective of the Tempus MatheGear project was to improve the quality of STEM education in Georgia by modernizing and improving the curricula and teachinglearning methods in the field of Mathematics by applying new Technology-Enhanced Learning (TEL) tools and new pedagogic approaches.

The main idea of MODERNIZATION of MATH SILLABI was creation of SEFI & ABET Competency based curriculum in mathematics for engineering programs.

GTU team have prepared three new syllabi: "ENGINEERING MATHEMATICS 1, 2, 3," that are consistent to Math syllabi of European and American technical universities. The new syllabi satisfy SEFI and ABET requirements concerning the Maths subject competences for BS level.

During the modernization, the GTU team prepared Lecture Courses "Engineering Mathematics" in Georgian: Main text about 1300 pp, more than 1800 Exercises (about 60 stakeholders were involved).

Recommendations to Georgian Universities:

Within the framework of MathGear, the project consortium conducted an exhaustive comparative analysis of the mathematical courses taught to the students of engineering and technical programs in Georgian and European universities. The reason for such a focused investigation is the importance of mathematics.

The main goal of the analysis was to identify similarities and differences between the educational practices accepted in teaching mathematics to Georgian and EU engineering students, identify potential risk factors.

We write this document to:

- 1) inform you about the main conclusions drawn from the conducted analysis and the recommendations of the EU expert community made based on these conclusions;
- petition you to act upon these recommendations in order to ensure competitiveness and compatibility of engineering educational program at GTU with the educational practices employed in EU universities.

Conclusion

The average number of academic credits (ECTS) for math courses in EU universities is much higher than in Georgian universities. It is also more consistent across engineering programs in EU, than it is in Georgia. For example, the minimum number of academic credits in an engineering program at TUT is 27, while in GTU, it is only 10. In some GTU engineering programs, this number goes as high as 20, which is also not enough, in our opinion. During the project implementation, we have learned that further reduction of academic credits dedicated to mathematics course is planed across a variety of engineering programs. In our opinion, this will be absolutely detrimental to the quality of engineering education at Georgian Universities.

Recommendations

We recommend increasing the amount of academic credits invested in mathematics, and we strongly advise against further reduction of these credits.

- The core competencies advised by the SEFI framework do not seem to be met nationwide in Georgia whereas their mastery is crucial for students' success.
- Mathematics should be taught more as a problem solving methodology rather than purely abstract subject, promoting applied examples and problems from the real world encountered by engineers. It is also evident that mathematics should be taught by mathematicians, because they are qualified masters of the subject.
- According to our experience in Europe the universities should offer bridging courses for their weakest first year students in order to train core competencies.
- Exams should measure actual understanding of mathematics instead of simple questions (e.g. multiple choice questions) based on student's rote memory. Pen and paper exams have to be based on actual understanding of mathematics with open rather than technical questions and answers in written form. It is harder to mark but usually worth the effort.
- To overcome difficulties related to the low level knowledge in mathematics of freshmen it seems almost necessary to introduce "Precalculus" course in the first semester by modernization of the engineering curricula (we notice that it is a usual practice for western universities).

APPENDIX 5. Status update of ISU's Computer Engineering Bachelor Program

ISU did not receive new students on the old program from 2015-2016 academic year. Now we have 100 active students on this program, 97 of them are on Informatics and only 7 - on Microelectronics. Ninety-two students graduated from Program for these years (81 and 11 respectively). Additionally, we have 88 students, who stopped the study at the different step, but according to our legislation can renewal their status and complete the program.

As for the new Program "Computer Engineering (Bachelor of Computer Engineering qualification), we have applied for accreditation procedure to the Ministry of Education at the end of February 2016. We made the changed in qualifications' framework document and add "Computer Engineering" for Bachelor degree.

In July 2016, experts' committee (two members) has visited ISU. One of them was from TSU, another -from GTU. They evaluated the Program and our resources for it. Their opinion was negative: they concluded that our Faculty staff is too restricted and some Professors would be overloaded. Minor remarks referred to the number of contact hours and evaluation system of some subjects.

Since conclusion was not positive, University decided to stop accreditation procedure.

For this one year, we had recruited new staff in Computer Engineering - Prof. Nana Dihaminjia from Missouri S&T University (<u>https://emclab.mst.edu/studfac/people/dikhaminjianana/</u>) Also, involved in Program existing Faculty staff - Prof. Giorgi Partskhaladze, Nato Jorjiashvili, researcher Khatuna Chergezia and others.

We increased the number of partner Organizations for Internship: LTDs Geographics, Idea Design Group, Vrex Immersive;

After all corrections, we reapplied to EQE and the Ministry this February. Experts had already visited us again (one - the same from GTU, another- from Batumi University). Two days ago we have received their official opinion. They have only minor remarks:

1. In the Data Networks course the number of contact hours for Routing was increased,

2. Competency Map of course results was corrected for some subjects,

3. Evaluation system was detailed in syllabi

Now, we are preparing for the meeting of accreditation board, that will decide on the accreditation.

With a great respect

Elene Zhuravliova Associate Professor Institute of Chemical Biology -- Ilia State University, Tbilisi, Georgia

2017

SDSU Georgia

Revised August 17, 2017



Georgia

SUSTAINABILITY REPORT

Contents

1.	Introduction
1.1	Project Background
1.2	Purpose of this document
2.	Situation Analysis
2.1	Country Overview
2.2	General Education (K-12)
2.3	Higher Education Institutions
2.4	Georgian Students Studying abroad17
2.5	Review of Scholarship Program on the main campus19
3.	ABET / ACS Process and Timeline
3.1	ABET timeline by program
4.	International students
4.1	International students studying in Georgia
4.2	Majors
4.3	Tuition actually paid
4.4	Living Arrangements
4.5	Study in Georgia Initiative
5.	SDSU Budget Projections
6.	Budget Projections
6.1	Three Cohort Projection
6.2	Four Cohort Projection
6.3	Multi-Cohort Projection
7.	Revenue Strategies
7.1	Philanthropic Concept (IR1)
7.2	Student Loan Approach (IR2)
7.3	Increase International Student Population (IR 3)
7.4	Increase Population of Students from Private High Schools (IR4)
7.5	Generate Self-Support Revenues from Continuing Education/Extended Education Offerings (IR5)
7.6	Consider New Degree Programs (IR6)
8.	Cost Reduction Strategies
9.	Concluding Remarks
9.1	Workshop summary
9.2	Workshop Outcome – Transition Plan

Introduction 1.1 Project Background

Georgia has a critical shortage of science, technology, engineering and mathematics (STEM) professionals, educated to current international standards, graduating from their institutions of higher education. To address this problem, the Georgian government through the Millennium Challenge Account-Georgia, with funding from the U.S. Millennium Challenge Corporation (MCC), contracted with San Diego State University (SDSU) to provide an American university education in Georgia focused on STEM disciplines that would improve human capital in the Georgian labor force. This type of preparation is intended to increase the number of high quality scientists and professionals for companies operating in Georgia, contribute to economic growth in Georgia, and enhance employment in companies requiring market-driven STEM skills.

SDSU is approaching this project in partnership with Tbilisi State University, Ilia State University, and Georgian Technical University - the three premier public universities in Georgia - to provide regionally and professionally accredited US Bachelor's degrees in the country of Georgia initially by SDSU and subsequently transferred to one of the Georgian partner universities. Using the facilities at these three universities, SDSU-Georgia has focused on providing STEM education initially by SDSU and subsequently by the Georgian partner universities to train an advanced workforce to meet the growing needs of Georgia. This program meets SDSU standards for curriculum, faculty training, and accreditation. As with all SDSU Bachelor's degrees, this program also includes general education to provide students with breadth in the liberal arts so necessary for an advanced workforce that will enhance the economy of the country. SDSU is be responsible for admissions (although within the NAEC umbrella), curriculum, quality of instruction, renovation of facilities, updating equipment and implementation of the program. In addition, SDSU-Georgia (SDSU-G) is responsible helping build capacity at the partner universities in STEM fields, including designing and managing construction of facilities, purchasing equipment, training faculty, and helping the partner universities in pursuit of ABET (or relevant professional) accreditation.

Additionally, to ensure academic standards and to provide students with the necessary skills to pursue their studies at an American STEM University, SDSU established an English Language Development Center. All instruction is and will be in English as English is the international language of science, and proficiency in English is required to read scientific literature, exchange ideas with international scientists, and participate in international scientific meetings.

SDSU is offering a variety of degrees and certificates based upon recommendations of the government of Georgia. The curricula and courses offered is equivalent to those offered at SDSU home campuses. Courses are taught by SDSU faculty, adjunct faculty, and visiting faculty hired for their scientific and educational expertise. Degree offerings for 2017-18 academic year include: BS Computer Engineering; BS Electrical Engineering; BS Chemistry – Biochemistry; BS Computer Sciences, and scheduled additions BS Civil Engineering; and BS Construction Engineering.

1.2 Purpose of this document

The focus of this report is on providing alternative approaches to the sustainable achievement of program goals. It is important to recognize the context of this report in the light of recent discussions about the future of the SDSU-G program. During the proposal and contract negotiations phase, parties to the process developed expectations about the potential enrollment and the ability of families and students to pay for that enrollment. Those expectations have proven optimistic compared to actual enrollments. The lower enrollments compared to these expectations have had significant project impacts. For the context of this specific report, the most important of those include:

- Lower tuition revenue
- Higher administrative cost burden per student
- Need for very significant scholarship resources to support student recruitment.

This report is provided in the context of these findings and implications, with the intention to provide data for joint decision-making about the best course of action in regards to additional cohorts, capacity building endeavors, and budget requirements. Ongoing work by others may also be important for that process, such as the efforts of Dalberg to complete additional investigations. Such efforts by others will be reported separately.

Recent discussions about the authorization of the 17-18 funding period and the acceptance of a third cohort of students crystalized the observation that the Government, MCA-Georgia, and MCC believe that a long term presence by SDSU in the higher education market is quite important to implementing and scaffolding change in Georgia. However, enrollment trends have revealed that the original expectations of student demand at the projected tuition level, by students with a significant ability and/or willingness to pay the full cost, has not materialized. This report is intended to provide input to support discussions to identify a mutually acceptable means of addressing these issues.

2. Situation Analysis

This chapter presents a summary data regarding the higher education market in Georgia. The data presented here will be used later in the report.

2.1 Country Overview

According to the World Bank, Georgia is now categorized as an "Upper Middle Income economy¹". The population is 3.7 million and GDP per capita is \$3,889².

Even though, according to World Bank, last year Georgia moved from the lower-middle income economy category to upper-middle income economy category, its GNI has retreated from \$16.4 billion USD in 2014 to \$13.6 billion USD in 2016³. This is due to devaluation of GEL against the dollar; as GNI in GEL has increased almost 10% in the last 2 years. Significant economic disparity between the urban and the rural areas continues. In their March 2016 report, Dalberg used median income of \$3,720. This has not changed much since 2014 according to Geostat⁴, and even though average monthly salary has risen to 900 GEL, the USD equivalent of the salaries has not changed significantly.

Georgia is now an Associate member of EU and as of April 1, 2017, Georgian citizens enjoy visa free regime in EU counties. Also, Georgia is ranked high as one of the safest countries in the world ^{5.}

According to Geostat⁶, the population of Georgia now (2017) is 3,718,200. This reflects a reduction in the negative population growth rate, which slowed down to -0.3% from averaging approximately -1.3% from 2007-2014.

2.2 General Education (K-12)

There are 2,083 general public schools throughout Georgia. Shown in the Table 1 is the total number of students in general education schools (K-12) in Georgia from the 2012-13 academic year to the 2016-17 academic year, ranging from 559,415 to 564,729. The total numbers are relatively stable over this time period. The share of private K-12 schools in this total ranges 9-10% (see Table 2). Gender distribution is slightly in favor of boys, both in the public schools and in the private schools.

	2012-13	2013-14	2014-15	2015-16	2016-17
Girls	265,491	261,860	262,937	262,633	268,194
Boys	293,924	291,156	291,057	291,281	296,535
Total	559,415	553,016	553,994	553,914	564,729

Table 1.	K-12	Totals	(Public	&	Private)
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1https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

2 http://www.worldbank.org/en/country/georgia/overview

 $3\ http://www.geostat.ge/index.php?action=page\&p_id=122\&lang=eng$

4 http://geostat.ge/index.php?action=page&p_id=149&lang=eng

5 http://www.georgianjournal.ge/society/32791-georgia-is-3rd-among-118-safest-countries-of-theworld.html; http://cbw.ge/georgia/georgia-ranked-among-top-6-safe-countries/

6 http://www.geostat.ge/?action=page&p_id=473&lang=eng

	2012-13	2013-14	2014-15	2015-16	2016-17
Girls	23,465	22,623	23,816	24,527	24,975
Boys	29,291	28,443	29,833	30,514	30,866
TOTALS	52,756	51,066	53,649	55,041	55,841
% of Total	9.4%	9.2%	9.7%	9.9%	9.9%

 Table 2. K-12 Totals (Private Schools)

In Table 3, the distribution of students by region is shown. It is interesting to note that more than 50% of the K-12 students in Georgia are in the Greater Tbilisi area (reflecting overall population trends).

Region	Fraction of Student Population
Greater Tbilisi	53.1%
Adjara/Guria	12.6%
Imereti/Racha	14.1%
Samtskhe-Javakheti	4.50%
Kakheti	7.7%
Samegrelo/Svaneti	8.0%
Total	100.0%

Table 3. Student Population Distribution by Regions

In Table 4, the number of students studying in high schools (grades 9, 10, 11 and 12), is shown. The number of high school graduates (12th graders) is approximately 40,000 students per year. It needs to be pointed out that the drop in the number of high school graduates in 2016-17 (and the same is expected for 2017-18) is because last decade the Ministry of Education and Science of Georgia (MOES) implemented general education reform, one aspect of which was that Georgia moved from a K-11 model to a K-12 model for general education. This created "transition years" with atypical enrollment. As a result, there are lower than average high school graduates is expected to be around 38,000. Starting with 2018-19 academic year, however, the number of high school graduates will go back up to more typical levels in the range of 40,000 plus.

GRADE	2012-13	2013-14	2014-15	2015-16	2016-17
9	51,647	47,092	46,962	46,688	45,158
10	44,071	46,111	42,522	43,517	43,525
11	40,142	42,081	42,588	39,723	40,525
12	41,947	38,079	40,876	42,101	38,808
Totals	177,807	173,363	172,948	172,029	168,016

Table 4. High School Students by Grade (Public-Private)

Table 5 shows the statistics of the high school exit exams (or "CAT exams") for 12th graders for the years 2011-2016 (Source: factcheck.ge). The table shows that the number of students failing the exams in 2016 almost doubled since the year before. Such large variability is not uncommon from year to year from the data, which is a bit surprising for data from such a large social system. According to the National Assessment and Examination Center, the mechanism for giving the exams, the level of difficulty or the minimum scores required to pass the exams have not changed during this period, indicating that the recent increase had to come from other factors, such as the process of the exams: seating of the students, better proctoring of the exams to decrease any chance of cheating, etc..

 Table 5. Number of High School Students Registered for School Graduation CAT Exams and

 Number of Students Who Failed

Year	2011	2012	2013	2014	2015	2016
Number of Registered Students	46,549	41,483	37,945	38,153	44,517	47,098
Failed minimum scores	14,113	4,684	7,941	5,205	6,426	11,519
%	30.3%	11.3%	20.9%	13.6%	14.4%	24.4%

Source: Ministry of Education and Science of Georgia

According to 2017 data, as of the closing date of NAEC exam registration on March 31, 2017, there were 41,200 students who registered to take the NAEC exams in the upcoming summer. However, according to the NAEC data, every year a certain percentage of the students who register for the exam fail to appear and do not take the NAEC exams. The NAEC administration attributes a portion of this to the CAT exams; some of the high school seniors cannot complete their high school studies because they fail the CAT exams. The rate of failure was 24.4% in 2016. In other words, roughly one-out-of four high school seniors could not graduate from high school, and subsequently, could not sit for the NAEC exams. The data presented in Table 5 makes clear that a significant fraction of the students are not able to pass the entrance exam standards. This result suggests significant diminution of the market, as a substantial fraction of students are not able to complete the CAT exams and, in turn, are not in the market for higher education placement.

Table 6 shows the share of private schools in the high school student population broken down by grade. Again, it ranges 9-10% of the total. Of these, close to 60% of the high school students studying in private high schools are in the Tbilisi region. Tbilisi, the capital of Georgia and the city with the largest population and economy, is the home for more than half of the private high schools in the country. Though there is a concentration of private high schools in the Tbilisi region, as Figure 1 shows there is an even distribution of K-12 public schools throughout Georgia.

GRADE	2012-13	2013-14	2014-15	2015-16	2016-17
9	3,846	3,617	3,976	4,081	4,145
10	4,316	4,067	3,877	4,158	4,089
11	4,120	4,270	4,222	3,832	3,938
12	5,617	3,850	4,095	4,229	3,632
Totals	17,899	15,804	16,170	16,300	15,804
Percent of Total	10.1%	9.1%	9.3%	9.5%	9.4%

Table 6. Population of Private High School Students by Grade

Figure 1. Distribution of K-12 schools by regions and municipalities⁷ Number of Schools by Regions in 2014/2015 school year, unit



⁷ <u>http://www.geostat.ge/?action=page&p_id=206&lang=eng</u>

Private high schools require tuition payments by families. The presence of private high schools with significant tuition in Georgia was taken as evidence of the potential for families to have ability and willingness to pay for education. There are high schools with tuition on the order of the SDSU-G tuition in Georgia. Table 7 provides a listing of schools with tuitions of about half of the SDSU-G tuition and more, with education programs in English language, and showing the approximate number of seniors in their most recently completed academic year.

School	Annual Tuition	Approx. Seniors (2016- 17)	Notes		
QSI	24,700 USD	4	Largely serves diplomatic community. Most students from Georgia receive scholarships		
European School	5,000 EUR	21	Three interested in STEM, 1 admitted to SDSU-G		
Buckswood	8,000 GEL	20			
Logos	11,180 GEL	20			
GZAAT	22,000 GEL	69	Average scholarship of 8,258 GEL		
New School	10,500 EUR	20	Based on IB section, largely serves diplomatic community		
British-Georgian	\$4,700	unknown	Georgian section, no high school		
Academy	\$10,100	unknown	English section, no high school		
School of Tomorrow	3500 USD	unknown	Tuition for both the Georgian and English section, inclusive of all costs		
Iakob Gogebashvili School	8000 GEL	10	Tuition inclusive of all costs		
Nikoloz Tsereteli	4000 USD	unknown	Tuition for Georgian Citizens		
International School	6000 USD	unknown	Tuition for International students		
St George British-	3500 USD	unknown	Georgian Section		
	6500 USD	unknown	English Section		

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The total number of seniors in Table 7 is under 200. SDSU-G and others have used a

rule of thumb in Georgia that about 10% of students are interested in STEM degrees, which for this set of students would translate to about 20 students. If SDSU-G were to capture all of these students, they would still constitute a relatively small group. Further, note that many of the programs listed in Table 7 offer scholarships to Georgian students – for example, there are QSI graduates attending SDSU-G, but they received scholarships at QSI and could not have afforded the full SDSU-G tuition.

