

Georgia – SDSU: Degree Accreditation and Institutional Support Initiative for Science, Technology, Engineering, and Mathematics (Georgia 2020)

Financial Proposal

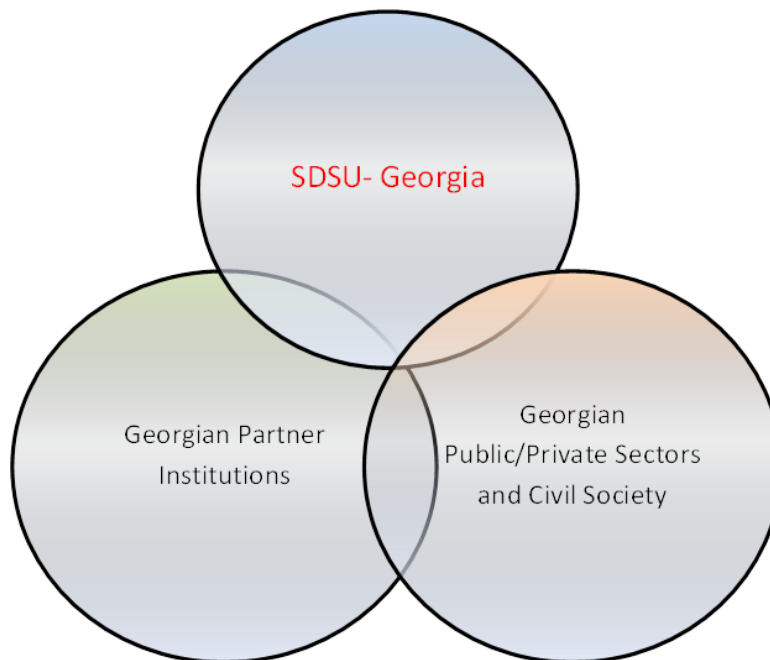
Submitted to

MCC Georgia

February 13, 2014

by

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SDSU Financial Template - SUMMARY