2.3 Higher Education Institutions

In Georgia, there are three types of Higher Education Institutions:

- 1. University Institution of Higher Education which carries out higher educational programs of all three stages (Bachelor; Master and Doctorate) and scientific research;
- Teaching University Institution of Higher Education which carries out higher educational program(s) (except doctorate programs). Teaching university necessarily carries out educational programs of second stage – Master Program(s);
- 3. College Institution of Higher Education which carries out only the first stage of the Educational Program (Bachelor's).

Obtaining a status of a Higher Education Institution and implementation of the respective educational activity is possible only through the authorization of the Higher Education Institution as defined by the rules of the Authorization provision – the purpose of which is to ensure compliance with the necessary standards to implement the respective activity required for issuing the document confirming education, recognized by the state. Authorization is carried out by the National Center for Educational Quality Enhancement (EQE). The state recognizes only those diplomas issued by the accredited institutions or educational institutions with the equal status. Figure 2 shows the composition of the Georgian Educational System.

According to the National Statistics Office of Georgia, the Number of Higher Education Institutions has been changing over the last few years as shown in Table 8. The drastic decrease in the number of private HEIs after 2011 was due to the educational reforms and the new procedures of Accreditation/ Authorization. As a result, the number of private HEI's dropped from 108 in 2009 to 33 in 2011. Table 9 shows the number of State and Private Higher Education Institutions in 2017 in Georgia, by the three types.

Year	2008	2009	2011	2012	2013	2014	2015	2016	2017
State	20	21	19	19	19	20	20	20	20
Private	109	108	33	38	47	53	54	54	55
Total	129	129	52	57	66	73	74	74	75

Table 8. Numbers of Registered HEI's, 2008-2017




	Universities	Teaching Universities	Colleges	Totals
Public / State	12	7	1	20
Private	20	21	14	55
Totals	32	28	15	75

Table 9. Number of HEIs in Georgia by Type for 2017

In recent years, several new HEI's have been authorized. The names of newly established HEI's are listed below by year:

- 2015 2 new HEI's authorized: Georgian Physical Education and Sports State Teaching University and the Georgian Academy of Ministry of Internal Affairs, none of which offer STEM;
- 2016 4 new HEI's authorized: Tbilisi International Academy; BAU International University - Batumi Teaching University; New Georgia University, Georgian Patriarchy Akhaltsikhe and Tao-Klarjeti Eparchy Akhaltsikhe St. Grigol Khandzteli State Religious Seminary, none of which offer STEM degree programs;
- 2017 1 new HEI authorized: Business and Technology University that offers Business Administration and Informational Technologies (Computer Science) Degrees.

Currently, approximately 150,000 students are registered on three levels of studies (BA, MA and PhD) at high education institutions in Georgia. However, about 20,000 students are inactive (on leave – suspended/frozen status), leaving 130,000 active students. In 2016, EQE reported that 128,383 students were registered in HEI's in Georgia.

2.3.1. STEM in HEI

For comparison purposes, an analysis was conducted to determine the number of quota spots available to prospective students throughout Georgian HEI's in the six STEM degree subjects offered by SDSU-G:

Computer Engineering	Computer Science
Electrical Engineering	Chemistry / Biochemistry
Civil Engineering	Construction Engineering

Since Computer Science at Georgian HEI's is frequently housed in the Math departments of the Faculties of Exact Sciences, the math quota of the universities was also included in our analysis. As far as the number of HEI's involved in STEM education, there 11 out of 20 public universities and 12 out of the 55 private universities that offer any kind of STEM programs.

Due to the Government of Georgia's stated priority in STEM education in 2015, state universities, organizations/institutions, including SDSU-Georgia's partner universities (TSU, GTU and ISU), increased promotion of STEM programs. Correspondingly, in the recent years, the number of places offered by the state and private universities in STEM programs increased. Despite this increase, the number of STEM slots registered with NAEC by all the HEI's remains at no more than 15% of the total slots offered by NAEC.

Table 10 shows the STEM quotas announced by the Higher Education Institutions for the Academic year 2017-2018. This also includes the Computer Science (Information Technologies) quotas announced by the Business and Technology University (BTU) for the 2017 enrollment.

Program	Quota	%
Computer Science	1,105	21.9%
Electrical Engineering	1,090	21.6%
Computer Engineering	795	15.7%
Construction Engineering	700	13.8%
Chemistry/Biochemistry	530	10.5%
Math	476	9.4%
Civil Engineering	359	7.1%
Totals	5,055	100%

Table 10. STEM quotas announced by HEI's in 6+1 Programs in 2017

The Computer Science program has the highest demand and quotas among the STEM degrees, and it is offered by most of the public and private universities. According to the 2017 data, the civil engineering major has the lowest quota. This is because Civil Engineering per se is offered only by the Georgian Technical University. In all cases, the tables are built around the NAEC program names. The quotas above include the SDSU-G quotas shown in Table 11.

Program	Quota	%
Computer Science	95	19.5%
Electrical Engineering	85	17.5%
Computer Engineering	70	14.5%
Construction Engineering	75	15.5%
Chemistry/Biochemistry	85	17.5%
Civil Engineering	75	15.5%
Totals	485	100

Table 11. Quotas offered by SDSU-G programs for 2017-18 academic year

For comparison purposes, Table 12 shows similar data at a summary level from the years 2015 and 2016. As shown in Table 12, in 2016, the total STEM quota for the 6+1 programs (6 + 1 = 6 SDSU-G programs + 1 Math) was 4,647 places. In 2015, public and private universities announced a total quota of 4,444 in STEM programs. The trend of the quotas offered is ascending and looking at the data from the last three years, the rate of growth is also increasing (almost doubling for the last year from 4.6 to 8.8%).

	Universities Offering STEM Degrees	STEM Quota (including SDSU-G)			
		2015	2016		
Public / State	11	3,294	3,619		
Private	12	1,150	1,028		
Totals	23	4,444	4,647		

Table 12. Recent SDSU-G-similar STEM quotas in Georgian HEI's

* The data analysis was conducted by taking into consideration 6 BS programs offered by SDSU-Georgia, plus Math program at Georgian HEI's.

According to the Education Quality Enhancement Center (EQE), 17,873 students are currently enrolled in Sciences and Engineering Programs offered by state and private educational institutions for Academic Year 2016-2017 (BS and MS; it needs to be noted that no data for PhD students was readily available).

The breakdown and gender distribution is shown in Table 13. According to this data, the involvement of females in sciences and engineering programs is about 26%. At SDSU-G programs this number is approximately 45%.

	Bachelor of Science	Master of Science	Totals
Female	4,220	499	4,719
Male	11,735	1,419	13,154
Totals	15,955	1,918	17,873

Table 13. Students enrolled in Science and Engineering Programs in Georgia in 2016

2.3.2. STEM subject tests on NAEC exam

The program registration analysis conducted by NAEC proves that the passing scores in Math, English and General Aptitude tests at NAEC exams are either average or below average for almost all the state and private universities offering STEM degrees. SDSU-G's thresholds in the STEM subjects and English are considerably higher (see Table 14). Therefore, this decreases the number of applications to SDSU-G programs.

NAEC subject	SDSU-G	Minimum Requirements
Georgian Language	25%+1	25%+1
G A	40%+1	29%+1
English	75%+1	20%+1
Math	50%+1	23%+1
Physics	40%+1	24%+1
Chemistry	50%+1	24%+1
Biology	64%+1	25%+1

Table 14. NAEC subject tests minimum requirements and SDSU-G threshold

In order to increase the number of applicants at SDSU programs, SDSU-G periodically sends updates and offers of scholarships to the applicants who have English and Math/Physics/Chemistry/Biology among their NAEC subjects. From about 10,000 messages sent, typically 10-12% of the students contact SDSU-G to get additional information.

In a related example, 2016 data for the students enrolled in the Civil and Construction Engineering programs at Georgian Technical University was analyzed. It turned out that out of the 600 students enrolled in these programs, only 30 scored high enough to pass SDSU-G's threshold in English, Math and General Aptitude tests.

Another enrollment challenge SDSU-G encounters with the competition from STEM program offerings of the public universities is that some of them do not require a technical subject as one of the NAEC entrance exams. A student can be admitted to, say, Electrical Engineering programs with General Aptitude, English, Georgian Language and Geography. Even the newly established Business and Technology University, BTU, announced that they will admit applicants to their STEM program with any subject of their choice and with minimum NAEC scores.

Tables 15 and 16 show the list of the NAEC subjects some of the state and private universities are accepting for their STEM programs. After analyzing this data, it is clear that most of the universities who offer STEM degrees, do not consider the applicants' knowledge of STEM subjects a decisive factor. For example, the Georgian Technical University offers one of the widest range of STEM programs in the country. However, applicants can apply to the STEM programs at GTU by taking any subjects of their choice as their fourth subject, even Georgian Literature, in case of the Civil Engineering program. As for the private universities, Free Uni is one of the few institutions who filters the applicants by their knowledge in STEM subjects. Others, for example the newly established Business and Technology University takes applicants for the Computer Science (Information Technologies) program with any of the subject choices offered by NAEC.

			ГSU		GTU				ISU	Agrarian University			
	EE	CS	Math	Chem	CS	Civ.E	Con.E	Math	Chem	Math	Comp.E	EE	Chem
Math	✓	✓	~		✓	✓	\checkmark	✓	✓	✓	✓	✓	✓
History					✓	✓	\checkmark		✓		✓	✓	✓
Geography					✓	✓	✓		✓		✓	✓	✓
Literature						✓							✓
Physics	✓				✓	✓	✓		✓		✓	✓	
Chemistry				✓		✓	✓		✓				✓
Biology					✓				✓		✓	✓	✓
Civ. Engrg					✓								

Table 15. List of NAEC subjects requested by State Universities for STEM (except SDSU-G programs)

		Fre	e Un	i	G	FAU		G	eorgi	an Uni		BTU	Caucasus Uni
	CE	EE	CS	Math	CS	Con.E	CE	EE	CS	Con.E	Math	CS	CS
Math	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	\checkmark
History					✓	~	✓	✓	✓	✓		✓	✓
Geography					✓	✓	✓	✓	\checkmark			\checkmark	\checkmark
Literature					✓	✓	✓	✓	✓			✓	
Physics		✓	✓		✓	✓	✓	\checkmark	✓		✓	✓	✓
Chemistry					✓	✓	✓	✓	✓			✓	
Biology					✓	✓			\checkmark			✓	
Civ. Education					✓	✓						✓	

Table 16. List of NAEC subjects requested by Private Universities for STEM

SDSU-G programs can compete with only a few programs according to current data. The number of freshmen who can study at SDSU-G programs are limited. Only 10-15 % of students who are enrolled at STEM programs in other universities have overcome the threshold established for SDSU-G.

Free University:

As for the data of Free University, in 2017, they announced 95 slots as opposed to 120 slots offered in 2016. Even though Free Uni does not have any minimal threshold on its NAEC subject requirements for STEM programs, only the applicants with higher than average NAEC scores are enrolled because the number of slots Free Uni announces each year is rather low, while the demand on its programs is high. Unfortunately the information about the University enrollment is not public so there is no data to analyze beyond the discussions off the record and the information universities choose to provide to each other, or public.

BTU:

Another university that could be considered competition is the Business and Technology University which according to the NAEC data (specified above) has announced enrollment by any subject of the applicant's choice offered by NAEC. Hence, the competence of the BTU enrollment cannot be on the same level as to be considered a competition to SDSU-G.

According to general data in 2017, private universities announced fewer places than in 2016. However, the quota on STEM programs in state universities has increased. This is logical as state universities are fully financed by the state. This quota does not reveal the real demand of the labor market. The demand is increasing annually; correspondingly the demand on engineering has increased. Out of all the graduates only 12-15 % are STEM graduates. While the demand on STEM is about 30% in the world market (leading countries).

2.4 Georgian Students Studying abroad

Unlike the higher institutions of Europe and other countries of the world, Georgia was only given an opportunity to become a part of the international environment and compete with other institutions in the 1990s. Consequently, the level of internationalization at the higher education establishments of Georgia fell behind a bit although it is increasing. One of the most important trends in the internalization of higher education in Georgia is the international mobility of students and academic staff, including two kinds of movement: students transferring from Georgia to foreign countries and vice versa. The issue of internationalization is also important for the Bologna Process with the major goal to ensure high mobility. (Source: Higher Education Internalization: Student International Mobility – Foundation "Open Society – Georgia").

According to the information provided by the Tempus program, during the years 2011-2015 there were 10,539 international students studying in Georgian HEI's on Bachelor's and Master's levels. In 2014 2.55% of the total number of students in Georgia were international.

According to Figure 3, the tendency of incoming international students was ascending, although in 2015 due to the changes in the visa regime towards foreign citizens, the number of incoming international students dropped compared to 2014. (GRASS: Migration Policy Brief).

By the data from the last five years, the most popular host HIE's in Georgia are: Tbilisi State Medical University; Tbilisi State University; Georgian University and Georgian Technical University (for applicants seeking Bachelor's degree); and the International Black Sea University, and Tbilisi State University and Ilia State University (for applicants seeking Master's degree).



Figure 3. Number of international students on Bachelor and Master levels

As for the Georgian students transferring abroad, according to UNESCO (Total outbound internationally mobile tertiary students studying abroad, both sexes, UNESCO, 2016), Figure 4 shows the number of Georgian students visiting foreign education institutions since 1999.



Figure 4. Number of Georgian students visiting foreign countries for education by years

The major trend of the internationalization of the higher educational establishments is joint and exchange programs, which are often considered an easy way of internationalization. EU programs in Georgia are known as Erasmus Mundus and Tempus programs, which were merged in 2014 and now operate within the scope of Erasmus + program. According to the Erasmus + National Office in Georgia, Georgia is one of the most successful countries of the program. After the first part of the competition in 2015, 814 scholarships were given out to Georgian participants, which puts Georgia in 7th place among the 74 partner countries.

While discussing the internationalization processes, it is important to consider the stimulating factors, barriers and opportunities for the Georgian students willing to study abroad and international students visiting Georgia for education. The factors that can be identified as stimuli for the internationals to apply to Georgian universities can be identified as the following:

- 1. Tuition fees
- 2. Ease of Acceptance by Georgian HEI's
- 3. Status and recognition of the programs
- 4. Positive influence on employment opportunities
- 5. Low cost of living
- 6. Safe environment
- 7. Availability of English-language programs and materials

As for the main motivators for the Georgian students to apply for HEI's abroad, the most important factor is international experience, higher quality education, and better opportunities on job market after coming back, and improving level of English language. The factors Georgian students consider before making a decision is the same at the motivators identified above for the internationals applying to Georgian universities. It is worth mentioning, that most of the high school graduates, applying for Bachelor-level studies, are still financially and otherwise dependent on their parents so parents actively participate in their decision

regarding education and most of the parents would prefer that their children did not have to leave the country to receive affordable, quality education.

Appendix A lists the numbers of foreign students applying for exchange programs by countries.

2.5 Review of Scholarship Program on the main campus

Table 17 presents data showing the source of funds for California resident tuition payments for SDSU main campus. Out of state and international students are not shown, because the scholarship/grant/waiver resources available to such students are quite limited and the income profile of such students is rather different than for resident students. Further, the tuition fee for California residents on main campus and for Georgian citizens in Tbilisi are much more similar.

In reviewing this information, it is important to recognize that SDSU campus data is by no means a perfect comparator. This information may be interesting for reference, but cannot be applied directly. The culture of philanthropy that drives scholarship giving is extremely well developed in San Diego, and not in Georgia. The student loan infrastructure is also very well developed, with a wide range of private loan products and a very substantial set of governmentguaranteed programs. Despite the increased access provided by student loan programs, there is a growing political concern inside the US about increasing student debt burden.

The table shows the approximate total tuition revenue in the first row for the last four academic years. Below, the source of these payments is broken down. The first category is scholarships, grants, and waivers – these are funds provided to the student that the student does not have to pay back. In addition, SDSU's Office of Financial Aid and Scholarships (OFAS) provides assistance to students in applying for a number of federal and private student and family loan programs. SDSU does not operate these loan programs, but is able to assist the student in identifying and applying for such programs, and in such cases payments are received on the student's behalf directly to the student's account. Finally, the balance of the tuition is paid by the students, their family, or some other source. On main campus, this portion of the tuition fee averages about 37% across all California resident students.

	2012/20)13	2013/20)14	2014/2015		2015/2016		Avg (%)
Gross tuition Fee - residents only	\$159.5M		\$162.8M		\$163.5M		\$163.9M		
Paid by:									
Scholarships, Grants, and Waivers	\$77.7M	49%	\$78.1M	48%	\$80.9M	49%	\$80.8M	49%	48.8%
Loan Programs	\$24.2M	15%	\$23.5M	14%	\$21.4M	13%	\$22.5M	14%	14.0%
PaidbyStudentorOtherThirdParty	\$57.6M	36%	\$61.2M	38%	\$61.2M	37%	\$60.6M	37%	37.0%

Table 17. Source of funds for California resident tuition payments at SDSU main campus

The impact of student loans on the overall financial picture is likely understated in these data. The loan programs line, representing about 14% of total tuition, decreases the overall family payment of tuition by about one-third of the scholarship amount. However, the loan programs represented here shows only those loans that are facilitated by OFAS. The student and their family may also access home equity loans, credit cards, or other loan vehicles outside of the OFAS portfolio. In such cases, the payment to the university would come in from the student or their parents and would not be distinguishable to the university. Estimated range of tuition payments by parents from such sources range from 5-15% of the cost of attendance (that is, tuition plus educational and living expenses).

3. ABET / ACS Process and Timeline

During the Spring 2016 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/ACS capacity building efforts. Committees were established at all three partner universities to raise awareness of ABET and to begin developing readiness reports. The membership of the committees is listed in Table 18.

A brief description of the ABET accreditation efforts at the partner universities are given here from a sustainability perspective. The overall ABET efforts are explained in detail in the Capacity Enhancement report. Thus far, SDSU-G has not initiated any work on ACS related accreditation at the partner universities.

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*		
Ia Mosashvili*		

Table 18: ABET Committee Membership by Partner University

* Note: Participants in a visit to San Diego

SDSU-G's original proposal called for seeking accreditation for the partner university programs by bridging through the SDSU-delivered programs first. In the September 2016 SDSU-G ABET report, however, it was pointed out that it may be possible to consider additional pathways, a "second track", to facilitate the accreditation of programs at the partner universities.

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. In the second-track, SDSU-G 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.

Table 19 shows the first-track and second-track programs which can be prepared for ABET accreditation in each partner university.

	First – track programs	Second – track pilot programs
TSU	Computer Engineering	Computer Science Electrical Engineering
GTU	Computer Engineering	Civil Engineering Electrical Engineering
ISU	Computer Engineering	

Table 19. First-track and Second-track programs at partner universities.

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

SDSU-G submitted an ABET report to TSU and GTU which provided a roadmap for the second-track ABET accreditation of the potential pilot programs. An action plan and a framework for the tasks to be undertaken during CY2, and CY3 (8 months budget: Nov 1, 2016 - June 30, 2017) were also provided. A roadmap for ISU has not been proposed as ISU does not have any programs that can be piloted as second track. ISU is commencing a new English language Computer Engineering program in Fall 2017, which lends itself to the first-track accreditation. Similarly, TSU wants to initiate a new Computer Engineering program (under consideration for Fall 2018) which will lend itself to first-track accreditation. GTU is also contemplating an English language Computer Engineering program focusing on BIG DATA for Fall 2018.

During the 2016-17 AY, the ABET committees of GTU and TSU worked closely with SDSU-G, under the guidance of our ABET Officer, Dr. Hashemipour. The ISU ABET committee is expected to be activated in Fall 2017 semester to work on a first-track program in Computer Engineering.

MCA-Georgia has signed a contract with a Consulting Firm that will provide ABET Accreditation Readiness Assessment of STEM Programs for the SDSU-G partner universities in September 2017.

During the Spring 2017 timeframe, SDSU-G attempted to complete the following ABET-second track tasks at TSU and GTU:

- Developing assessment systems and archiving relevant data:
- Design curricula: Adapting the existing related degree programs to the ABET requirements
- Forming an External Industry Advisory Board to obtain practitioner input for degree programs
- The faculty ABET web page

3.1 ABET timeline by program

Anticipated timelines for getting first and second track ABET accreditation for the partner university programs shown in Table 19 are given below:

ABET process/timeline	2018	2019	2020	2021	2022	2023
Commencing of the program	Х					
Outcome Assessment Plan		Х				
Continuous Improvement Plan			Х			
Outcome Assessment Plan				Х		
Continuous Improvement Plan					Х	
First Graduate of this program					Х	
Preparation of final SSR					Х	
ABET Response and questions						Х
ABET On-site review						Х

TSU first-track program: Computer Engineering

ABET process/timeline	201	7			2018	3			2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preparation of PSSR		Х	Х									
Visit of ABET Consulting Firm			X									
Revision of initial PSSR				Х								
Outcome Assessment Plan				Х								
Continuous Improvement Plan					Х							
Readiness Review (RR) Report						Х						
Submission of RR							Х					
ABET response to RR								Х				
Outcome Assessment Plan								Х				
Continuous Improvement Plan									Х			
Submit a request for Evaluation									Х			
Preparation of final SSR										Х		
Submission of SSR											X	
ABET Response and questions											Х	
ABET On-site review												Х
Post-visit activity												Х
ABET approval July 2020												

TSU Second-track programs: Electrical Engineering and Computer Science

Q1: January, February and March Q3: July, August and September Q2: April, May and Jun

Q4: October, November and December

ABET process/timeline	2017		2018			2019						
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preparation of PSSR		Х	Х									
Visit of ABET Consulting Firm			Х									
Revision of initial PSSR				Х								
Outcome Assessment Plan				Х								
Continuous Improvement Plan					Х							
Readiness Review (RR) Report						Х						
Submission of RR							Х					
ABET response to RR								Х				
Outcome Assessment Plan								Х				
Continuous Improvement Plan									Х			
Submit a request for Evaluation									Х			
Preparation of final SSR										Х		
Submission of SSR											Х	
ABET Response and questions											Х	
ABET On-site review												Х
Post-visit activity												Х
ABET approval July 2020												

GTU Second-track programs: Electrical Engineering and Civil Engineering

Q1: January, February and March Q3: July, August and September Q2: April, May and Jun

Q4: October, November and December

ABET process/timeline	2018	2019	2020	2021	2022	2023
Commencing of the program	Х					
Outcome Assessment Plan		Х				
Continuous Improvement Plan			Х			
Outcome Assessment Plan				Х		
Continuous Improvement Plan					Х	
First Graduate of this program					Х	
Preparation of final SSR					Х	
ABET Response and questions						Х
ABET On-site review						Х

GTU first-track program: Computer Engineering (BIG DATA)

ISU first-track program: Computer Engineering

ABET process/timeline	2017	2018	2019	2020	2021	2022
Commencing of the program	Х					
Outcome Assessment Plan		Х				
Continuous Improvement Plan			Х			
Outcome Assessment Plan				Х		
Continuous Improvement Plan					Х	
First Graduate of this program					Х	
Preparation of final SSR					Х	
ABET Response and questions						Х
ABET On-site review						Х

4. International students4.1 International students studying in Georgia

According to data provided by MOES⁸, for the years 2013, 2014, 2015 and 2016, the number of new international students who were approved by the Ministry to be students in Georgia were 2030, 3031, 3264 and 3490, respectively. From 2013 to 2014, the number of new international students who were admitted increased almost 50%. However, the growth slowed after the implementation of stricter visa regimes by the Government of Georgia in 2014. The increase in number of new international students dropped to approximately 7%. Georgia receives most students from Azerbaijan, India, Nigeria, Iraq, Russia, and Turkey. The numbers show slight variations from year to year, but these six countries have traditionally sent the most students. The 2016 admitted new international student count from these six countries is given in the Table 20 below.

Country	2016-17
Azerbaijan	948
India	1443
Nigeria	140
Iraq	103
Russia	92
Turkey	78

Table 20.	Тор	6 countries	-2016-17
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It needs to be noted that not all the students who received admission authorization from the MOES actually came to Georgia, registered and became a student in Georgia. According to the MOES, the enrolled student count can be approximately 75% of the students who were found admissible. The total number of enrolled international students in Georgian universities during any given year can then be calculated by multiplying the new student count by 4 (i.e., 4-year period) and taking 75% of the total. This number is approximately 9,000 for the years 2013 to 2016. According to a study sponsored by the Konrad Adenauer Foundation ⁹, in 2015-16 academic year, there were 6,643 international students studying in Georgia. Out of which 3,822 were studying in Bachelors level. A policy brief prepared by the Open Society and CIE¹⁰.

⁸ Data provided by MOES of Georgia (Alexander Goloronidze), May 2017

⁹ Zhvania, A. and Chanturia, R. 2016. Study in Georgia: Prospects of Internationalization of Higher Education. Report prepared by PMC Research Center by the support of Konrad Adenauer Foundation.

¹⁰ Chanturia R. 2016. Internationalization of Higher Education: International Student Mobility. Policy Brief, Open Society Georgia Foundation and Center for

quotes a UNESCO publication (2013) and puts the number of incoming new international students to Georgia at 2,167.

Of these, probably the Konrad Adenauer Foundation number is probably too low and our number is probably somewhat high. However, for the purposes of this study we will take 6,643 as the number of international students in Georgia. Of these 54.1% of the students study at private HEIs, and 45.1% study at public institutions.

As an example, the break-down of international students by country reported on October 17, 2016 by GTU, one of the public institutions, is shown in the Table 21 below:

Country	2016-17
Azerbaijan	442
Russia	59
Iraq	7
Qatar	1
Korea	1
Armenia	5
Uzbekistan	3
Ukraine	12
Kirgizstan	1
Turkey	5
Nigeria	1
Iran	4
Kazakhstan	4
Latvia	1
Canada	1
TOTALS	547

Table 21. Enrollment of Foreign students at GTU

There are students from 15 countries but the numbers from Azerbaijan dominates, which is typical of international student enrollments in most public and private universities.

International Education Foundation.

4.2 Majors

The five most popular majors studied by international students in Georgia are Medicine (70%), Business (19%), Economics (5%), Education (3%) and Law (3%).

4.3 Tuition actually paid

Tuition in public universities of Georgia, for Georgian citizens, is 2,250 GEL. For international students, the tuition in public universities can be more than this amount. Except for Medicine and Dentistry, the average tuition paid by international students studying in Georgia is around \$2,000. Medicine and Dentistry are in the range of \$4,000-\$7,000. In Table 22, annual tuition in selective private universities in Tbilisi is given.

School		Annual Tuition
		(GEL)
Free University of	Standard	6,950
Tbilisi	B.A. in Business Administration	7,850
Caucasus University	Standard	2,250
	B.A. in Business Administration	7,500
	Law, Journalism, Mass Comm, PR, etc	5,900
Georgian Institute of	B.A. in Business Administration	7,500
Public Affairs (GIPA)	Law	5,000
	Audio-Visual & Media Art	5,400
Georgia-American	Business School	5,900
University (GAU)	International Rel. and Diplomacy	4,900
	Nat. Sciences & Engineering	4,500
	Liberal arts & Humanities	3,500
International Black Sea	B.A. in Business Administration	5,100
University (IBSU)	Economics, Accounting,	
	Tourism, Engineering.	
	-	3,960
	Law	5,900
	International Relations	4,680
New Vision University	Medicine	4500 Georgian
		students, 5500
	T	USD Int'ls
		2250
	Politics and Diplomacy	3950 2050 4500 HGD
	Business and IT	3950, 4500 USD
		Int ts

Table 22. Tuition of some of the private higher education institutions in Tbilisi, Geo.

Reference: 2017 NAEC Directory for Applicants

Demand for non-STEM fields (i.e., law, business administration, social sciences, humanities, international relations, journalism, etc.) is much higher than the demand for STEM disciplines. Accordingly, the tuition for non-STEM fields is priced based on demand, rather than the cost of education. Likely, the cost of instruction for STEM degrees is considerably higher than that of non-STEM degrees. In the U.S., the cost of education is reflected in the

tuition. But this is not the case in Georgia; the differential pricing of degrees are based on demand rather than the cost of instruction.

The two STEM degrees listed in Table 22, at GAU and at IBSU, are priced at 4,500 GEL and 3,960 GEL, respectively. New Vision is also listed, with tuitions of 4500-5500 USD for medicine and business/IT. Compared to these, SDSU-G annual tuition for Georgian students, \$7,500, is 4-5 times higher. It is considerably higher for international students; the list-price of annual tuition for international students is \$13,500.

4.4 Living Arrangements

Currently, HEIs do not provide any dormitories for international students. There are also no dormitories for Georgian students who come to Tbilisi from the regions to study. Also, though there are some plans by private investors, currently, there are no private dormitories in Tbilisi either.

International students are left on their own to sort out their housing needs. Universities provide minimal referral and assistance to students to rent apartments. Typically, a few students get together and share an apartment.

4.5 Study in Georgia Initiative

In earlier writings, SDSU-G pointed out that:

"So far, how Georgia and Georgian higher education is positioned in the international higher education arena, posed some difficulty for SDSU-G promotions; particularly, in relations to partner universities tuition, etc.

Georgia opened its doors to international students in 2008 by admitting 259 undergraduate students. Since then the numbers grew to 3490 new students in 2016. This is a very good progress; however, currently Georgian HE is serving the "value market". To date, the Georgian undergraduate higher education sector, both private and public, appeals only to international students looking to obtain a degree in a country that offers "value-market" inexpensive degrees (mostly -- 70% of the total-- in the medical field). Shifting the perception of Georgian universities in the international education arena from that of "value-market" to a "higher-end brand" (e.g., internationally accredited U.S. degree), needs to be set as a goal by the GoG. This will need both time and coordinated effort among several ministries, led by the MOES of Georgia."

Such a goal and initiative is now underway spearheaded by the Ministry of Education and Science. The MOES launched a STUDY IN GEORGIA campaign early in 2017. This initiative has already resulted in a highly successful participation in the Dubai Education Fair in April 2017. The Study in Georgia booth was very popular and well-received. As an HEI in Georgia, SDSU-G participated in this fair under the auspices of Study in Georgia. As part of the same initiative, a delegation of Study in Georgia staff from the MOES, headed by the Deputy Minister, will be attending the NAFSA Annual Conference in Los Angeles in June 2017.

A good summary of the potential benefits of Study in Georgia and the prospects of internationalization of higher education in Georgia can be found in "Study in Georgia: Prospects of Internationalization of Higher Education". SDSU-G is a firm believer in the concept and will support the MOES fully in this endeavor.

5. SDSU Budget Projections

The SDSU-G budget process is relatively complex and depends on a number of assumptions and conditions. Critical variables that have experienced a great deal of fluctuation over the life of the project to date include the enrollment numbers, the GEL-USD currency exchange rate, and the anticipated fraction of the tuition that would be paid by the student or their families as compared to by scholarship funds. This variable has been called "family pay" in the past, with 1-family pay equal to scholarship pay. To date, the scholarship funds that have been used have come almost exclusively from GRDF funds. Further, there are some structural differences between the way the budget was originally projected and the way it has developed in actual operation (for example, the so-called merit scholarship offset). A challenge has been that as these various changes have occurred, the resulting impacts on the budget have created the impression of changing budget numbers.

For purposes of the upcoming discussion, we intend to rely upon budget estimates presented herein, based on our best estimates of the important variables and projections. However, as changes occur over the remainder of the project, the actual operating budgets must reflect those actual conditions. Significant changes to, for example, the currency exchange rate or the actual enrollments as compared to the estimates here, will produce alterations to this budget that would have to be managed at the time they occur. Given this reality, the budget estimates presented in this document should not be taken as guarantees or proposals. Rather, they are intended to provide context for upcoming discussions and an indication of the magnitude of resource requirements.

6. Budget Projections6.1 Three Cohort Projection

In the recently completed negotiations, SDSU and MCA-G agreed on a budget based on the acceptance of a third cohort of students in Georgia. This budget covers the completion of studies by the third cohort, who will start their studies in the Fall of 2017. This budget is presented in Appendix B. It is based on the actual enrollments for the first two cohorts and a projected enrollment of 200 Georgians and 25 international students for the third cohort.

6.2 Four Cohort Projection

A budget projection for the case of acceptance of a fourth cohort is presented in Appendix C. This model is based on the actual enrollments for the first two cohorts, a projected enrollment of 200 Georgians and 25 international students for the third cohort, and a projected enrollment of 225 Georgians and 50 international students for the fourth cohort. At present, this budget shows a resource requirement of about \$6.4M that must be addressed.

6.3 Multi-Cohort Projection

As a tool for discussion, it is important to have a general idea of the financial impact of each new accepted cohort. Of course, this impact is strongly dependent on the key variables described in Section 5. For the purposes of providing a rough order of magnitude planning tool, a multi-cohort projection is presented in Appendix D. This model is based on the

following assumptions, and actual budget for any accepted cohorts would obviously be based on the conditions that exist at that time. A model is presented for each level of family pay presented in the list below. This model is presented with enrollment through CY9 (cohort 8) which allows the steady state level to be obtained. The result can then be used to approximately project for a larger or smaller number of cohorts as will be presented below.

- Steady-state enrollment of 225 (Georgian) and 50 (international), starting CY 5 (cohort 4) and continuing thereafter
- Family Pay at 20%, 25%, and 30% for Georgian Students
- Scholarship Pay at 80%, 75%, and 70% for Georgian Students
- Tuition for Georgian students constant at \$7500/year
- Government lump sum constant at 2250 GEL/year/student
- International tuition at \$13,500 offset by a 25% waiver (net of \$10,125)
- Currency Exchange rate of 2.50 GEL to 1 USD
- Attrition at 5% per year per cohort
- Georgian students receive average GoG merit scholarship of 70%
- Students complete in 8 semesters of study
- Costs of all books and laboratory supplies and other educationally related expenses are included in the tuition
- Partner university receive 2250 GEL per student enrolled and 100 GEL facility usage fee for hosting students enrolled through other partner universities
- MCC funds not a part of budget beyond CY 6.
- GRDF funds not a part of budget beyond CY8.

Based on these assumptions, the results imply that for each cohort accepted, the total revenue requirement per cohort for a balanced budget is approximately \$10.5M. This amount can be broken down as follows:

	Scholarship Percentage				
	70%	75%	80%		
Tuition Paid by Family	\$1.4M	\$1.1M	\$0.8M		
Tuition Paid by Scholarship	\$5.2M	\$5.5M	\$5.9M		
International Student Tuition	\$1.9M	\$1.9M	\$1.9M		
Government of Georgia Lump Sum	\$0.8M	\$0.8M	\$0.8M		
Additional Revenue Needed to Balance	\$1.2M	\$1.2M	\$1.1M		
Total Revenue Needed	\$10.5M	\$10.5M	\$10.5M		

Using this result, the funding needs per cohort, over and above international student tuition, family pay, and GoG lump sum, consist of the following:

	Scholarship Percenta		
	70%	75%	80%
Tuition Paid by Scholarship	\$5.2M	\$5.5M	\$5.9M
Additional Revenue Needed to Balance	\$1.2M	\$1.2M	\$1.1M
Support Funds Needed per Cohort	\$6.4M	\$6.7M	\$7.0

The values presented above are a steady state projection as cohorts continue. There are additional expenses incurred once the closeout process begins. This expense arises because of a three-year period during which the number of students decreases annually as SDSU-G students teach out to graduation. So, for example, in the first year of the closeout period there are only three cohorts of tuition-paying students, in the second year there are two cohorts, and in the third year there is only a single cohort. Administrative costs are thus borne to a smaller population of tuition payers each year, increasing the cost per student. The estimated total additional cost of the closeout process is approximately \$6.5M

Using these values, it is possible to estimate the support funds that are needed per cohort accepted for any number of cohorts desired. This is a useful planning tool for order of magnitude costs, detailed budgets would of course be needed for each cohort actually accepted. For example, assume a case where we wish to estimate the total amount of support funds needed for 10 cohorts, with an estimated scholarship percentage of 80%. The estimate would be:

10 cohorts x 7.0M per cohort + 6.5M per cohort = 76.5.M.

The levels of family pay described above are substantially smaller than was used in initial budget projections, and also smaller than the values that have been used in budget projections that were circulated in the early part of this academic year. This change is based primarily on three observations. First, as previously presented in this report, the fraction of tuition paid by students on the main campus is in the range of these assumptions. Second, the experience of negotiation with students in the recruitment process for the second and third cohort suggest that a plateau is being identified in family pay in the range of that presented in these assumptions. Third, the recently completed survey of the student experience revealed that the existing students in the first two cohorts overwhelmingly stated that, though they were quite pleased with their SDSU-G experience, they would not be able to participate were it not for the scholarship funds they have received.