For Finalists to Input									
Program Selection¹									
Program ²	Georgian Partner	US Partner University							
Program 1a Electrical Engineering	TSU, ISU, GTU	SDSU							
Program 1b Computer Engineering (Civil/Construction added in CY3)	TSU, ISU, GTU	SDSU							
Program 2 Applied Sciences (Chemistry (Biochem) and Computer Science)	TSU, ISU, GTU	SDSU							
Georgian Partner Annual Per Student Budget Allocation³									
Program ⁸	CY 0 (AY 2013/14)	CY 1 (AY 2014/15)	CY 2 (AY 2015/16)	CY 3 (AY 2016/17)	CY 4 (AY 2017/18)	CY 5 (AY 2018/19)	CY 6 (AY 2019/20)	CY 7 (AY 2020/21)	
Program 1a Electrical Engineering			\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Program 1b Computer Engineering (Civil/Construction added in CY3)			\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Program 2 Applied Sciences (Chemistry (Biochem) and Computer Science)			\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
SDSU: Annual Tuition + Fees for US Degree⁴									
Program	CY 0 (AY 2013/14)	CY 1 (AY 2014/15)	CY 2 (AY 2015/16)	CY 3 (AY 2016/17)	CY 4 (AY 2017/18)	CY 5 (AY 2018/19)	CY 6 (AY 2019/20)	CY 7 (AY 2020/21)	
Program 1a Electrical Engineering			\$ 7,500	\$ 7,688	\$ 7,880	\$ 8,077	\$ 8,279	\$ 8,486	
Program 1b Computer Engineering (Civil/Construction added in CY3)			\$ 7,500	\$ 7,688	\$ 7,880	\$ 8,077	\$ 8,279	\$ 8,486	
Program 2 Applied Sciences (Chemistry (Biochem) and Computer Science)			\$ 7,500	\$ 7,688	\$ 7,880	\$ 8,077	\$ 8,279	\$ 8,486	
Project Co-financing									
Source	Amount	Intended Use							
GoG Merit Based Grant (~\$1350/student enrolled) ⁵	\$ 2,700,000	Partner tuition funding for qualified students							
GoG Annual contribution (~\$1350/student enrolled) ⁶	\$ 2,700,000	SDSU Programs Development/Sustainment							
Georgia Regional Development Fund (GRDF) ⁷	\$ 2,600,000	Scholarship, Aid, and English/STEM Prep							
Automatically Calculated									
Projected Student Graduation Rate									
Finalist	90%								
Partner (Local + Finalist)	87%								
Partner (Only)	82%								
Operational cost per student in Compact Year 7									
Program 1a Electrical Engineering									
Finalist	\$ 8,503	Does not include costs for scholarships, PhD scholarships, reserve-carryforward							
Partner	\$ 1,593								
Program 1b Computer Engineering (Civil/Construction added in CY3)									
Finalist	\$ 7,681	Does not include costs for scholarships, PhD scholarships, reserve-carryforward							
Partner	\$ 1,618								
Program 2 Applied Sciences (Chemistry (Biochem) and Computer Science)									
Finalist	\$ 6,887	Does not include costs for scholarships, PhD scholarships, reserve-carryforward							
Partner	\$ 1,580								
Average Operating Cost / Student									
Finalist	\$ 7,690								
Partner	\$ 1,597								
Together	\$ 4,644								
¹ SDSU and Partners will offer 2 programs with 4 initial undergraduate degrees in engineering and science disciplines. EE, CompE, Chem/Computer Science; Civ/Con Eng phased-in in CY3/CY4. ² Anticipate that all Partners will participate in all undergraduate degree programs. Additional degrees will be phased in CY3 thru CY7. ³ Sources of funding for Partner budget is a \$500 per student allocation from Finalist in addition to an additional 2250 GEL (\$1350) paid by each student, which may include the GoG Merit based grant. The \$500 per student is an annual allocation per student to support faculty co-teaching and development, curriculum development, Abet certification, and other costs. ⁴ A 2.5% annual escalation is included for budget purposes but will be assessed and applied only as required. All fees are included in the Tuition. ⁵ It is assumed that this GoG Merit-Based Grant is given to the student and will be used as "tuition" for enrollment in Partner University as revenue for Partner support in the SDSU degree. ⁶ This annual lump sum, capped at 2250 GEL/student for up to 2000 students will be used by SDSU for Program Development, Sustainment, and other other operating expenses including student aid. ⁷ The GRDF is planned primarily for use in student scholarships, student aid programs, and an English/STEM preparatory program.									