7. Revenue Strategies

In order to continue offering SDSU degrees in Georgia, by California law SDSU must be able to project that the expenses required in order to allow each student the opportunity to complete their studies can be covered. In this section, we present a number of scenarios focused on increasing and/or diversifying the revenue streams of SDSU-G. These are summarized in the Table 23, with discussion of the impact of each approach to follow.

	Concept Code	Concept Summary		
INCREASE REVENUES	IR1	Philanthropic Funds are Raised as Scholarship Funds		
	IR2	Student Loan Programs Provide an Increase in Family Pay		
	IR3	Increase International students		
	IR4	Recruit more students from high cost private high schools		
	IR5	Add self-support		
	IR6	Add new non-STEM degree programs		

7.1 Philanthropic Concept (IR1)

The concept here is to raise philanthropic funds to provide scholarships for the amounts presented in Section 6.3. There is additional work ongoing via the consultancy of Marts and Lundy, and also efforts by Dalberg, that will inform this effort. Critical questions that these efforts can help address by the time of our meetings include the following:

- What quantity of funds can realistically be raised in Georgia or from outside entities for Georgia?
- What is a reasonable estimate for the time period that would be required in order to obtain those funds?
- What infrastructure must be put in place in order to conduct the necessary development effort, and who is in the best position to manage that infrastructure?
- What is the likely cost of the development effort (which is not currently included in the revenue structure presented in Section 6.3). How can these costs be covered?

The answers to some of these questions may be available at the time of our upcoming discussions. In the meantime, it must be recognized that:

- Commitments for philanthropic funds to date are significant, in the range of \$3M. However, there are significant complexities in the structuring of the acceptance and management of funds and the tax implications of such funds that are proving to be quite challenging to overcome. Overcoming these challenges must be considered in the identification of cost of the development effort.
- At present only annual giving (as compared to endowment) seems feasible in Georgia. This means that the availability of funds for any given year (or cohort) is not guaranteed. No cohort can be accepted without a guarantee of funds. At present, only Government seems viable as a guarantor during the interim period until philanthropic funds are developed.

7.2 Student Loan Approach (IR2)

There are existing student loan programs in Georgia, but these programs tend to be offered at relatively high interest rates as compared to, for example, SDSU students in the US are able to access, and require collateralization not likely available to the majority of SDSU's existing students. There are ongoing discussions with several parties about the potential that a new loan program could be developed in Georgia that might be able to provide more attractive programs that could be accessed by a larger fraction of the potential student body.

At present, we are not aware that any of the existing students are using existing loan programs available in Georgia. It may be that a loan program can be developed in the future. However, it should be noted that the experience on campus, where well-developed programs with long histories exist, is that loans cover only about 14% of tuition, or around ¹/₄ of the scholarship amount. Thus, this strategy is unlikely to solve the entire support funds requirement, even if such a program were put in place, as the expectation in Georgia is likely lower than in the US. Furthermore, there is no program in place at present and the road to complete this process seems quite lengthy. At least in the short to medium term, this strategy cannot be counted on.

7.3 Increase International Student Population (IR 3)

International students pay a tuition premium over and above what the Georgian students pay. Thus, a strategy for increasing revenues is to increase the number of international students. To date, in order to attract international students SDSU-G has had to write down the effective tuition to about \$10,125. This means that approximately three international students could cover the tuition of one Georgian student (based on the difference between \$10,125 and \$7500 tuitions). We have estimated that it would require 565 international students per cohort to cover the funding gap presented in section 6.3. This exceeds the total capacity at buildout of about 500 students per cohort, even without counting the Georgian students thus supported. Furthermore, the growth rate for international student enrollment is difficult to predict. For this concept to bear fruit, SDSU-G needs to substantially increase its international marketing efforts, and to maintain full-time recruitment staff. Note that for main campus, the international recruitment staff). With that staff, and its name recognition and ranking, SDSU home campus recruits significantly less

than 500 international students per year for all its programs.

We strongly support the Government's efforts to increase the market share of international students in Georgia and in SDSU-Georgia. However, from a budgeting perspective it seems unlikely that this can be a significant funding source for quite some time.

7.4 Increase Population of Students from Private High Schools (IR4)

The existence of high schools with tuitions in the range of SDSU-G's tuition was taken as evidence of demand by students with ability and willingness to pay for education. Unfortunately, as previously presented in section 2.2, this population appears to be quite small. This effort should of course be continued, but from a budgeting perspective does not seem to provide a significant impact.

7.5 Generate Self-Support Revenues from Continuing Education/Extended Education Offerings (IR5)

Preliminary discussions with Georgian stakeholders including members of the Advisory Board (for example) self-support programs such as continuing education, technology training, innovation and entrepreneurship, or summer camps for children may have high demand. This is an avenue that could be explored to enhance revenues. A formal needs assessment survey would need to be conducted to support this concept, in order to better describe the market and identify good targets. The Needs Assessment would be most effective if several audiences would be surveyed or would participate in face-to-face group discussions. These audiences would likely include potential students, potential instructors, businesses, government, and education institutions. Price points, modalities (online face-to-face, hybrid or blended), potential topics, timeframes, and other instructional and administrative services would also be important to include in the needs assessment. This effort would require resources to support it.

However, before embarking on such an effort it must be recognized that the College of Extended Studies on the main campus, with a substantial history in the market place and a large staff, does not generate bottom line profits near the levels presented in section 6.3. Once again, this concept could provide some resources, but not in the short to medium term and not without due consideration of the costs associated with the effort.

7.6 Consider New Degree Programs (IR6)

It has been widely reported by SDSU and others that STEM subjects are not in high demand in Georgia. As a concept, it was argued that adding new degree programs, that might even include areas outside STEM, could boost student demand and increase student populations, and potentially identify students with higher willingness to pay within Georgia or among international students. In various settings, potential degree areas suggested have included:

- Business Administration
- International Relations
- Hospitality and Tourism Management
- Nursing

It is possible that adding degree programs with higher demand may help boost SDSU-G revenues and support sustainability of the STEM degree offerings. As shown in the tuition chart of various private universities (Table 22), non-STEM degree programs commanded relatively higher tuitions in the Georgian higher education market. The number of slots currently available in these fields, and the potential price competitiveness of a SDSU-G degree in this market are briefly discussed below.

Based on the data from NAEC (2016) and EQE (2017) student enrollment in non-STEM programs, namely in Business Administration (Marketing, Management, Finance, and Budgeting) offered by around 95% of the state/private universities, the average tuition fees for the top six private universities is 5,164 GEL. Tuition for state universities are fixed at 2250 GEL. Most of these universities require the minimum thresholds for their applicants at NAEC exams. Only 40-60% of the quotas announced by private universities in Business Administration programs are filled, while the offered quotas in the state universities are filled 85-100%. Slots for Business Administration degrees are usually in surplus.

There is basically the same picture for the International Relations BA programs. Average tuition fees for these programs in top six universities is 5,342 GEL and only 50% of quotas are filled, while at state universities enrollment rates are higher – around 80-95%.

Tourism and Hospitality Management programs and Nursing programs are not highly popular among students in Georgia so have not been studied further.

While the foregoing suggests that there could be demand at a higher price point for some degree areas, the tuition levels reported above are in the range of 1/3 of SDSU-G's tuition. Consequently, family pay for these degree programs might not be substantially higher than has been experienced for our existing degree programs.

The existing SDSU-G program required a significant, multi-year effort to engage the colleges currently involved. New degree programs outside of those colleges would require a significant effort in demand assessment, and subsequently engagement of the relevant colleges in the planning and management of new degrees. This is a major undertaking with additional risks, and could not be deployed quickly. Furthermore, the appetite for new degree programs by campus management will be low until and unless the financial picture for the existing degree programs is assured.

8. Cost Reduction Strategies

In addition to the effort to identify other potential revenue streams, a parallel effort was conducted to consider the impact of several approaches to reduce costs. Eleven concepts for cost reduction at SDSU-G were considered, as outlined below. Potential impacts are also shown in Table 24. Cost reductions are continually sought and many reductions compared to original expectations are incorporated in existing budgets. Note that the SDSU-G cost basis compared very favorably to benchmarks in the 2016 Dalberg report.

	Concept No.	Concept	
REDUCE COST	RC1	Skip the 4th cohort	Potential savings in one year recruiting costs, but offset by increased expense per student. Actual impact is negative.
	RC2	Stop accepting cohorts.	This is represented at present in the 3 and 4 cohort models, which limit the total cost to the levels shown.
	RC3	Shorten curriculum to 3 years, attract more students with strong high school partnership.	Deploy programs to allow high schools to offer year one courses, similar to partnerships in San Diego. Could reduce teaching costs, but significant management effort might offset gains.
	RC4	Shift to Georgian-sourced faculty sooner.	This is a promising strategy, and is incorporated in the budgets presented in this report.
	RC5	Streamline administration at SDSU.	Might be possible to reduce management attention and administrative costs from SDSU-based personnel. Financial stability of the program would need to be assured.
	RC6	Streamline maps	This is an ongoing effort. Note that recently completed Student Experience survey showed that students hope for increased opportunities for elective content, especially in the GE program.
	RC7	Consider articulating from partner universities on a 2+2 or 3+1 basis	This is a completely new academic model. The experience of the ABET process suggests that it would require very significant changes to the partner university curricula. Significant negative impacts on revenue with reduced total enrollment.
	RC8	Move to an on-line programs	Actually increases costs, as instructor salaries switch to higher US levels.

Table 24. Cost reduction strategies and comments

9. Concluding Remarks

Section 2 of this report provided descriptive data regarding the higher education market in Georgia and some relevant comparisons from SDSU's main campus. Section 3 presented an overview of the effort and timeline to reach the point at which ABET accredited degrees can be attained by the partner universities. Section 4 reviewed the international context for the SDSU-G programs. Sections 5 and 6 presented budget information, with Section 6.3 providing a means for estimating resource requirements on a per cohort basis. This section allows the projection of resource requirements across many cohorts, and thus provides order of magnitude budget information that can allow our discussions to be informed by the relevant costs. Section 7 reviewed several strategies for increasing revenues toward those levels indicated in Section 6. Section 8 provided a brief overview of some potential cost reduction approaches.

This report was used as an input to a co-writing workshop between SDSU, MCA-Georgia, and MCC seeking to identify a mutually acceptable pathway for the future of this project. This workshop was held on August 9 and 10. The results were presented to Deputy Minister of Education and Science, Temur Murghulia, on August 11. A summary of the consensus plan developed at that workshop is presented in this section. A powerpoint presentation used at the briefing with the deputy minister is included as Appendix E.

9.1 Workshop summary

The workshop was facilitated by Joe Dougherty and colleagues from Dalberg, and was held at Rooms Hotel. Attendees included:

MCAG –	Magda Magradze, Nodar Surguladze, Rusudan Kemularia, Giorgi Kopaleishvili				
MCC –	enner Edelman, Sonia Shahrigian, Anna Thomas, Eka Kveliashvili, abel Dillener, Peter Rosner, Albert Bossar				
SDSU-G-	Ken Walsh, Halil Guven, Lado Kiknadze				
SDSU-SD -	Stanley Maloy, Agnes Wong-Nickerson, Michele Goetz, Barry Janov				
Dalberg-	Joe Dougherty, Megan Shutzer, Robert Colvin				
D (* *)					

Participants at the meeting were asked to consider the original objectives of the project, and to vision together the best strategy to reach those objectives. The workshop relied on both whole group and breakout meetings to develop potential approaches. The plan presented in the next section resulted from these efforts. It is our understanding that a detailed summary of the workshop itself will be provided by Dalberg.

9.2 Workshop Outcome – Transition Plan

The outcome of the discussions was a transition plan in which the degree-granting efforts of SDSU in Georgia would be transitioned to the partner universities, who would be supported in the development of US-accredited degree programs. The group sought a way forward that would balance the increased expense associated with admitting more cohorts of students to the SDSU degree granting programs against the benefits of having SDSU degree granting use a support the partner universities in obtaining US

accreditation and operating their degrees over a longer time plan. The group consensus was that stopping after only 3 cohorts would introduce a gap in the provision of US accredited degrees in all programs, and after 4 cohorts would introduce such a gap in at least 2 programs. However, with a 5 cohort model, it was projected that there could be no gap in availability of US accredited degree programs (assuming partner universities maintain their efforts toward US accreditation).

Category	Assumed
Exchange Rate	2.50 Georgian Lari to 1 USD
Scholarship Support Level	75% of overall domestic student tuition by scholarship,25% paid by families
International Student Tuition	\$13,500
Enrollment	300 Georgian students and 50 international students over cohorts 4 and 5.
Retention Rate	95% year over year for each cohort, or 86% over 4 years
Programs	All current programs offered by SDSU-G extended to cohort 4. 2 nd track ABET programs in Civil/Construction Engineering, Electrical Engineering, and Computer Science transitioned to at least one partner each for cohort 5, so SDSU-G hosts only Computer Engineering and Chemistry for cohort 5.

The final consensus proposal was based on the following assumptions:

This transition approach is based on a model in which degree programs that can receive ABET accreditation at the partner universities on the fast track (so-called second track programs in Section 3) will be able to complete their ABET visits during the Fall of 2019. This means that the partner university ABET programs can receive cohorts of students in the Fall of 2019, that is, cohort 5. At that point, we believe that a parallel offering from SDSU-G would be detrimental to the development of the partner university programs, as it could be taken as competition with the partner university program. To avoid this, SDSU-G would cease admissions for new students in these programs. SDSU-G would continue academic operations in those programs for all students admitted in previous years, however. Cohort 5 would thus include students in only two programs will be in place and ready to receive students by the following year, meaning SDSU would not enroll a new student class in the 20/21 academic year. Again, SDSU would continue academic operations for all students graduate, projected in May of 2023.

The projected enrollment would decrease together with the number of programs offered. In this model, the projected enrollment total across cohorts 4 and 5 is 300 Georgian students and 50 international students. They are broken out in the model as 200/30

(Georgian/International) in cohort 4 and 100/20 in cohort 5. Together with the existing cohorts of students and the anticipated retention rate, this projects to a total of 685 graduates of the SDSU program by 2023.

With students paying only a 25% fraction of their SDSU-G tuition, there is a funding gap of approximately \$11.2M. This is over and above the current lump sum funding of 2250GEL per student and merit scholarship support from the Government of Georgia. A budget summary with additional detail is provided in Appendix F.

To support this transition, we proposed to continue and intensify efforts to support the partner universities in their pursuit of professional accreditation in the US. Self studies will be available shortly for the second track programs, with a planned visit from the ABET foundation to assess progress in September, 2017. The observations and results from this visit will support the development of their readiness reports and the remainder of the application process, as outlined in Section 3. We will advance their participation in recruitment during the next academic year, in preparation for transition to the partners having to recruit for their own programs starting with the ones that come online with cohort 5. The faculty visits to SDSU already emphasize ABET assessment practices and documentation requirements, so the cadre of faculty in Georgia with an understanding of these processes will continue to grow throughout the process. As the student population at SDSU-G plateaus and begins to decay over the last 3 years of the final cohort, SDSU will be able to devote more effort to advising on collection of assessment data and reports and review of the process and outcomes.

An important component of the proposal outlined here is that the 5th cohort of students is projected to graduate at the end of the Spring semester in 2023. This means that SDSU would have been in Georgia and continually operating as an academic institution for a decade. There are many impacts of this presence over and above the graduates themselves. For example, SDSU will be in a position to support partner universities in their efforts toward US accreditation over that time period. Faculty from the partner universities will continue to be engaged in efforts to improve their understanding of SDSU's classes, equipment, and teaching methods via the training in San Diego program. Faculty from partner universities and SDSU will continue to engage in collaborative research projects.

In addition, however, there are a number of other ways in which SDSU's role could be expanded, either as a means of continued educational development after the completion of studies by the 5th cohort, or in parallel with the delivery of courses to students prior to that time. Several examples are noted below:

• Once the partner university programs are operating, we can work together to offer a "3+1" program to students studying in their programs. Where programs closely mirror SDSU's own curricula, it may be possible to accept students from the partner universities to complete the final (4th) year of study in San Diego, after completion of the first 3 years in the partner university program. In effect, we could develop a program in which SDSU could accept the first 3 years of study at the partner, and the student could then come to SDSU as an international student to complete the final year and receive a degree from SDSU. The international student tuition and living expenses associated with that final year would have to be borne by the student, but the total cost of the degree would be much lower than completing all four years in San Diego or

another US university.

- SDSU offers a limited number of international tuition waivers and assistantships (both research and teaching) to graduate students at the MS and PhD levels. We can work together to identify mechanisms to provide such support to Georgian students to complete their graduate studies on the main campus. The number of such options, particularly at the MS level in a teaching capacity, is diminishing due to legislative budget reductions, but we could work together to develop a joint funding mechanism to support students in this way.
- SDSU-G proposed a STEM summer camp for international high school students to the Ministry. This concept is based in part on successful day camps for high school students that are conducted in San Diego. We believe that this could be a useful component of Study in Georgia efforts. It could also be opened to students from inside Georgia as a part of the STEM awareness efforts. The program could be modified to create a summer program for high school teachers to develop improved teaching skills in STEM subjects.
- SDSU-G has hosted a series of public lectures when scholars from main campus visit Tbilisi. They have proven quite popular, and serve to raise awareness of STEM subjects. This process will continue during the years with academic activity, but could be extended beyond the completion of the academic studies of the 5th cohort.
- An important capacity development component of the SDSU-G program is the effort to train faculty from the partner university with visits to San Diego and mentorship in Tbilisi once they begin teaching in the SDSU curriculum. This activity will continue during the years in which cohorts of students are studying. The effort could be expanded to incorporate administrative staff from the partner universities, or other universities, to build capacity in research administration, faculty affairs, library management, etc. Further, the effort could be continued after the completion of studies by the 5th cohort.
- SDSU operates entrepreneurship programs on the main campus in San Diego, and we could work together with partner universities and others in Georgia to find ways to use this expertise to enhance entrepreneurship efforts in Georgia. A number of models can be developed, but one example might be engaging entrepreneurship experts in Georgia in a visit to San Diego to participate in the activities on our main campus, similar to the faculty development effort model in the current project. These experts could then return to Georgia to work to adapt the models that work in San Diego to the Georgian setting, and engage experts from SDSU main campus both virtually and physically in expanding entrepreneurship training in Georgia.
- SDSU is a highly-ranked public research university in the United States. Through the SDSU-G program, there have already been joint research proposals (including successful proposals) and joint conference and journal publications authored by faculty from SDSU and the main campus. Collaborative projects between Georgian and SDSU faculty are a very effective way to continue to build the reputation and ranking of the Georgian universities and SDSU. These collaborations build naturally as faculty work together during the years in which SDSU-G conducts academic operations, and we could seek to find ways to

facilitate and incent such efforts in the future.

• SDSU-G and SDSU continue to express interest and willingness to participate in the development of the new university project to be constructed in Kutaisi. SDSU is eager to support this effort with measures that could include an advisory capacity, facility sharing, design and deployment of graduate programs, faculty and student exchanges, or the development of "4+1" BS/MS programs, just as a few examples.

These continued educational development activities for longer term engagement would in most cases require additional resources. Once SDSU has a clear understanding of what forms of longer term engagement are of interest, we could begin developing estimates of the needed resources associated with those options.

Note: Cohort 3 is supported, in part, by a generous scholarship contribution from the Cartu Fund. By the terms of this gift, the Cartu Fund maintains the right to terminate their contribution at any time. This is, we understand, a standard clause they have used in grant agreements for many years without exercising, and thus represents an extremely low risk. Nonetheless, by WASC policy we must be able to provide every student who starts at SDSU the opportunity to graduate, and thus the funding must be assured. Accordingly, in the very unlikely case that this termination language would be exercised, SDSU would have to look to the undispersed funding for future cohorts to close any resulting funding gaps. In a similar way, changes to the fundamental assumptions would also result in changes to these projected enrollments or costs.



Enrollment Report and Budget Fall 2017

June, 2017

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TABLE OF CONTENTS

I	1.1 1.2	INTRODUCTION Project Overview Purpose of this document	.2 .2
2		ENROLLMENT	. 2
	2.1	Cohort I	.2
	2.2	Cohort 2	3
	2.3	Total Enrollment	.4
	2.4	Course Offerings	.4
3		EARLY ENROLLMENT	I
4		BUDGET FOR FALL 2017	6
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." This report is a requirement of the subsequent contract, initiated in October of 2015, which covers the remaining 45 months of the project. Currently we have the first and the second cohort. The second cohort of students were enrolled in September of 2016.

1.2 **Purpose of this document**

This document is intended to provide a summary of the expected enrollment for the upcoming semester. The final enrollment will be summarized, along with academic outcomes, after the end of each semester in the Academic Course Delivery Report.

2 ENROLLMENT

2.I Cohort I

In Spring semester of 2017, there were 75 active students, and two students on academic leave. Names, identification numbers, and other specific details were conveyed under separate cover for purposes of GRDF and Government of Georgia Lump Sum financing. From Fall semester of 2016, there were a total of 4 students placed on academic probation and at the end of Fall semester of 2016 they were disqualified due to low academic performance. During the mobility period, all four disqualified students were assisted to successfully transfer to programs at the partner universities. Accordingly, from the 81 first cohort students in Fall 2016, we have 77 returning first cohort students, 75 of which are two of which are on academic leave. There were two students from this cohort on academic probation in the Spring semester. Table 1 provides a summary of current enrollment data for cohort 1.

Group	Number of Students	Notes
Georgian citizens 74		 71 are NAEC students (51 - TSU, 17 - ISU, 3 - GTU) 3 mobility students Tbilisi - 51 students (69%), Regions - 23 (31%); 20 - Females (27%); 14 SV students (19%). 1 student from Kazakhstan, 1 from Nigeria and 1 from Azerbaijan. 3 Males
TOTALS	77	 Electrical Engineering - 1 Computer Engineering - 2 Chemistry - 17 (22%); Computer Engineering / Electrical Engineering - 59 (76.6%) 1 student transferred to Computer Science

Table I: First cohort enrollment data.

2.2 Cohort 2

Between the end of the Fall semester of 2016 and the Spring semester of 2017, we enrolled one new IB student, leading to a total of 127 students for cohort 2. Out of these students, in the Spring semester of 2017, there were 123 active students, one student on academic leave, and three students left the program due to personal reasons. Accordingly, from the 127 second cohort students we have 124 returning for Spring 2017. Names, identification numbers, and other specific details were conveyed under separate cover for purposes of GRDF and Government of Georgia Lump Sum financing. Based on their academic performance in the Fall semester of 2016, 14 students were placed on academic probation. Table 2 provides a summary of current enrollment data for cohort 1.

Group	Number of Students	Notes
Georgian citizens	114	 104 are NAEC students (100 - TSU, 4 - ISU, 0 - GTU) 6 IB-MOU students 4 mobility students Tbilisi - 76 students (67%), Regions - 38 (33%);
		 51 - Females (45%); 20 SV students (17.5%).
International	10	• 9 students from Iran and 1 student from Turkey.
		 4 Females (all from Iran). Computer Science 1
		• Chemistry – 0
		• Electrical Engineering - 1
		• Computer Engineering - 8
		• Computer Science - 42 (34%);
TOTALS	124	• Chemistry - 35 (28%);
		• Computer Engineering / Electrical Engineering - 47 (38%).

	Table 2:	Second	cohort	enrollment data.
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2.3 Total Enrollment

As of this writing, with the return of 77 first cohort students and the addition of 124 second cohort students, the total student headcount in the Spring of 2017 is 201. This is comprised of 188 Georgian students and 13 international students.

2.4 Course Offerings

Course offerings and the academic calendar for Spring 2017 is presented in Figure 1.



Figure 1: Course Offerings and Academic Calendar, Spring, 2017

Enrollment in specific courses in the Spring 2017 will vary by the level (sophomore versus freshman) and major, as well as the students' previous academic performance. For reference, notional class schedules for typical freshman students by majors are presented in Table 3. Notional class schedules for typical sophomore students by major are presented in Table 4. A list of instructors for Spring, 2017 was provided in the Faculty Development Report.

Table 5 shows the list of courses offered for Spring 2017 with the number of sections for each course; maximum number of students in each section and the names of the Georgian and SDSU instructors.

Table 6 shows the planned course offerings for Fall 2017 with the names of the Georgian and SDSU instructors.

Electrical Engineering 1st year				
	Course	Units		
1	Math 151	4		
2	Phys 195	3		
3	Phys 195 L	1		
4	Con E 101	3		
5	Oral. Com 103	3		
6	Ling 100	3		
7	Ling 200	3		
8	GE Humanities – Foreign Language	3		

Table 3: Notional Class Schedules fo	r Typical Freshman Students By	Major, Spring – 2017
--------------------------------------	--------------------------------	----------------------

Computer Engineering 1st year				
	Course	Units		
1	Math 151	4		
2	Phys 195	3		
3	Con E 101	3		
4	Oral. Com 103	3		
5	Ling 100	3		
6	Ling 200	3		
7	GE Humanities – Foreign Language	3		

Cl	Chemistry/Biochemistry 1st year				
-	Course	Units			
1	Chemistry 201	5			
2	Math 141/150	3/4			
3	Con. E 101	3			
4	Oral Com. 103	3			
5	Ling 194	3			
6	Ling 100	3			
7	Ling 200	3			
8	GE Humanities – Foreign Language	3			

Computer Science 1st year				
	Course	Units		
1	Math 151	4		
2	CS 107	3		
3	Phys 195	3		
4	Phys 195 L	1		
5	Oral Com 103	3		
6	Ling 100	3		
7	Ling 200	3		
8	GE Humanities – Foreign Language	3		

El	Electrical Engineering 2nd year				
	Course	Units			
1	Math 252	4			
2	Computer Engineering 271	3			
3	Electrical Engineering 210	3			
4	AE 280	3			
5	Ling 200	3			
6	GE Humanities – Foreign Language	3			
/					

Computer Engineering 2nd year				
	Course	Units		
1	Math 245	3		
2	Computer Engineering 271	3		
3	Computer Engineering 260	3		
4	Electrical Engineering 210	3		
5	AE 280	3		
6	Ling 200	3		
7	GE Humanities – Foreign Language	3		

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Cł	Chemistry/Biochemistry 2nd year			
	Course	Units		
1	Chemistry 232	3		
2	Chemistry 232 L	1		
3	Ling 200	3		
4	Math 252	4		
5	Phys 195	3		
6	Phys 195L	1		
7	Bio 203	3		
8	Bio 203 L	1		
9	GE Humanities – Foreign Language	3		

Table 4: Notional Class Schedules for Typical Sophomore Students By Major, Spring - 2017

Table 5: Course offerings for Spring 2017

#	Course	Units	Number of Sections	Number of Students/section	Georgian Instructor	SDSU Instructor
1	AE 280	3	1	55	Alexander Meskhi	Alan Plotkin
2	Bio 203/203L	3	1		Magda Alania; Natalia Dachanidze	Stanley Maloy
3	Chemistry 232/232L	4	1	18	Ana Goletiani	Douglas Grotjahn
4	Chemistry 201	5	2	16	Giorgi Jibuti; Tina Bukia	Theresa Carlson
5	Comp. E 260	3	2	26	Magda Tsintsadze	Sweta Sarkar
6	Comp. E 271	3	2	33	Tinatin Davitashvili	Ken Arnold
7	Con. E 101	3	1	77		Kenneth Walsh
8	CS 107	3	1	43	Bidzina Midodashvili	Patty Kraft
9	EE 210	3	2	26	Simon Nemsadze	Parisa Kaven
10	Ling 100	3	3	17		Hasan Autman; Amanda Black
11	Ling 200	3	3	26		Hasan Autman; Amanda Black
12	Ling 94		1	24	Nino Jojua	Hasan Autman; Amanda Black
13	Math 141	3	1	13	Nino Manjavidze	Janet Bowers
14	Math 150	4	1	44	Nino	Stephen

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#	Course	Units	Number of Sections	Number of Students/section	Georgian Instructor Manjavidze	SDSU Instructor Kirchvink
15	Math 151	4	3	28	Giorgi Chelidze; Nino Manjavidze; David Natroshvili	Ricardo Carretero
16	Math 245	3	1	42	Nana Odishelidze	Vadim Ponomarenko
17	Math 252	4	2	15	Giorgi Chelidze; Alexander Meskhi	Bo-Wen Shen
18	Oral Comm. 103	3	5	27	Mariam Nebieridze	Brianna Quintero
19	Phys 195	3	1	104		Matt Anderson
20	Phys 195L	1	3	28	Giorgi Tsitsishvili; Tamar Chelidze	Matt Anderson

SDSU Instructor/Mentor Course Georgian Co-instructor BIOL 100 **Robert Pozos** Magda Alania Giorgi Jibuti **CHEM 100 CHEM 200** Giorgi Jibuti **CHEM 232** Ana Goletiani Ana Goletiani CHEM 232L **CHEM 560** Undefined Undefined CIV E 100 Kenneth Walsh COMP E 160 Ken Arnold Tina Davitashvili COMP E 270 Ke Huang Ia Mosashvili Ken Arnold David Chkhaidze COMP E 375 COMP E 361 New Faculty Magda Tsintsadze CS 108 Magda Tsintsadze **HIST 100** Leri Tavadze LING 94 Nino Jojua; Tinatin Tabidze; Mariko Nebieridze LING 100 Tamara Matchavariani Pietera Pincok 1.1.1.1 LING 200 Pietera Pincok Tamara Matchavariani LING 305W Nino Jojua **MATH 141** Nino Manjavidze, Giorgi Chelidze, Davit Natroshvili **MATH 150** Nino Manjavidze, Giorgi Chelidze, Davit Natroshvili Giorgi Chelidze, Alexander **MATH 151** Meskhi MATH 245 Nana Odishelidze ECON 102 Iraakli Murtskhvaladze EE 300 Ken Arnold Simon Nemsadze EE 310 Barry Dorr Simon Nemsadze EE 330 Barry Dorr Nikoloz Abzianidze EE 330L Andrew Szeto Archil Gvimradze EE 340 Madgu Gupta Tamar Tchelidze **PHIL 101 Kevin Seifert**

Table 6: Course Offerings for Fall 2017

· · · · · · · · · · · · · · · · · · ·		
Course	SDSU Instructor/Mentor	Georgian Co-instructor
PHIL 232	Kevin Seifert	
PHYS 195	Matt Anderson	
PHYS 195L		Alexander Shengelaya
PHYS 196	Matt Anderson	
PHYS 196L		Tamar Tchelidze, Giorgi Tsitsishvili
POLI SCI 101	Ron King	Khatuna Chapichadze
STAT 250 (or CIV E 160)	Undefined	Undefined
WS 101	Huma Ghosh	Tamta Melashvili
WS 375	Huma Ghosh	Tamta Melashvili

3 EARLY ENROLLMENT

The early enrollment recruitment cycle started on September 1, 2016. Prospective students were asked to fill out on-line applications by mid-January (See Figure 2). As shown in Table 6, the application cycle was completed with 238 applications. Out of this pool, 34 prospective students were eliminated due to incomplete application, incomplete interview, or poor academic performance. Two hundred and four (204) prospective students were selected for interview. Eleven (11) of these prospective students were disqualified after the interview due to poor English competence, very poor interview performance, or both. Seventeen (17) prospective students decided not to apply after the interview.

Figure 2. Early Enrollment Timeline.



One hundred and seventy six (176) prospective students were found successful in the interview process. Thirty five percent (35%) of these students were from the regions, 31% were women, and 3% had social vulnerability status with a score of 70,000. In addition to the 3%, there were 22% social support students in the third cohort who qualified for financial assistance based on other social support categories. This cohort also had 2% students from the IB programs. After a few iterations, 176 students agreed to join SDSU in the Fall, and subsequently ranked SDSU as their number 1 choice on their NAEC registration. The student numbers have shown a good correlation with the data obtained from NAEC. Table 6 provides a summary of these data, along with the numbers from a similar point in time for Cohort² for reference.

Table 6. Forecast of Fall 2017 enrollment.

SDSU – GEORGIA EARLY APPLI	CATION FI	NANC	AL AID S	UMM	ARY	n ben strage sonder Generalise
	Second Cohort	Thir	l Cohort		1 (d. 14	
# of early applicants (Georgian)	143	218				
Incomplete Applications / interviews	28	34				
Number of interviews	115	184				
Rejected (not qualified)	10	13				
QUALIFIED STUDENT POOL for financial aid of	fers 105	171				
Regions	37%	40%				
Girls	43%	33%		11 나라라는 것 15 12 Year All		
SV< 70,000	6%	4%				
	6%	2%				
Arcenteil	96	161*	* includes 4 eth from 1+4 heide	nic minority	y students	that will transfer
Rejected	9	10				
Family Co-pay NAEC Registration stats	25%	26%**	** includes for sponsored by th TSU	iding for th ie U.S.Eml GTU	e ethnic m xassy ISU	inority students CIVE - CONE
#1 ranking	86	157	121	26	10	23
Post-NAEC Registration recruitment		30***	*** Promotion	for CIVE	& CONE	are underway
Post-NAEC score announcement attrition	14	10	(assumed %5-	more infor	ned and f	ocused third cohort)
Post-NAEC Exam recruitment (SMS students)	31	31	assumed same	as the secor	id cohort	
THIRD COHORT GEORGIAN ENROLLMENT FOR	ECAST	212	161-10+30+31=	212		
THIRD COHORT INTERNATIONAL ENROLIMENT	T FORECAST	30	 Increased inter possible summ 	est/internerschool	ational S1	EM academies /
GR	AND TOTAL	242				

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SDSU-GEOI	RGIA EARL	Y APPL	ICATION FINANCIAL AID SUMMARY
	Second	Third	
	Cohort	Cohor	t
# of early applicants			
(Georgian)	143	238	
Incomplete			
Applications/Interviews	28	34	
Number of Interviews	115	204	
Rejected (not qualified)	10	11	
QUALIFIED STUDENT			
POOL - for Financial Aid			
offers	105	193	
Regions	37%	35%	
Girls	43%	31%	
SV < 70000	6%	3%	
IB	6%	2%	
Accepted	96	176	
Rejected	9	17	
Family Co-pay	25%	25%	
			·····
NAEC Registration stats			
#1 ranking	86	157*	*information updated on March 31st
Post-NAEC Registration			
recruitment		21	
Post-NAEC score			(assumed %10 - more informed and focused third
announcement attrition	14	18	cohort)
Post-NAEC Exam		1	
recruitment (SMS			
students)	31	31	assumed same as the second cohort
THIRD COHORT			
		240	476 40-21-24 240
		518	170-18+21+31=210
		20	
		30	
GRAND TOTAL		240	

Compared to last year's early enrollment figures, we had a significant increase in "accepted offers" this year (from 96 to 176), and the quality of the interviewed students was found to be quite high. Since we are offering two new programs this year, Civil Engineering and Construction Engineering, we are hopeful that we will be able to have 30 additional students to

agree on scholarship offers for these two programs before the announcement of the NAEC exam results.

After the announcement of the NAEC raw scores, it is expected that some 10% of the prospective students will drop out due to lower than expected NAEC scores or opting to go to overseas universities, or other reasons. After the announcement of the NAEC raw scores, we plan to send SMS to top-scorers on NAEC exam, as this was successfully completed last year. We expect to attract a minimum of 31 new recruits (the number gained last year during the same period) from this process.

Overall, we forecast to enroll a grand total in the range of 249 students for our third cohort: 219 Georgian citizens, and approximately 30 international students. Currently more than 30 international students have gone through the interview in our offices. Others have applied on line from different countries. Twenty two (22) students have already applied to the CSU Mentor and 12 have agreed to join SDSU programs starting Fall 2017. Out of the 30+ international students interviewed so far, two were living in Georgia prior to 2016 and three are Iranian students who have been recruited and moved to Georgia to attend the last year of high school and enroll at SDSU for Fall 2017. Others are the foreign citizens who are graduating from international high schools.

It needs to be pointed out that out of 31 prospective students that ranked SDSU-G in the first place for CIVE-CONE, only 12 are in the Construction Engineering major. SDSU-G is pushing to increase this number to around 25, in order to justify a cohort in Construction Engineering in 2017-18. GTU is also assisting in this effort. We are hopeful that by the time NAEC raw scores are announced, we will have enough students. However, if we do not reach this goal, SDSU-G plans to ask prospective students that chose Construction Engineering program to consider switching to Civil Engineering instead. SDSU will offer the Construction Engineering option under the Civil Engineering program allowing students to take technical electives in Construction Engineering. Ideally, this decision should be made after the NAEC raw scores are announced (approximately July 25). However, NAEC has the final word on when we can pull out a program.

SDSU-G Enrollment Report

4 BUDGET FOR FALL 2017

The table below summarizes the budget for the upcoming semester. This is presented in the same format as a breakout from the upcoming 12 month contract.