Assumptions and justification for the Summary Spreadsheet

1. Program Selection: Initially, SDSU will provide 2 programs including 4 undergraduate degrees in the Engineering and Applied Sciences based on discussions with the Georgian Partners. The degrees include Electrical Engineering, Computer Engineering and Chemistry and Computer Science. Since all degrees have a comparable concentration of required GE and lower division courses offered in the Freshman and Sophomore years, we submit that the inclusion of these 4 degrees is not overly aggressive. In addition, we propose to add Civil and Construction Engineering starting in CY3/CY4 and have included the required facilities and equipment and faculty development in the MCC and program operational budgets. Note: Students may elect their choice of degree (EE, CompE, Chem, Comp Sci) upon enrollment as a Freshman or any time up to completion of the Sophomore year. Note: a few additional courses might be required depending on when the student makes the declaration of the degree.
2. Georgian Partner Annual Per Student Budget Allocation: For this program, we propose to provide the Partner University a budget allocation of \$500 per student dual enrolled in a SDSU degree program. The allocation is included as a cost to the Finalist Program operations budget and is posted against the Tuition paid by each student. Note: we did not include any GoG merit based allocation of the usual “up to” 2250 GELs per student.
3. Finalist Annual Tuition and Fees for US Degree: Assumes an annual tuition of \$7500 with a modest 2.5% annual escalation to be assessed as required. [Note: Actual cost to a Georgian student may be less for students receiving scholarships and student aid as outlined in the MCC Budget and the Finalist Program Operations Budget which includes funding from the Georgia Regional Development Fund.]
4. Project Co-financing:
 - a. GoG Merit-based grants of up to 2250 GEL (approximately \$1350) per qualified student will be used to cover enrollment in a Partner Institution. We assume a notional \$2.7 million will be available annually for grants by the Government of Georgia.
 - b. GoG Annual lump sum contribution of 2250 GEL (approximately \$1350) per student enrolled for use in covering education operational costs and/or financial aid is paid to the Finalist after enrollment of the students for the current academic year. The amount is capped at 500 students in CY2, 1000 students in CY3, 1500 Students in CY4, and 2000 students in CY5 through CY20.
 - c. Regional Development Fund initial allocation of \$2.6M is included in the Finalist Program Operations budget for scholarships, student aid, and English/STEM preparatory education, with emphasis on women and socially vulnerable students.
5. Projected Student Graduation Rates are as indicated and were calculated using the established formula in the spreadsheets.
6. Cost per student in CY 7 for SDSU, Partner Universities, and combined has been computed using the established formula. Note that any budget “carry forward” (unexpended) funds, scholarships, and student aid were not included in the calculations.