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SDSU-Geargin						
Faculty Development and Operations	\$7,124,263	\$1,589,406,90	\$3,178,814	\$2,272,483	\$5,451,297	\$12,575,560
Lab and Instructional Equiparent and Furnishings	\$2,959,193	\$743,678.41	\$1,491,357	\$2,429,229	\$1,920,586	\$6,879,779
Construction/Renovation Mgmt	\$309,569	\$146,361.60	\$292,723	\$292,723	\$585,446	SHI6,015
Subtorel SUSA-Greige	510,02,074	3.141 141	- 1 .2012	- Service -	NY SSTERE	- saidaki sisa
MCA-Georgia						
Construction	\$0		\$0	50	\$0	\$9
Renovation in Partner Universities	\$388,607	\$177,773.75	\$355,548	\$23,872	\$379,420	\$768,027
Sulleara MECA-Cuarges	STREAD?	\$177774	51555 6	ធរភារ	\$379.438	\$706.827
Totul	\$10,772,632	\$1,659,121	\$5,318,441	\$5,018,108	\$10,336,749 E	\$211(09.381

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Country	2013	2014	2015	2016
Azerbaijan	700	991	1376	948
India	273	316	601	1443
Georgia	168	280	419	141
Nigeria	201	238	296	140
Iraq	410	718	147	103
Russia	111	116	83	92
Turkey	168	230	91	78
Israel	6	3	5	70
Syria	10	3	25	66
Egypt	11	10	17	58
Iran	30	15	13	37
Shri-Lanka	38	29	16	32
Nepal	1	· · · 1	. 1	
Ukraine	6	11	20	25
Yemen			11	25
Bangladesh	1	1	4	24
Pakistan			15	18
Zambia				12
USA	14	-11	16	11
Kazakhstan	3	6	12	11
Sudan			-1	10
Jordan		1	8	9
China	1	4	5	8
Palestine		1	1	7

Appendix A. Numbers of foreign students applying for exchange programs by countries

Zimbabwe		3	5	6
Cameroon			3	6
Saudi		1		5
Somalia			1	5
Liberia			3	4
Lebanon		1	1	3
Ghana	1	1	5	3
Belorussia	2		1	3
Kuwait				3
Afghanistan				3
Algeria				3
Germany	9	6	3	2
Greece	5	3	7	2
Canada	1	1	4	2
UK		1	1	. 2
Kirgizstan	3	1	5	2
Netherland				2
Maldives	2			2
South Africa				2
Bahrein			1	2
Libya			1	2
UAE				2
Belize				2
Ethiopia				2
Oman	1. 1. 1.			2
Lithuania	9	5		1

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France	1	2		1
Republic of Mauritius		1		1
Morocco		1	1	1
Brazil	1	1	1	1
Turkmenistan			1	1
Uzbekistan	7			1
Tajikistan	2			1
Burundi	3		2	1
Guyana	3		3	1
Vanuatu			5	1
Tunisia			1	1
Ecuador				1
Jamaica				1
Ivory Coast				1
Romania				1
Тодо				1
Djibouti				1
Thailand				1
Mauritania				1
Mexico				1
Armenia		2		
Poland	2	2	2	
Estonia	1	2		
Denmark		2		
Australia		1		
Italy		1		

		NUMBER OF BELLEVILLE		Contraction Contraction Providence
Austria	2	1		
Kenya	2	1	1	
Qatar	1	1	1	
Korea		1	3	
Portugal		1		
Tanzania		1	2	
Philippines		1		
Chile		1		
Trinidad and Tobago	2			
Moldova			1	
Sweden	2		1	
Switzerland	1			
Singapore			1	
Uganda			1	
Bhutan	. 1			
Gambia	3	W. Pretty	1	
Guinea	1			
Colombia	1			
Congo	1			
Slovenia	1			
Finland	2		1	
Fiji	6		3	
Antigua and Barbuda			2	
Dominican Republic			1	
Latvia			2	
South Sudan			1	

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Tuvalu			2	
Totals	2230	3031	3264	3490

SDSU-Georgia STEM Degree Program Operations -- Executive Summary Three-Cohort Model -- CH1-CH3 Enrollment Geo/Int1: 80/1 (75/2), 114/11, 200/25 -- Scholurshp/Family Pay: 9512%/4.88, 77.10%/22.84%, 70%/30%+ -- MCC Supplement: \$6.2M, \$2.8M, \$1.2M -- GRDF: \$2.8M, \$3.36M, \$3.36M, \$3.38M -- CARTU: \$1.6575M -- Other Schol: \$180K -- GoG LS Suppl: \$1,040,108

OR OR<	Revenue less espense	(\$41,747)	0\$	0\$	0\$	0\$	\$0	\$505,060)	383,314) (098.428) (\$2.	608,569 (S2	.438.490 \$1.	1 600 085 41	207 011 6	Revenue - Expenses \$
OP/Lemponent Instrumentation Construction Const		\$ 37,923,035		- 5	. \$	- 5	- 5	505,060 \$	414,652 \$,360,642 \$ 4.	668,362 \$ 5	9,842,317 \$ 5,	5,862,167 \$ 1	6,269,835 \$	Total \$
Nor. OP OP OP OP OP<	MCC Funds reserved for Reno/Cons/Outfitting - Total MICC funds \$20,643,139	\$ 10,473,508		X SP C SP C SP C	North Contraction	In statistic and the	Station of the	人口の方法であ	States and Scattering	and a state of the	419,857	1,267,953 \$	2,464,283 \$ 4	3,321,415 \$	MCC Renovation/equipment/other \$
OR OR OR OR OR <td>Total all operational expenses</td> <td>\$ 27,449,527</td> <td>10 mile - 10 mile</td> <td>- 5</td> <td>. \$</td> <td>- 5</td> <td>- 5</td> <td>505,060 \$</td> <td>414,652 \$</td> <td>,360,642 \$ 4,</td> <td>248,505 \$ 5</td> <td>5,574,364 \$ 5,</td> <td>3,397,884 \$ 1</td> <td>2,948,420 \$</td> <td>Subtotal \$</td>	Total all operational expenses	\$ 27,449,527	10 mile - 10 mile	- 5	. \$	- 5	- 5	505,060 \$	414,652 \$,360,642 \$ 4,	248,505 \$ 5	5,574,364 \$ 5,	3,397,884 \$ 1	2,948,420 \$	Subtotal \$
Variable	HR Support (Grant Thornton) and Legal Services	\$ 932,522	1011	· 5	- 5	· ~ \$	- \$	35,765 \$	143,059 \$	142,215 \$	141,387 5	184,576 \$	186,520 \$	\$ 000,66	Contract Services \$
NameOrdO	Geo Partner faculty training and travel ; SDSU Faculty replacement provision	\$ 2,167,767	部に書いたい	- 5	- 5	. \$. 5	- · S	300,000 \$	495,686 \$	491,849 \$	488,088 \$	184,400 S	207,744 \$	Capacity Building \$
Nor. Ord Ord <td>Costs based on recruiting the next Cohort; CY4 cost support Cohort #4 recruite</td> <td>\$ 740,512</td> <td></td> <td>· \$</td> <td>. \$</td> <td>- 5</td> <td>- 5</td> <td>· · S</td> <td>. 5</td> <td>· 5</td> <td>- 5</td> <td>278,833 \$</td> <td>217,704 \$</td> <td>243,976 \$</td> <td>Student Recruitment \$</td>	Costs based on recruiting the next Cohort; CY4 cost support Cohort #4 recruite	\$ 740,512		· \$. \$	- 5	- 5	· · S	. 5	· 5	- 5	278,833 \$	217,704 \$	243,976 \$	Student Recruitment \$
Value Value <th< td=""><td>Administrative, faculty, recruiting, etc.</td><td>\$ 607,839</td><td></td><td>· \$</td><td>- 5</td><td>- 5</td><td>- 5</td><td>- 5</td><td>, s</td><td>. 5</td><td>95,671 \$</td><td>174,114 \$</td><td>170,700 \$</td><td>167,353 \$</td><td>SDSU_Georgia Staff Travel \$</td></th<>	Administrative, faculty, recruiting, etc.	\$ 607,839		· \$	- 5	- 5	- 5	- 5	, s	. 5	95,671 \$	174,114 \$	170,700 \$	167,353 \$	SDSU_Georgia Staff Travel \$
Value Column for Mark Column for Mark <thcolumn for="" mark<="" th=""> Column for Mark</thcolumn>	Relocation, housing, dependent schooling, home leave, etc.	\$ 849,176	THE REAL PROPERTY.	- 5	. \$	- 5	. 5	49,935 \$	137,342 \$	106,801 \$	128,748 \$	166,541 \$	116,867 \$	142,942 \$	Personnel Allowances 5
Hart - Gragin min km Yangit	Faculty, Administrative, Management staff (not Cons/Reno SDSU staff)	\$ 8,166,411	11-1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	- 5				264,738 \$	414,694 \$,366,854 \$ 1,	286,000 \$ 1	1,497,593 \$ 1,	974,066 \$	1,362,465 \$	MCA_Georgia/SDSU Personnel Staff \$
Value <th< td=""><td>Per project proposal, 26% fee applied to net tutition versus standard 32.87%</td><td>\$ 3,734,018</td><td>Service Service</td><td></td><td></td><td></td><td></td><td></td><td>498,754 \$</td><td>806,982 \$</td><td>022,235 \$</td><td>842,985 \$ 1,</td><td>402,773 \$</td><td>160,290 \$</td><td>Administrative Fees \$</td></th<>	Per project proposal, 26% fee applied to net tutition versus standard 32.87%	\$ 3,734,018	Service Service						498,754 \$	806,982 \$	022,235 \$	842,985 \$ 1,	402,773 \$	160,290 \$	Administrative Fees \$
Value Ord Ord </td <td>Covers Intri'l student co-enrollment tuition of 2250 GELs at a Partner Universi</td> <td>\$ 133,496</td> <td></td> <td>• • •</td> <td></td> <td></td> <td></td> <td></td> <td>19,800 \$</td> <td>30,600 \$</td> <td>33,300 \$</td> <td>34,200 \$</td> <td>11,700 \$</td> <td>3,896 \$</td> <td>International Student Partner Tuition \$</td>	Covers Intri'l student co-enrollment tuition of 2250 GELs at a Partner Universi	\$ 133,496		• • •					19,800 \$	30,600 \$	33,300 \$	34,200 \$	11,700 \$	3,896 \$	International Student Partner Tuition \$
Arrow (a) C(a)	includes materials, utilities, insurance, communications, etc.	\$ 519,352	11					24,796 \$	99,184 5	97,494 \$	95,582 \$	93,708 \$	61,247 \$	47,340 \$	General Operations \$
Cr Cr<	Included in Student Support Programs beginning in CY4 (2017/2018)	\$ 35,295	時にあり							. 5	. s		32,764 \$	2,532 \$	Laboratory Resupply (Chem/EE/CompE) \$
CT CT<	includes SUSU faculty and administration staff travel including advisory board	\$ 891,048						. 5	201,620 \$	269,588 5	203,886 \$	93,909 \$	70,015 \$	52,031 \$	Faculty & Support Staff Travel \$
Cr Cr<	Includes SUSU, Georgian, and other faculty compensation	\$ 5,851,699	· · · ·					129,826 \$	246,277 \$,489,832 \$ 1,	123,540 \$ 1	991,831 \$ 1,	605,132 \$	265,262 \$	Faculty Compensation \$
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Covers difference between Partner tuition of 2250 GEL and the ment scholars	\$ 402,407	No. 11 - 18						46,712 \$	76,042 \$	98,583 5	103,472 \$	51,328 \$	26,270 \$	Merit Sch Co-Enrollment Tuition Shortfall S
Cry Cry <td>Pays Partner universities whose facilities are used for non-co-enrolled studen</td> <td>\$ 98,675</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>- 5</td> <td>11,640 \$</td> <td>18,840 \$</td> <td>24,000 5</td> <td>25,140 \$</td> <td>12,120 \$</td> <td>6,935 S</td> <td>GELS/class/student - not co-enrolled \$</td>	Pays Partner universities whose facilities are used for non-co-enrolled studen	\$ 98,675						- 5	11,640 \$	18,840 \$	24,000 5	25,140 \$	12,120 \$	6,935 S	GELS/class/student - not co-enrolled \$
Cryptic	Learning Centers, Mentors, Interns, Clubs, books, lab supplies, Admin Fees, et	\$ 2,319,309	ALL LAND	·	. 5	- 5	. 5	- 5	295,571 \$	459,708 \$	503,723 \$	599,376 \$	300,548 \$	160,383 \$	Student Support Programs \$
Cr Cr<													100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		\$ 37,881,287	N	· · · ·	- 5	. 5	- S	- S	031,337 \$	262,214 \$ 2,	276,931 \$ 3	1,280,807 \$ 7.	7,463,152 \$ 1	6.566.846 S	Total S
Cr2 Cr3 Cr3 Cr4 Cr5 Cr4 Cr4 <td>MCC Funds reserved for Reno/Cons/Outfitting - Total MCC funds \$20,643,135</td> <td>\$ 10,473,508</td> <td>Contraction of the second</td> <td>State of the second</td> <td>and the second second</td> <td>のないのない</td> <td>This of the second second</td> <td>and the second second</td> <td></td> <td>No. In Concession</td> <td>419,857</td> <td>1,267,953 S</td> <td>2,464,283 \$.</td> <td>3,321,415 \$</td> <td>MCC Renovation/equipment/other \$</td>	MCC Funds reserved for Reno/Cons/Outfitting - Total MCC funds \$20,643,135	\$ 10,473,508	Contraction of the second	State of the second	and the second second	のないのない	This of the second second	and the second second		No. In Concession	419,857	1,267,953 S	2,464,283 \$.	3,321,415 \$	MCC Renovation/equipment/other \$
CC2 CC3 CC4 CC4 <td>Total revenue all sources, not including MCC reserved for Reno/Cons/Outfitti</td> <td>\$ 27,407,779</td> <td></td> <td>- 5</td> <td>- 5</td> <td>- 5</td> <td>- 5</td> <td>- 5</td> <td>031,337 \$</td> <td>262,214 \$ 2,</td> <td>857,074 \$ 3</td> <td>7,012,854 \$ 6,</td> <td>4,998,869 \$</td> <td>3,245,431 \$</td> <td>Subtotal S</td>	Total revenue all sources, not including MCC reserved for Reno/Cons/Outfitti	\$ 27,407,779		- 5	- 5	- 5	- 5	- 5	031,337 \$	262,214 \$ 2,	857,074 \$ 3	7,012,854 \$ 6,	4,998,869 \$	3,245,431 \$	Subtotal S
Cr Cr<	MCC Supplement #2 for Cohort #3 operations; offsets GRUF reduction for ISU	\$ 1,200,000			. 5	. \$. 5	- 5	- 5	- 5	800,000 \$	400,000 \$	- 5	- 5	MCC Supplemental #2 \$
Cr2 Cr3 Cr3 Cr4 Cr5 Cr4 Cr4 Cr5 Cr4 Cr4 <td>Addn'l Funds to cover expenses in excess of revenue due to low enrollment C</td> <td>\$ 2,772,360</td> <td></td> <td>- 5</td> <td>- \$</td> <td>. \$</td> <td>- 5</td> <td>- 5</td> <td>- 5</td> <td>- 5</td> <td>065,921 5</td> <td>823,947 \$ 1,</td> <td>882,492 \$</td> <td>s -</td> <td>MCC Supplemental #1 \$</td>	Addn'l Funds to cover expenses in excess of revenue due to low enrollment C	\$ 2,772,360		- 5	- \$. \$	- 5	- 5	- 5	- 5	065,921 5	823,947 \$ 1,	882,492 \$	s -	MCC Supplemental #1 \$
Cr2 Cr3 Cr3 Cr3 Cr4 Cr3 Cr4 Cr3 Cr4 Cr3 Cr4 Cr3 Cr4 Cr4 <td>budget</td> <td>\$ 6,197,271</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>- 5</td> <td>- 5</td> <td>- 5</td> <td>941,791 5</td> <td>L,352,300 \$</td> <td>1,461,835 \$ 1</td> <td>2,441,345 \$</td> <td>MCC Operational Funding \$</td>	budget	\$ 6,197,271						- 5	- 5	- 5	941,791 5	L,352,300 \$	1,461,835 \$ 1	2,441,345 \$	MCC Operational Funding \$
CR2 CR3 CR4 CR4 <td>Supplement using 500 Student cap less CH #1 & CH #2 enrollment Fail 2016 -</td> <td>\$ 1,040,108</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>の二、二日、二日三日、</td> <td>- 5</td> <td>- 5</td> <td>346,703 \$</td> <td>693,405 \$</td> <td>- S</td> <td>GoG Lump Sum Supplemental \$</td>	Supplement using 500 Student cap less CH #1 & CH #2 enrollment Fail 2016 -	\$ 1,040,108							の二、二日、二日三日、	- 5	- 5	346,703 \$	693,405 \$	- S	GoG Lump Sum Supplemental \$
CPC CPC <td>Assumes 2250 Gel for each Geogian student X Exchange rate adjusted for attr</td> <td>\$ 1,325,396</td> <td></td> <td>- 5</td> <td>. \$</td> <td>- 5</td> <td>• \$</td> <td>- \$</td> <td>154,800 \$</td> <td>252,000 \$</td> <td>326,700 \$</td> <td>342,900 \$</td> <td>170,100 \$</td> <td>78,896 \$</td> <td>GoG Lump Sum \$</td>	Assumes 2250 Gel for each Geogian student X Exchange rate adjusted for attr	\$ 1,325,396		- 5	. \$	- 5	• \$	- \$	154,800 \$	252,000 \$	326,700 \$	342,900 \$	170,100 \$	78,896 \$	GoG Lump Sum \$
CP CP<	GRDF allocations for Scholarships and Student Support Services; Incl \$3.8 for 0	\$ 9,760,500			. 5			- 5	\$ 000,026	,790,125 \$	440,125 \$ 1	2,440,125 \$ 2,	1,490,125 \$ 1	650,000 \$	GRDF (total funding) \$
CT2 CT3 CT4 CT5 CT4 CT5 CT7 CT8 CT9 CT0 CT1 CT12 CT13 Totals Tution - Georgian Family Fay S 66,390 S 442,355 S 413,035 S 274,412 S S 5 S 5 S 5 S 422,375 443,375 413,375 S S S S S S S S S S S 442,375 443,375 S	Tuition X Int'I student enrollment less "SUSU_Scholarships"; adjusted for attri	\$ 1,473,750			. 5	- 5	- 5	- S	222,750 \$	347,625 \$	378,000 \$	384,750 \$	131,625 \$	9,000 \$	Int'l Tuition (net) \$
Cr2 Cr3 Cr4 Cr3 Cr4 Cr5 Cr4 Cr4 <td></td> <td>s .</td> <td></td> <td>- 5</td> <td>- 5</td> <td>- 5</td> <td>- s</td> <td> 5</td> <td>- 5</td> <td>- 5</td> <td>- S</td> <td>- 5</td> <td>- 5</td> <td>- s</td> <td>Additional Scholarships \$</td>		s .		- 5	- 5	- 5	- s	5	- 5	- 5	- S	- 5	- 5	- s	Additional Scholarships \$
Cr2 Cr3 Cr4 Cr5 Cr4 Cr5 Cr7 Cr8 Cr9 Cr10 Cr11 Cr12 Cr13 Cr13 Cr13 Cr14 Cr13 Cr13 Cr13 Cr13 Cr14 Cr13 Cr13 Cr13 Cr13 Cr14 Cr13 Cr13 <thcr13< th=""> <thcr13< th=""> <thcr13< th=""></thcr13<></thcr13<></thcr13<>	\$120K for CH2 \$60K for CH3	\$ 180,000	Contraction of the	- 5	- 5	- 5	- S	- 5	15,000 \$	45,000 \$	45,000 \$	45,000 \$	30,000 \$	- 5	Other Scholarships 5
Cr2 Cr3 Cr4 Cr5 Cr6 Cr7 Cr8 Cr9 Cr4 Cr5 Cr6 Cr7 Cr8 Cr9 Cr4 Cr5	Assumes 100% of funds are for scholarships for Cohort #3; no attrition	\$ 1,657,500		- 5	- 5	- 5	- 5	- 5	414,375 \$	414,375 \$	414,375 \$	414,375 \$	• \$	- 5	CARTU Scholarships \$
CY2 CY3 CY4 CY5 CY6 CY7 CY8 CY9 CY10 CY11 CY12 AY 2015/15 AY 2015/17 AY 2017/18 AY 2015/20 AY 2025/20 AY 2020/21 AY 2022/23 AY 2023/24 AY 2023/242 AY 2023/24	Family Pay Tuition adjusted for attrition; No MS offset reduction	\$ 1,800,895		- 5	- 5	- 5	- 5	- 5	274,412 \$	413,089 5	445,162 \$	462,755 \$	139,287 \$	66,190 \$	Tultion Georgian Family Pay \$
CY2 CY3 CY4 CY5 CY6 CY7 CY8 CY9 CY10 CY11 CY12 CY13		Totals	2026/2027	0205/2026 A	124/2025 AY2	023/24 AY24	122/23 AY2	021/22 AY20	020/21 AY24	019/20 AY 2	118/19 AY 2	017/18 AY 20	2016/17 AY:	AY 2015/16 AY	
			CY13	CV12	CYLL	01V	7 6A.	-Y8 C	27 TFC	CY6 I	Y5 .	CY4 0	CY3	CY2	