Assumptions and Justification for the Enrollment Spreadsheet

1. We propose that Compact Year 1 (CY1) be used for program development, facilities development, Georgian faculty indoctrination, student recruitment, student preparatory education (at no-cost to the student) in English and STEM disciplines, and other administrative and operational activities.
2. The following table summarizes the current/projected enrollment data provided by the 3 Partner institutions in the engineering and sciences degree programs. Data on dropout rates, proportion of women and socially vulnerable students were provided also.

	Student Enrollment			University	Proportion Women Students			Proportion Socially Vulnerable		
	Elec Eng	Comp Eng	Sciences		Elec Eng	Comp Eng	Sciences	Elec Eng	Comp Eng	Sciences
TSU	26	0	373	11%	9%		23%	1%		2%
ISU	50	50	120	5%		5%	51%		4%	0%
GTU	521	446	0	8%	12%	22%		7%	8%	
Totals/Average	597	496	493	8%	11%	14%	37%	4%	6%	1%

3. Based on enrollment information provided by the Partner Institutions in the proposed degree program disciplines for 2013/14, we are proposing an initial combined cohort for Compact Year 2 of 600 students, 150 each in the two Engineering programs and 300 students in the Applied Sciences. [Note: We have not established a proportion of the 600 for each of the Partners.] Of this, we are seeking to enroll in the SDSU degree programs 80%, 480 students, across the 3 programs (124 in each of the 2 engineering programs and 248 in the Sciences).
4. The drop rate as indicated in the table above is less than currently experienced. However, given the nature of the programs, preparatory training in English/STEM, other student support, sizeable scholarships and student aid, etc., we believe that the dropout rate can be improved over current rates.
5. Considering the sizeable current student population, we believe that the enrollment into a SDSU degree program in subsequent years can be increased as needed to maintain a cohort enrollment of Freshman of at least 500 students plus the number of dropouts to achieve the target of 1000 students in CY3, 1500 in CY4, and 2000 in CY5. [Note: for sustainability, we intend to increase enrollment above the 2000 total enrollment in CY6 and beyond as we intend to introduce new degree and certificate programs.
6. As for Women and Socially Vulnerable, we recognize that there exists a paucity of women students enrolling in the engineering disciplines; where as there is a strong women student population in the Sciences. In particular, the initial proportion of Women students was set at the average across all Partners of 11% and 14% for Electrical and Computer Engineering, respectively, and 37% for the Applied Sciences. The initial target for the SDSU degree programs is set 4% above these averages with a target increase of 4% per year in the proportion for engineering and 2% for the sciences.
7. The Socially Vulnerable population is particularly low and will be a primary focus of the outreach, recruitment, English/STEM preparatory education, and student scholarships and aid initiatives. As with the "proportion" of women, we have set the initial percentages for the Partners based on the data provided, increased the initial target for SDSU programs at 4% above these percentages with a target increase of 4% per year.
8. The spreadsheet suggests by formula that a percentage (not specified) of freshmen enrolling in each of the degreed programs at the Partner Universities be allocated to the Finalist and that the balance if any remain enrolled at the Partner University. Using this approach and striving to reach a cohort size of 500 new students by CY2 (note CY1 is concentrating on outreach and student enrollment in the programs) and a total enrollment of 2000 students by no later than CY5, we propose that 80% of new students enrolled at the Partner Universities be dual enrolled in the SDSU degree programs for CY2 with a gradual reduction in the rate over subsequent years until the target 2000 student population is reached, preferably by CY5. Note for CY3 thru CY7, we propose that the cohort of new students exceed the target 500 to compensate for the dropout rate, which is applied uniformly across the various cohorts transitioning from Freshman to Sophomore, Sophomore to Junior, etc. Note: The total enrollment for use in calculating the GoG lump-sum sustainment allocation complies with the limits as specified on page 4 of the instructions to finalist of 500, 1000, 1500, and 2000 over compact years 2 thru 5.

SDSU Financial Template - FACULTY STAFF

Assumptions re Faculty & Staff Spreadsheet

1. There are 4 teaching modalities that will be employed and used in developing the cost estimates for delivery of course work. The 4 modalities are as follows:
 - 1) Online courses will be offered initially with SDSU as Lead and Partner University as Support. After Georgian receive orientation/training in the subject matter and modality, the lead-support role will reverse. Anticipate that for all GE courses, the transition will occur after no more than two cycles; i.e., Partner universities to assume lead, if qualified, during second or third cohort of new freshmen.
 - 2) Face-to-Face courses will be taught using current SDSU Faculty, Partner Faculty, and/or new Hires having requisite qualifications. Partner/SDSU will provide support/co-instruction. Plan is to have SDSU faculty initiate the course onsite for the first and last 2 weeks of the course with Georgian faculty conducting the in-class teaching in between, but with SDSU faculty participating via internet SKYPE or other video conferencing facilities. Objective is to transition teaching from SDSU to Georgian Faculty after one or two cycles depending on the course work (lower division versus upper division courses).
 - 3) Hybrid courses with SDSU faculty as lead and Partner University as Co-Instructors; course includes 2 weeks of intensive three 2.5 hour lecture sessions daily taught by SDSU in Georgia followed by one 75-min synchronous online lecture/week for remainder of semester. Georgian faculty will participate in a support role. After two iterations, the intent is to transition lead to the Georgian faculty with SDSU faculty oversight to maintain accreditation requirements.
 - 4) Laboratory classes will be managed by Partner University with SDSU support for lower division courses; and SDSU managed, Partner support, for upper division until transition to Partner University.
2. For all teaching modalities, Partner University faculty will participate in orientation at SDSU prior to conduct of any course. This may be 7-weeks over the summer or 3 months over a semester. SDSU Program will pay for travel including per diem and will provide meals and accommodations on SDSU campus. Assumption is that Partner University will cover salary compensation.
3. In addition to the orientation sessions, SDSU proposes to implement a phased-in strategy for transition of lead instruction from SDSU faculty to Partner University faculty as follows:
 - 1) Lower Division GE and Major courses will be taught by SDSU faculty for at least one cycle with Partner faculty participation in a support role. This includes lower division laboratory courses.
 - 2) Upper Division courses including laboratory courses will be taught by SDSU faculty for at least two cycles with Partner faculty participation in a support role.
 - 3) Online courses will involve co-instruction with SDSU lead in one to two cycles, visa vie lower or upper division, and then shift to Georgia faculty as lead instructor.
 - 4) After at least 2 cycles of courses taught by Georgia faculty, SDSU will assume a monitoring role to ensure quality and attainment of ABET certification.
4. For ease of budgeting and cost estimating, a class/section size is notionally 60 students; laboratories are maximum of 25 students (15-24 in Sciences, Program 2) as are the GE English courses.
5. SDSU faculty will use release time for courses in which they have the lead role in the class; overload will be utilized in supporting where possible; i.e. online courses.
6. For budgeting purposes, SDSU average salaries are based on the CES "Salary Schedule for Instructional Faculty, Special Programs" with compensation ranging from Instructor through Professor depending on the course (upper/lower division, modality, etc.). For example, GE courses will be taught by instructors, which are paid \$1522 per unit. Assuming an average of 15 units per semester (includes 3 units of office hours and other activity), 2 semesters per year, a full time instructor teaching 12 units per semester plus 3 units of office hours would have a salary of $\$1522 \times 15 \times 2 = \$45,660$. Adding 42% fringe benefits makes the total compensation for 1 FTE instructor at \$64,837.
7. Compensation for Georgian Faculty, as adjunct faculty and teaching SDSU courses, similarly has different salary levels based on position classification, average base salary in Georgian Lari – GEL. Using salary information provided by Georgian partners, we have established an average compensation including fringe benefits costs of 20% for 3 classifications. The following table (nest page) summarizes the positions, base salary and fringe benefits in GELs and converted to U.S. Dollars using a conversion rate .6 dollars to 1 GEL.