Sustainable Enrollment (TBD) Georgian Students International students

CY2

CY3

CY4

CYS

CY6

23

00

V12 CY13

81 2 83

114 11 125 202

200 25 225 419

69

0 0 99

Freshmen Total Freshmen-Senior Cumulative Georgian graduated Gross Cost per Student \$

35,523 \$

16,821 \$

13,304 \$

Adjusted Cost per Student \$ 26,059 \$ 13,581 \$ 10,596 \$ 11,136 \$ 14,555 \$ 19,610 WDV/01 WDV/01 WDV/01 WDV/01 WDV/01 WDV/01 WDV/01

0 0 0 400 314 194 69 99 172 13,121 \$ 17,072 \$ 22,756 #DV/0

#DIV/01

#DIV/0!

#DIV/0!

#DIV/01

#DIV/0!

340 Total Includes all expenses -- partner subsidies, recruitment, capacity building, etc. Excludes Recruitment, capacity building, and 20% of Personnel and Travel

Three-Cohort Operational Scenario rev 6-26-17 - Copy_SUMMARY FOR MCA_6/29/2017_1

SDSU-Georgia STEM Degree Program Operations -- Executive Summary Four-Cohort Model -- CH1-CH4 Euroliment Geo/Int'l: 80/1 (75/2), 114/11, 200/25,225/50 -- Scholarship/Family Pay: 95.12%/4.88, 77.15%/22.84%, 70%/30% -- MCC Supplement: S6.2M, \$2.8M, \$1.2M -- GRDF: \$2.6M, \$3.36M, \$3.8M -- CARTU; \$1.6575M -- Other Schol: \$570K -- Geo LS Supp: \$1,040,108

	0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	50	200	11	2	International students	
	CY13	CV12	CATT	CYID	643	CV8	3	CY6	CV5	CY4	CY3	CY2 81	inable Enrollment (TBD)	Sustain
4,868,983 "Other Scholarships" Funds needed 5,413,284 Total required funding for 5 or more Cohorts	Ş													
1,544,301) Revenue less espense	\$1 0\$	0\$	\$0	0\$	(\$453,558)	(\$2,634,471)	(\$2,113,855)	(\$1,345,916)	\$1,667,012	\$1,438,490	\$1,600,985	\$ 297,011	Revenue - Expenses	
8,679,092	- 54	- \$	• \$	- \$	453,558 \$	4,881,422 \$	\$ 6,439,490 \$	5 6,945,025	\$ 7,985,278	\$ 9,842,317	\$ 5,862,167	\$ 6,269,835	Total	
0,473,508 MCC Funds reserved for Reno/Cons/Outfitting - Total MCC funds \$20,643,139	\$ 1		Carl and a state of the state o	Constant and the second		No. of the other states of	A NUMBER OF THE OWNER	and a second	\$ 419,857	\$ 4,267,953	\$ 2,464,283	\$ 3,321,415	MCC Renovation/equipment/other	
8,205,583 Total all operational expenses	- 53	• •	. \$	- \$	453,558 \$	4,881,422 \$	\$ 6,439,490 \$	\$ 6,945,025	\$ 7,565,421	\$ 5,574,364	\$ 3,397,884	\$ 2,948,420	Subtotal	
1,076,657 HR Support (Grant Thornton) and Legal Services	- \$	- 5	- 5	- 5	35,980 \$	143,920 \$	\$ 143,059 \$	\$ 142,215	5 141,387	\$ 184,576	\$ 186,520	\$ 99,000	Contract Services	
3,117,267 Geo Partner faculty training and travel; SDSU Faculty replacement provision	- 5	. s	- 5	- 5	- 5	400,000 \$	\$ 649,500 \$	\$ 595,686	5 591,849	\$ 488,088	\$ 184,400	\$ 207,744	Capacity Building	
1,049,422 Costs based on recruiting the next Cohort, CY4 cost support Cohort #4 recruitment	. \$	- 5	- 5		- \$		s . s	5	\$ 308,909	\$ 278,833	\$ 217,704	\$ 243,976	Student Recruitment	
689,764 Administrative, faculty, recruiting, etc.	. \$	- 5	- 5	- 5	- 5	- 5	s - s	· · ·	\$ 177,596	\$ 174,114	\$ 170,700	\$ 167,353	SDSU_Georgia Staff Travel	
957,070 Relocation, housing, dependent schooling, home leave, etc.			. 5		19,935 \$	167,894 \$	\$ 107,342 \$	5 106,801	5 128,748	\$ 166,541	\$ 116,867	\$ 142,942	Personnel Allowances	
9,980,842 Faculty, Administrative, Management staff (not Cons/Reno SDSU staff)					274,004 \$	1,520,078 \$	\$ 1,414,694 \$	5 1,387,933	\$ 1,550,009	\$ 1,497,593	\$ 974,066	\$ 1,362,465	MCA_Georgia/SDSU Personnel Staff	
6,432,406 Per project proposal, 26% fee applied to net tutition versus standard 32.87%			•			627,708 \$	\$ 1,156,752 \$	\$ 1,496,385	\$ 1,745,514	\$ 842,985	\$ 402,773	\$ 160,290	Administrative Fees	
302,696 Covers Intri'l student co-enrollment tuition of 2250 GELs at a Partner University						39,600 \$	\$ 61,200 \$	5 73,800	\$ 78,300	\$ 34,200	\$ 11,700	\$ 3,896	International Student Partner Tuition	
621,016 Includes materials, utilities, insurance, communications, etc.		- 5	• \$	5	25,292 \$	101,168 \$	\$ 99,184 S	5 97,494	\$ 95,582	\$ 93,708	\$ 61,247	\$ 47,340	General Operations	
35,295 Included in Student Support Programs beginning in CY4 (2017/2018)						- 5	s - s	· · ·	s .	s -	\$ 32,764	\$ 2,532	Laboratory Resupply (Chem/EE/CompE)	
1,352,714 Includes SDSU faculty and administration staff travel including advisory board					- 5	195,061 \$	\$ 293,320 \$	\$ 351,689	\$ 296,690	\$ 93,909	\$ 70,015	\$ 52,031	Faculty & Support Staff Travel	
8,351,095 Includes SDSU, Georgian, and other faculty compensation			·		98,347 \$	1,349,765 \$	\$ 1,788,927 \$	\$ 1,838,351	\$ 1,413,481	\$ 991,831	\$ 605,132	\$ 265,262	Faculty Compensation	
629,718 Covers difference between Partner tuition of 2250 GEL and the merit scholarship	. \$	• 5	• 5	. 5	- 5	52,686 \$	\$ 102,114 \$	\$ 134,160	\$ 159,688	\$ 103,472	\$ 51,328	\$ 26,270	Merit Sch Co-Enrollment Tuition Shortfall	
160,175 Pays Partner universities whose facilities are used for non-co-enrolled students	. 5	- 5	. \$. \$. 5	14,280 \$	\$ 26,640 \$	\$ 34,560	\$ 40,500	\$ 25,140	\$ 12,120	\$ 6,935	GELS/class/student - not co-enrolled	
3,449,444 Learning Centers, Mentors, Interns, Clubs, books, lab supplies, Admin Fees, etc.	• •	- 5	- 5	- 5	- s	269,262 \$	\$ 596,758 \$	\$ 685,951	\$ 837,166	\$ 599,376	\$ 300,548	\$ 160,383	Student Support Programs	
													nses	Expens
100100		é		¢ .	د .	¢ 106'047'7	¢ 000,020,4 ¢	ant'esc'c	167'700'6	\$ 11,280,807	\$ 1,463,152	\$ 0,500,840	Iota	
1 12/ 200 Interimination of the set of set of the set o		0	•	•					100,011	CCC,102,14 C	2,404,200	> 0,021,410	MCC Kenovation/ equipment/ other	
1473 508 MCC Funds reserved for Reno/Cons/Outfittine - Total MCC funds \$20,643,139	0 1					A westarter	A adatate A	anteres .	110 257	200 230 V 2				
1661.282 Total revenue all sources not including MCC reserved for Reno/Cons/Outfitting						2 220 2021 6	C A 335 636 C	5 500 109	000,000 0	C 200,000 C	C 1000 000	C 3 7 AE 4 34	Micc subplemental #2	
1 200 000 MCC Simplement #2 for Cohort #3 onerations: offsets GRDF reduction for ISH Bide	• •	•		A 4	• •	• •	•		1,000,11		366,300		MCC Subjection 41	
777360 Adda'l Funds to cover expenses in excess of revenue due to low enrollment (H)		~		~ ~			n u		0 1 0CE 011	2 1,322,300	2 1,401,000	C++C'T+++'7 C	MCC Operational Funding	
1,040,108 Supplement using 500 student Capliess CH #1 & CH #2 enrollment Fail 2016 - all 2017										5 346,703	\$ 693,405		GoG Lump Sum Supplemental	
2,078,696 Assumes 2200 Gei for each Geogran student X Exchange rate adjusted for attrition		>		>	• 5	1/4,600 \$	\$ 338,400 \$	5 444,600	5 529,200	\$ 342,900	\$ 170,100	5 78,896	GoG Lump Sum	
9,760,500 GRDF allocations for Scholarships and Student Support Services; Incl \$3.8 for CH #3	. \$	- 5		- 5		- 5	\$ 950,000 \$	\$ 1,790,125	\$ 2,440,125	\$ 2,440,125	\$ 1,490,125	\$ 650,000	GRDF (total funding)	
3,380,625 Tuition X Int'l student enrollment less "SDSU_Scholarships"; adjusted for attrition	. \$	- 5	- 5	- 5	- 5	448,875 \$	\$ 688,500 \$	\$ 833,625	\$ 884,250	\$ 384,750	\$ 131,625	000'6 S	Int'l Tultion (net)	
4,868,983 Includes 70% avg. schship for CH 4 + plus Merit Offset for Family Pay; no attrition	. s	- 5	- 5	- 5	- 5	1,214,622 \$	\$ 1,220,819 \$	\$ 1,220,864	\$ 1,212,679	\$ -	- 5	s .	Additional Scholarships	
570,000 \$120K for CH2 \$60K for CH3, and \$390K for CH4	• •	. 5	- 5	- 5	- S	97,500 \$	\$ 112,500 \$	\$ 142,500	\$ 142,500	\$ 45,000	\$ 30,000	s .	Other Scholarships	
1,657,500 Assumes 100% of funds are for scholarships for Cohort #3; no attrition	. \$	- 5	. \$	- 5	- 5	- \$	\$ 414,375 \$	\$ 414,375	\$ 414,375	\$ 414,375		s .	CARTU Scholarships	
3,135,240 Family Pay Tultion adjusted for attrition; No MS offset reduction	- \$	- 5	- 5	- 5	- 5	311,354 \$	\$ 601,042 \$	\$ 753,019	\$ 801,593	\$ 462,755	\$ 139,287	\$ 66,190	Tuition Georgian Family Pay	
Fotals	Y2026/2027	20205/2026 A	12024/2025 AY	Y2023/24 A	VY2022/23 A	AY2021/22 .	AY 2020/21	AY 2019/20	AY 2018/19	AY 2017/18	AY 2016/17	AY 2015/16	nue	Revenu
	CY13	CY12	CY11	CY10	CV9	CY8	CY7	CY6	CY5	CY4	CY3	CY2		

Freshmen-Senior Cumulative Georgian graduated Gross Cost per Student \$

83

125 202 16,821 \$

225 419 13,304 \$

275 675 69 11,208 \$

0 576 99 12,057 \$

0 444 172 14,503 \$

0 238 194 20,510

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534 Total Includes all expenses -- partner subsidies, recruitment, capacity building, etc. Excludes Recruitment, capacity building, and 20% of Personnel and Travel

#DIV/0! #DIV/0! #DIV/0!

Adjusted Cost per Student \$ 26,050 \$ 13,581 \$ 10,596 \$ 9,324 \$ 10,504 \$ 12,355 \$ 17,411 #DIV/01 #DIV/01

Four-Cohort Operational Scenario rev 6-26-17 - Copy (2)_SUMMARY FOR MCA_6/29/2017_1

SDSU-Georgia STEM Degree Prograin Operations -- Executive Summary Multi-Cohort Model -- CH1-CH4 Enrollment Geo/Intl: 80/1 (75/2), 114/11, 200/25,225/50 -- Scholarship/Family Pay: 95.12%/4.88, 77.15%/22.84%, 70%/30%+ -- MCC Supplement: \$6.2M, \$2.8M, \$1.2M -- GRDF: \$2.6M, \$3.36M, \$3.8M -- CATU: \$1.6575M -- Other Schol: \$570K -- GoG LS Suppl: \$1.040,108

7,995,184 Learning Centers, Mentors, Interns, Clubs, books, lab supplies, Admin Fees, etc. 406,175 Pays Partner universities whose facilities are used for non-co-enrolled students	· ·	294,462 \$ 14,280 \$	583,049 \$ 29,280 \$	796,692 \$ 45,000 \$	1,117,535 \$ 61.500 \$	1,117,535 \$ 61.500 \$	1,156,444 \$ 58,860 \$	1,031,994	\$ 837,166 \$ \$ 40,500 \$	599,376 25 140	300,548	5 160,383 S	Student Support Programs	
														Expenses
84,254,606	- 5	2,246,951 \$	4,541,473 \$	6,884,135 \$	9,280,385 \$. 9,280,385 \$	\$ 9,065,026 \$	7,993,155	\$ 9,652,291 \$	\$ 11,280,807	7,463,152	\$ 6,566,846 \$	Total	
10,473,508 MCC Funds reserved for Reno/Cons/Outfitting - Total MCC funds \$20,643,139	S	CHILDRID STATE	ALC: NOT THE OWNER OF THE	- North North State	And a state of the	日本がないない	Store and a store of the		\$ 419,857	4,267,953	2,464,283	\$ 3,321,415 \$	MCC Renovation/equipment/other	
73,781,098 Total revenue all sources, not including MCC reserved for Reno/Cons/Outfitting	- \$	2,246,951 \$	4,541,473 \$	6,884,135 \$	9,280,385 \$	9,280,385 \$	\$ 9,065,026 \$	7,993,155	\$ 9,232,434 \$	\$ 7,012,854	4,998,869	\$ 3,245,431 \$	Subtotal	
1,200,000 MICC Supplement #2 for Cohort #3 operations; offsets GNUE reduction for ISU Bldg		- 5	. 5	- 5	- \$	- 5	5	1	\$ 800,000 \$	\$ 400,000	-	s s	MCC Supplemental #2	
2,772,360 Addn'l Funds to cover expenses in excess of revenue due to low enrollment CH2				- 5	- 5	- 5	- 5		\$ 1,065,921 \$	\$ 823,947	882,492	· · · · · · · · · · · · · · · · · · ·	MCC Supplemental #1	
6,197,271 budget		- 5		- 5	• 5	- 5	- 5		\$ 941,791 \$	1,352,300	1,461,835	\$ 2,441,345 \$	MCC Operational Funding	
1,040,108 Supplement using 500 Student cap less CH #1 & CH #2 enrollment Fall 2016 - all 2017									s - s	346,703	693,405	s . s	GoG Lump Sum Supplemental	
5,091,896 Assumes 2250 Gel for each Geogian student X Exchange rate adjusted for attrition		174,600 \$	358,200 \$	550,800 \$	753,300 \$	753,300 \$	5 733,500 \$	647,100	\$ 529,200 \$	\$ 342,900	170,100	\$ 78,896 \$	GoG Lump Sum	
9,760,500 GRDF allocations for Scholarships and Student Support Services; Incl \$3.8 for CH #3					- 5	- 5	\$ 000,026	1,790,125	\$ 2,440,125 \$	5 2,440,125	1,490,125	\$ 650,000 S	GRDF (total funding)	
11,008,125 Tuition X Int'l student enrollment less "SDSU_Scholarships"; adjusted for attrition		448,875 \$	914,625 \$	1,400,625 \$	1,906,875 \$	1,906,875 \$	\$ 1,680,750 \$	1,339,875	\$ 884,250 \$	\$ 384,750	131,625	\$ 0,000 \$	Int'l Tuition (net)	
26,010,719 Includes 70% avg. schship for CH 4 + plus Merit Offset for Family Pay; no attrition		1,312,122 \$	2,630,664 \$	3,954,797 \$	5,285,865 \$	5,188,365 \$	\$ 3,876,498 \$	2,549,730	\$ 1,212,679 \$	-		s - s	Additional Scholarships	
570,000 \$120K for CH2 \$60K for CH3, and \$390K for CH4		•		- 5	- 5	97,500 \$	\$ 112,500 \$	142,500	\$ 142,500 \$	\$ 45,000	30,000	s - s	Other Scholarships	
1,657,500 Assumes 100% of funds are for scholarships for Cohort #3; no attrition		. \$. 5	- 5	- 5	- 5	\$ 414,375 \$	414,375	\$ 414,375 \$	\$ 414,375	1000	s . s	CARTU Scholarships	
8,472,619 Family Pay Tuition adjusted for attrition; No MS offset reduction		311,354 \$	637,984 \$	977,914 \$	1,334,345 S	1,334,345 \$	\$ 1,297,403 \$	1,109,450	\$ 801,593 \$	\$ 462,755	139,287	\$ 66,190 \$	Tuition Georgian Family Pay	
Totals	026/2027	20205/2026 AY2	Y2024/2025 AY	Y2023/24 A	AY2022/23 /	AY2021/22	AY 2020/21	AY 2019/20	AY 2018/19	AY 2017/18	AY 2016/17	AY 2015/16		Revenue
	CY13	CY12	CY11	CY10	CY9	CY8	07	CY6	CV5	CY4	CY3	CY2		