Position Classification	Monthly Salary (Avg)	Fringe Benefits (20%)	Annual Compensation	U.S. Equivalent (\$)
Full Professor	2000 GEL	400 GEL	28,800 GEL	\$17,280
Associate Professor	1500 GEL	300 GEL	21,600 GEL	\$12,960
Assistant Professor	1200 GEL	240 GEL	17,280 GEL	\$10,368

8. For budgeting purposes, a Full Professor compensation level was used for the Hybrid – face-to-face and the Co-Instruction modalities. An Associate Professor classification was used as a Lecturer for major and general education courses, lower division, and an Assistant Professor classification would be used as Laboratory Instructors.
9. FTE is based on a minimum of 12/15 units (e.g., 4 sections of 60 students per 3-credit course, 4 sections of 25 (20 for Sciences) students for laboratory courses, or 5 sections of 25 students for GE English courses). FTE is derived by taking the student enrollment for the CY in each class (Fr, Soph, Jr, Sr) divide by 60 if lecture or 25 if Lab/GE English to determine the number of sections, rounded up. Multiply this by number of courses being taught during that CY (both semesters) per that teaching modality (online, face-to-face, hybrid, etc). Then divide by 4 since one full time faculty could teach either 4 courses or 4 sections or some combination not to exceed 4 classes. This gives us the number of instructors needed for the 2 semesters. Divide this by 2 to get the FTE for the year. For example: If 180 freshmen enroll and taking 4 courses in semester 1 and 5 courses in semester 2, the number of instructors then would be: 180 students/60 students per section = 3 sections times 9 courses = 27 section-courses/4 for a total of 7, rounded up, instructors over 2 semesters or 3.5 FTE for the year.
10. A .025% cost-of-living increase was applied to all salaries for each successive year.
11. Notes Specific to Spreadsheet subsections for the as indicated:
 - 1) College/Department Coordinators: Assumes one FTE assigned to each College/Department for coordination of activities associated with instruction, class schedules, etc. for the degrees. Additionally, 1/3 FTE is budgeted to support the CAL GE courses and activities and 1/3 FTE for the COS GE courses and activities for that program (Note assignment is 1 FTE for the combined 3 programs for CAL and COS.)
 - 2) GE Professors (CAL Eng – on Site) – Assumes Freshman year GE Composition, GE Intermediate Composition, and GE Oral Communications for all 3 programs. SDSU Faculty will teach on-site (Face-to-Face) for at least two cycles of freshmen classes.
 - 3) No budget was developed for International Hire Faculty. This can be revised later should we opt to hire international instructors to replace some on-site teaching by SDSU faculty.
 - 4) Georgian Faculty and Teaching Staff: Assume that for every course, there will be at least one SDSU faculty/instructor and one Partner faculty/lecturer assigned as either lead or support to facilitate ABET certification, transition of teaching from SDSU to Partner University, quality oversight, etc.
 - 5) Partner faculty and teaching support staff are assumed to be compensated out of the 2250 GEL that the partner receives from the dual enrolled students. In addition, the SDSU program budget includes a \$500 per student supplemental revenue for lead/support effort associated with all SDSU courses. Compensation will be based on Georgian wages (not SDSU) and with 20% fringe benefit rate. NOTE: THIS CATEGORY OF EXPENSE AND BUDGET HAS BEEN INCLUDED UNDER THE PARTNER PROGRAM OPERATIONS WITH COSTS BEING ALLOCATED AGAINST OTHER REVENUES SUCH AS THE \$500/STUDENT PAID TO THE PARTNER OUT OF THE TUITION REVENUE.
 - 6) Administration: There is no place among any of the other spreadsheets to cover program management and administration for such things as executive management, finance, student affairs, facilities, and other typical functions that are performed at a university staff level. Twenty-four positions were identified and budgeted. Compensation for the Dean and several executive level Directors to be filled by U.S. personnel using the SDSU salary schedule with the other positions to be recruited in Georgia with compensation comparable to wages of similar positions in Georgia. The FTE is spread uniformly across all 3 programs and is not based on student population.

SDSU Financial Template - DETAILED INVESTMENT (MCC)

BUDGET CATEGORY	Unit	Compact Year 1 (AY 2014/15)				Compact Year 2 (AY 2015/16)				Compact Year 3 (AY 2016/17)				Compact Year 4 (AY 2017/18)				Compact Year 5 (AY 2018/19)				TOTAL ALL YEARS
		No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	
I. FACILITIES REHABILITATION/UPGRADE																						
A. Program 1a Electrical Engineering																						
1. Renovations					\$29,442			\$73,606			\$0			\$0			\$0			\$0		
Laboratory 1 - Courses EE210L, 330L, 430L (TSU, GTU)	Sq. Meters	149	\$198	\$29,442				\$0			\$0			\$0			\$0			\$0		
Laboratory 3 - Digital Communications (TSU)	Sq. Meters					74	\$198	\$14,721														
Laboratory 5 - Senior Design (TSU, GTU)	Sq. Meters					149	\$198	\$29,442														
Laboratory - Antenna-Microwave (TSU)	Sq. Meters					74	\$198	\$14,721														
Laboratory EE Power Electronics (GTU)	Sq. Meters					74	\$198	\$14,721														
2. Refitting					\$349,628			\$0			\$0			\$0			\$0			\$0		
Engineering Computer Classroom - with 30 computers (TSU, GTU) qty 2	Sq. Meters	297	\$198	\$58,885				\$0			\$0			\$0			\$0			\$0		
GE Smart Classrooms - with 30 computers (TSU) qty 3	Sq. Meters	446	\$198	\$88,327				\$0			\$0			\$0			\$0			\$0		
GE Lecture Hall- Media Center with 100 seats (TSU) qty 2	Sq. Meters	446	\$198	\$88,327																		
Lecture Hall- Media Center with 60 seats (GTU) qty 1	Sq. Meters	130	\$198	\$25,762																		
Library Digital Media Area (TSU, GTU) qty 2	Sq. Meters	446	\$198	\$88,327																		
3. Other Facilities Upgrades (please define)					\$183,095			\$0			\$0			\$0			\$0			\$0		
Laboratory Storeroom (TSU, GTU) qty 2	Sq. Meters	93	\$198	\$18,401				\$0			\$0			\$0			\$0			\$0		
Laboratory Technician Office (TSU, GTU) qty 2	Sq. Meters	65	\$198	\$12,881				\$0			\$0			\$0			\$0			\$0		
Programs Offices (3 - 1 GE and 2 Engineering) (TSU (2), GTU (1))	Sq. Meters	98	\$198	\$19,322				\$0			\$0			\$0			\$0			\$0		
Lavatory/ Facilities (TSU, GTU)	Sq. Meters	669	\$198	\$132,491																		
4. Contingency Reserve 10%					\$56,217			\$7,361			\$0			\$0			\$0			\$0		
Reserve for renovation/pricing adjustments, etc.	Percent	10%		\$56,217		10%		\$7,361														
Sub-Total for Program 1					\$616,382			\$80,967			\$0			\$0			\$0			\$0		
B. Program 1b Computer Engineering (Civil/Construction added in CY3)																						
1. Construction (ISU)/Renovations (GTU)					\$2,137,138			\$0			\$0			\$0			\$0			\$0		
Laboratory 2 - Courses CompE 270, 375, 470L	Sq. Meters	74	\$1,175	\$87,361				\$0			\$0			\$0			\$0			\$0		
Laboratory 5 - Senior Design	Sq. Meters	74	\$1,175	\$87,361																		
Laboratory - Hydraulics	Sq. Meters	93	\$1,175	\$109,201																		
Laboratory - Hydraulics (GTU)	Sq. Meters	93	\$198	\$18,401																		
Laboratory - Structural	Sq. Meters	186	\$1,175	\$218,401																		
Laboratory - Geotechnical	Sq. Meters	93	\$1,175	\$109,201																		
Laboratory - Geotechnical (GTU)	Sq. Meters	93	\$198	\$18,401																		
Surveying Laboratory	Sq. Meters	19	\$1,175	\$21,840																		
Surveying Laboratory (GTU)	Sq. Meters	19	\$198	\$3,680																		
Computer Classroom - 2 with 30 computers; 1 EE/CompE & 1 Civ/Con E	Sq. Meters	297	\$1,175	\$349,442				\$0			\$0			\$0			\$0			\$0		
Lecture Hall- Media Center with 100 seats	Sq. Meters	223	\$1,175	\$262,082																		
Library Digital Media Area	Sq. Meters	223	\$1,175	\$262,082																		
Laboratory Storeroom (2)	Sq. Meters	93	\$1,175	\$109,201				\$0			\$0			\$0			\$0			\$0		
Laboratory Technician Offices (2)	Sq. Meters	65	\$1,175	\$76,441																		
Programs Offices (2 Engineering)	Sq. Meters	65	\$1,175	\$76,441				\$0			\$0			\$0			\$0			\$0		
Communal Areas (halls, stairs, HVAC plant, etc)	Sq. Meters	279	\$1,175	\$327,602																		
2. Contingency Reserve 10%					\$213,714			\$0			\$0			\$0			\$0			\$0		
Reserve for new building construction/pricing adjustments, etc.	Percent	10%		\$213,714																		
Sub-Total for Program 2					\$2,350,851			\$0			\$0			\$0			\$0			\$0		
C. Program 2 Applied Sciences (Chemistry (Biochem) and Computer Science)																						
1. Renovations					\$110,409			\$73,606			\$0			\$0			\$0			\$0		
Chemistry & General Education (TSU)	Sq. Meters	93	\$198	\$18,401				\$0			\$0			\$0			\$0			\$0		
Chemistry, Environmental, General Education (TSU, GTU)	Sq. Meters	186	\$198	\$36,803																		