Space Super Figure Figure Space Super Figure Figure Space Super Figure	1310 lotal	#DIV/01	20 228	2 DCV EL				10 440 0	10 000 4					and the same condent of	Contraction of the local division of the loc
Spini Lipper Figure		•	194	194	194	194	194	172	66	69				Georgian graduated	
Space Support Support Support Space Support Support Support Space Support Sup		0	238	488	750	1025	1025	981	851	675	419	202		Freshmen-Senior Cumulative	
State Super Figure State S		0	0	0	0	275	275	275	275	275	225	125	83	Freshmen Total	
Speed Support Support Function Speed Support Speed Support Support Speed Support Sup		0	0	0	0	50	50	50	50	50	25	11	2	national students	Inter
Space Super Figure Space S		0	0	0	0	225	225	225	225	225	200	114	81	gian Students	Geor
Suden Support PregramSupport		CY13	CY12	CY11	CY10	CY9	CY8	22	CY6	CY5	CY4	CY3	CY2	nt (TBD)	ustainable Enrollme
Sident Sipport PigramSipport	32,305,459 Total required funding for 5 or more Cohorts														
Student Support Fugurent Student	26,010,719 "Other Scholarships" Funds needed	\$				100 L 100 L 100 L		CONTRACTOR OF STREET							
Sudert Support Fregrand5100,345100,345100,345100,346110,344111,345111,355111,	(\$6,294,739) Revenue less espense	(\$491,543)	(\$2,645,949)	(\$2,012,034)	(\$1,388,497)	(\$1,110,094)	(\$1,174,296)	(\$1,185,731)	(\$1,290,093)	\$1,667,012	\$1,438,490	\$1,600,985	\$ 297,011	Revenue - Expenses	
Student Support Program 5 100,345 90,345 90,346 101,395 111,395	90,549,345	491,543 \$	4,892,900 \$	6,553,507 \$	8,272,632	10,390,479	. 10,454,681 \$	10,250,757 \$	9,283,248 \$	7,985,278 \$	9,842,317 \$	5,862,167 \$	\$ 6,269,835 \$	Total	
Student Support Program 110 38 200,47 200,407 </td <td>10,473,508 MCC Funds reserved for Reno/Cons/Outfitting - Total MICC funds \$20,643,139</td> <td>\$</td> <td>A DATA CONTRACTOR</td> <td>South State State</td> <td>all the second of</td> <td>NON-COMPANY OF LITT</td> <td></td> <td>Non-second second</td> <td></td> <td>419,857</td> <td>4,267,953 \$</td> <td>2,464,283 \$</td> <td>\$ 3,321,415 \$</td> <td>Renovation/equipment/other</td> <td>MCC</td>	10,473,508 MCC Funds reserved for Reno/Cons/Outfitting - Total MICC funds \$20,643,139	\$	A DATA CONTRACTOR	South State State	all the second of	NON-COMPANY OF LITT		Non-second second		419,857	4,267,953 \$	2,464,283 \$	\$ 3,321,415 \$	Renovation/equipment/other	MCC
Student Support Program 5 100,345 900,345	80,075,837 Total all operational expenses	491,543 \$	4,892,900 \$	6,553,507 \$	8,272,632	10,390,479	10,454,681 \$	10,250,757 \$	9,283,248 \$	7,565,421 \$	5,574,364 \$	3,397,884 \$	\$ 2,948,420 \$	Subtotal	
Student Support Program 5 30,12 50,100 1	1,662,205 HR Support (Grant Thornton) and Legal Services	36,885 \$	147,541 \$	146,609 \$	145,695	144,799 \$	143,920 \$	143,059 \$	142,215 \$	141,387 \$	184,576 \$	186,520 \$	\$ 99,000 \$	ract Services	Cont
Student Support Program 110383 20048 20049 200	6,675,958 Geo Partner faculty training and travel ; SDSU Faculty replacement provision	- 5	500,000 \$	824,080 \$	817,726	811,496 \$	805,388 \$	749,500 \$	695,686 \$	591,849 \$	488,088 \$	184,400 \$	\$ 207,744 S	city Building	Capa
Student Support Forgern 5 100 345 200,445 5 97,164 5 100 345 200,445 2	2,237,887 Costs based on recruiting the next Cohort; CY4 cost support Cohort #4 recruitment	. \$	- 5			305,252 \$	299,757 \$	294,369 \$	289,087 \$	\$ 606'805	278,833 \$	217,704 \$	\$ 243,976 \$	ent Recruitment	Stud
Student Support Program 110335 200345	689,764 Administrative, faculty, recruiting, etc.	- \$. s	- 5			- 5	- 5	. 5	177,596 \$	174,114 \$	170,700 \$	\$ 167,353 \$	Georgia Staff Travel	SDSL
Student Support Program 5 903,45 503,45 903,45	1,342,560 Relocation, housing, dependent schooling, home leave, etc.	. \$	154,267 \$	93,669 \$	109,031	108,457 \$	107,894 \$	107,342 \$	106,801 \$	128,748 \$	166,541 \$	116,867 \$	\$ 142,942 S	onnel Allowances	Pers
Student Support Program 5 100,345 200,447 5 987,164 5 101,545 5 101,545 5 101,545 5 101,545 5 101,545 5 101,545 5 101,545 5 101,545 5 101,545 5 101,545 5 101,545 5 101,545 5 101,545 5 101,545 5 101,555 5 10	17,974,040 Faculty, Administrative, Management staff (not Cons/Reno SDSU staff)	314,426 \$	1,744,324 \$	1,685,337 \$	1,652,534	1,920,073 \$	1,855,143 \$	1,738,428 \$	1,679,641 \$	1,550,009 \$	1,497,593 \$	974,066 \$	\$ 1,362,465 \$	Georgia/SDSU Personnel Staff	MCA
Student Support Program 5 500,50 5 807,16 807,16 807,16 807,16 807,16 807,16 807,16 807,16 807,16 807,16 807,16 807,16 807,16 807,16 807,16 807,16 807,16 807,16<	17,225,960 Per project proposal, 26% fee applied to net tutition versus standard 32.87%	- \$	627,708 \$	1,285,706 \$	1,975,109	2,698,388	2,698,388 \$	2,569,435 \$	2,219,664 \$	1,745,514 \$	842,985 \$	402,773 \$	\$ 160,290 \$	inistrative Fees	Adm
Student Support Program 5 50/216	979,496 Covers Intn'l student co-enrollment tultion of 2250 GELs at a Partner University	- 5	39,600 \$	\$ 000,18	124,200	169,200 \$	169,200 \$	149,400 \$	118,800 \$	78,300 S	34,200 \$	11,700 \$	\$ 3,895 \$	national Student Partner Tuition	Inter
Student Support Forgans 5 100,38 200,48 5 937,46 1,115,39 5	1,048,414 Includes materials, utilities, insurance, communications, etc.	27,377 \$	109,507 \$	107,360 \$	105,255	103,191	101,168 \$	99,184 \$	97,494 \$	95,582 \$	93,708 \$	61,247 S	\$ 47,340 \$	ral Operations	Gent
Student Support Program 5 100 38 5 987/16 5 987/16 101 39 5 117/159 5 100 38 5 997/16 101 39 5 117/159 5 100 38 5 100 38 5 997/16 101 39 5 117/159 5 100 38 5 100 38 5 101 38 5 111	35,295 Included in Student Support Programs beginning in CY4 (2017/2018)	- 5	- 5				. 5	- 5	- 5	- 5	- 5	32,764 \$	\$ 2,532 \$	ratory Resupply (Chem/EE/CompE)	Labo
Student Support Forgrams 5 200,345 5 200,345 5 201,415 5 111/555 5 202,425 5 201,415 211/555 5 202,425 5 201,415 211/555 5 201,415 211/555 5 202,425 5 201,415 211/555 5 202,425 5 201,415 211/555 5 202,425 5 201,415 211/555 5 202,425 5 201,415 211/555 5 202,426 5 201,415 7<	3,141,635 Includes SDSU faculty and administration staff travel including advisory board	- \$	170,643 \$	207,000 \$	311,273	434,535	474,019 \$	511,788 \$	519,733 \$	296,690 \$	\$ 606'26	70,015 \$	5 52,031 5	ty & Support Staff Travel	Facu
Student Support Support Student Support Forgrams Student	17,122,300 Includes SDSU, Georgian, and other faculty compensation	112,855 \$	1,037,882 \$	1,402,327 \$	2,023,911	2,288,742	· 2,393,458 \$	2,451,611 \$	2,135,808 \$	1,413,481 \$	991,831 \$	605,132 \$	\$ 265,262 \$	ty Compensation	Facu
S 150,383 S 300,548 S 599,376 S 837,166 S 1,031,194 S 1,1256,444 S 1,127,335 S 1,256,442 S - S 7,4592,144 Learning centers, interns, Lueus, obook, ina suppliers, etc. etc. GELS/class/student-not co-enrolled S 6,935 S 12,120 S 25,140 S 40,500 S 51,060 S 58,860 S 61,500 S 45,000 S 23,280 S 14,280 S - S 406,175 Pays Partner universities whose facilities are used for non-co-enrolled students	1,538,964 Covers difference between Partner tuition of 2250 GEL and the merit scholarship	. \$	52,686 \$	108,088 \$	166,206	227,312	227,312 \$	221,337 \$	195,265 \$	159,688 5	103,472 \$	51,328 \$	\$ 26,270 \$	t Sch Co-Enrollment Tuition Shortfall	Men
Student Support Programs 5 160,383 5 300,548 5 599,376 5 887,166 5 1,031,994 5 1,117,535 5 1,217,535 5 1,247,462 5 - 5 7,949,124 Learning Centers, Mentors, Interior, Liubs, books, also supplies, Admin rees, etc.	406,175 Pays Partner universities whose facilities are used for non-co-enrolled students	- \$	14,280 \$	29,280 \$	45,000	61,500 \$	61,500 \$	58,860 \$	51,060 \$	40,500 \$	25,140 \$	12,120 \$	\$ 6,935 \$	/class/student - not co-enrolled	GELS
	7,995,184 Learning Centers, Mentors, Interns, Clubs, books, lab supplies, Admin Fees, etc.	- 5	294,462 \$	583,049 \$	796,692	1,117,535	1,117,535 \$	1,156,444 \$	1,031,994 \$	837,166 \$	599,376 \$	300,548 \$	\$ 160,383 S	ent Support Programs	Stud

Adjusted Cost per Student \$ 26,050 \$ 13,581 \$

10,596 \$ 13,304 \$ 200 25 225 419

9,324 \$

9,332 \$

9,009 \$

8,738 \$

8,652 \$

9,470 \$ 11,012 \$ 16,862 #DIV/0!

1310 Total Includes all expenses -- partner subsidius, recruitment, capacity building, etc. Excludes Recruitment, capacity building, and 20% of Personnel and Travel

Multi-Cohort Operational Scenario rev 6-26-17_SUMMARY FOR MCA_6/29/2017_1

Work Plan 30 May 2017



)	Task	Task Name	Duration Start	Finish	26, '17	М	lay 7, '17	Jul 16, '17		Sep 24, '17	Dec 3, '17	Feb 11, '18	Ap
41	♥ Mode	Student Projects	43 days Sep 1	'17 Oct 31 '1	17	M	<u> </u>	I S	W		M F	1 5	W
42	*	Student Projects	43 days Mar 1	'18 Apr 30 '1	18								
43	*	Convocation	0 davs Sep 1	2 '17 Sep 12 '1	17				9/	/12			
44	*	STEM Institute											
45													
46	*	Deliverables											
47		Incention report (I Indated	11 days Jul 17	'17 Jul 31 '1'	7								
		Workplan, updated Recruitment	11 00350117	17 30131 1									
48	*	6-Month Procurement Report submission	10 days Jul 18	'17 Jul 31 '1	7								
49	*	Quarter 1 Progress Report (Progress Meeting and related minutes; Academic Course Delivery and Progress Report for	12 days Sep 10 '17	6 Sep 30 '17									
50		Procurement Plan	10 days Oct 3	17 Nov 10 '	1.								
51	1	Quarter 2 Progress Report	10 days Dec 1	0 Dec 31	L.						-		
51		(Progress Meeting and related minutes; Initial Enrollment Report for Spring 2017: Faculty	'17	'17									
52	*	Academic Course Delivery Repor for Spring 2017	t 10 days Feb 1! '18	5 Feb 28 '18									
53	*	Assessment of 2018 Cohort Viabilit	tr										
54	*	Reports of 2016 renovation activ	i 10 days Mar 2	0 '1: Mar 31 '	1:								
55	*	Facility Development Report Reports of 8-month contract time period renovation activity.											
56	*	Quarter 3 Progress Report	10 days Mar 2	0 '1: Mar 31 ':	1:								
57	*	6 Month Procurement Report	10 days May 2	'18 May 15 '	1								
58	*	Progress Meeting (and related minutes); Capacity Enhancement Report for academic year 2017-18; Sustainability Plan for CY 2018-2019; Enrollment Report and Budget for Fall 2018;	12 days Jun 16 '18	5 Jun 30 '18									
59	*	2017 renovation progress report.	10 days Oct 18	3 '17 Oct 31 '1	7								
60	*	Summer 2018 Renovations 30% Documents (if applicable)	34 days Dec 1	'17 Jan 17 '18									
61	*	Reports of 2017 construction and Renovation activities	10 days Jan 18 '18	Jan 31 '18								•	
62	*	Summer 2018 Renovations 70% Documents (if applicable)	23 days Jan 18 '18	Feb 17 '18									
		Task	Pro	oject Summary				Manual Task			Start-only	C	Dea
rojec	t: MCA Work I	Plan 2017.0 Split	Ina	active Task				Duration-only		1	Finish-only	Э	Pro
ate:	May 30 '17	Milestone 🔷	Ina	active Milestone				Manual Summary Rollu	р		External Tasks		Mai
		Summany		active Summan	B		8	Manual Summany	-		External Milectone	٨	

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2, '18 S T	Jul 1, '18 M F	Sep 9, '18 T	S	Nov 18, W
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al Progress				

ID	Task Mode	Task Name	Duration Start	Finish	26, '17 T	M	May 7,	'17 F	т	Jul 16	5, '17 S	۱۸/	Sep 24	'17		ec 3, '17	F	Feb 11	, '18 S	
63	*	Summer 2018 Renovations 100%	32 days Feb 18	Mar 31		141					5		3						5	
		Documents(if applicable)	'18	'18																
64	*	Reports of 2018 YTD construction activity.	10 days Jan 17 '18	Jan 30 '18																
65																				
66	- 5	2017 Renovations	91 days May 12 '1	Sep 15 '1	.7															
67	*	General Construction	91 days May 12 '1	Sep 15 '1	.7		-													
68	*	MCA Issues Tender	21 days May 12 '1	Jun 9 '17				100												
69	*	Award Contract	0 days Jun 9 '17	Jun 9 '17				• 6/	/9											
70	*	General Construction	67 days Jun 15 '17	'Sep 15 '1	.7															
71	*	HVAC	90 days May 15 '1	Sep 15 '1	.7															
72	*	Issue Tender	15 days May 15 '1	Jun 2 '17				1												
73	*	Award Contract	0 days Jun 2 '17	Jun 2 '17				6/2												
74	*	HVAC Construction	75 days Jun 5 '17	Sep 15 '1	7			194-558												
75	*	Fume Hoods	77 days Jun 1 '17	Sep 15 '1	.7					deserve and	1000 (1000 - 100)	1								
76	*	Award Contract	0 days Jun 1 '17	Jun 1 '17				6/1												
77	*	Delivery and Installation	77 days Jun 1 '17	Sep 15 '1	7			and the second												
78		ISU New Building	365 day May 29 '1	Oct 19 '1	8		r						and the second second							
79	*	Base Building	246 day May 29 '1	May 7 '1	8		1						MARKAN CARACTER		C Second Sec			n an		
80	*	Issue Tender	46 days May 29 '1	Jul 31 '17			,			Here a										
81	*	Award Contract	0 days Jul 31 '17	Jul 31 '17						٠	7/31									
82	*	Construction	10 mon Aug 1 '17	May 7 '18	3															
83	*	Fit-out	365 day May 29 '1	Oct 19 '1	8		6													
84	*	Issue Tender	45 days May 29 '1	Jul 28 '17																
85	*	Construction	6 mons May 7 '18	Oct 19 '1	8															

					Dama 2				
	Summary	1	Inactive Summary	[Manual Summary	1	External Milestone	\diamond	
Date: May 30 '17	Milestone	•	Inactive Milestone		Manual Summary Rollup)	External Tasks		Manu
Project: MCA Work Plan 2017.0	Split		Inactive Task		Duration-only		Finish-only	3	Progr
	Task		Project Summary	El cel	Manual Task	THE CONTRACT OF STREET	Start-only	E	Dead

S	Jul 1, '18 T M	F	Sep 9, '18 T	S	Nov 18, W
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