Chemistry 232 and 432 (TSU)	Sq. Meters	186	\$198	\$36,803																		
Chemistry 417, 427, 457 (TSU)	Sq. Meters					93	\$198	\$18,401														
Chemistry 457 Special (TSU)	Sq. Meters					93	\$198	\$18,401														
Chemistry 567 (TSU, GTU)	Sq. Meters					186	\$198	\$36,803														
Physics Laboratory (TSU)	Sq. Meters	93	\$198	\$18,401																		
2. Refitting					\$220,818			\$0			\$0			\$0			\$0			\$0		
Sciences Computer Classroom - 2 with 30 computers in each	Sq. Meters	297	\$198	\$58,885				\$0			\$0			\$0			\$0			\$0		
GE Smart Classrooms - 1 with 30 computers in each	Sq. Meters	149	\$198	\$29,442				\$0			\$0			\$0			\$0			\$0		
Lecture Hall- Media Center with 100 seats	Sq. Meters	446	\$198	\$88,327																		
Library/Digital Media Center (TSU)	Sq. Meters	223	\$198	\$44,164																		
3. Other Facilities Upgrades (please define)					\$75,446			\$0			\$0			\$0			\$0			\$0		
Laboratory Storerooms (2 in CY1 and 2 in CY2)	Sq. Meters	186	\$198	\$36,803				\$0			\$0			\$0			\$0			\$0		
Laboratory Technician Offices (2 in CY1 And 2 in CY2)	Sq. Meters	130	\$198	\$25,762																		
Programs Offices (2 TSU)	Sq. Meters	65	\$198	\$12,881				\$0			\$0			\$0			\$0			\$0		
4. Contingency Reserve 10%					\$40,667			\$7,361			\$0			\$0			\$0			\$0		
Reserve for renovation/pricing adjustments, etc.	Percent	10%		\$40,667		10%		\$7,361														
Sub-Total for Program 3					\$447,340			\$80,967			\$0			\$0			\$0			\$0		
Total Facilities Rehabilitation					\$3,416,573			\$161,933			\$0			\$0			\$0			\$0	\$3,578,507	
II. FURNITURE AND EQUIPMENT																						
A. Program 1a Electrical Engineering					\$0			\$685,140			\$764,970			\$2,564,715			\$0			\$0		
1. Lab Equipment								\$685,140			\$0			\$0			\$0			\$0		
Laboratory 1 - Courses EE210L, 330L, 430L (TSU, GTU) - See attached	No. Stations	30	\$22,838							15	\$23,249	\$348,735				\$0			\$0			
Laboratory 3 - Digital Communications (TSU) - See attached	No. Stations															\$0			\$0			
Laboratory 5 - Senior Design (TSU, GTU) - See attached	No. Stations															\$0			\$0			
Laboratory - Antenna-Microwave (TSU) - See attached	No. Stations															\$0			\$0			
Laboratory EE Power Electronics (GTU) - See attached	No. Stations									15	\$27,749	\$416,235				\$1,879,575			\$0			
2. Computers					\$375,000			\$0			\$0			\$0			\$0			\$0		
Engineering Computer Classroom - with 30 computers (TSU, GTU) qty 2	No. Stations	60	\$2,500	\$150,000				\$0			\$0			\$0			\$0			\$0		
GE Smart Classrooms - with 30 computers (TSU) qty 3	No. Stations	90	\$2,500	\$225,000				\$0			\$0			\$0			\$0			\$0		
3. Supplies and Materials					\$0			\$60,000			\$45,000			\$0			\$0			\$0		
Engineering Laboratories Software (annual recurring costs)	Number			\$0		4	\$5,000	\$20,000		3	\$5,000	\$15,000				\$0			\$0			
Electronic Parts (recurring)	Number			\$0		4	\$10,000	\$40,000		3	\$10,000	\$30,000				\$0			\$0			
4. Health and Safety Equipment and Supplies					\$0			\$0			\$0			\$0			\$0			\$0		
for example: Eye washing station	Number			\$0				\$0			\$0			\$0			\$0			\$0		
5. Classroom Furniture and Equipment					\$593,000			\$0			\$0			\$0			\$0			\$0		

SDSU Financial Template - DETAILED INVESTMENT (MCC)

[illegible]

SDSU Financial Template - DETAILED INVESTMENT (MCC)

[illegible]

SDSU Financial Template - DETAILED INVESTMENT (MCC)

[illegible]

Assumptions and Justification for Detailed Investment (MCC) Budget Spreadsheet

1. For Section I, Facilities Rehabilitation/Upgrade: Using SDSU laboratory, classroom, office and other facilities, we estimated the square meters of space required for the two programs and associated 4 degrees. We also estimated the space requirements for an additional engineering program (Civil and Construction Engineering) to be added in CY3 or CY4. With this information, we engaged Saunders Group to meet with the Partner institutions to perform a site visit of the potential existing facilities to be used for conversion/upgrade.
 - a. For TSU and GTU, spaces were identified for renovation/upgrade to be performed at a notional cost of \$198 per square meter and included environment and other special requirements as outlined in the proposal requirements. For Ilia and with concurrence of the Rector, we are opting to use MCC funds for construction of a new facility to house the laboratories, smart classrooms, lecture halls, and other required facilities for a new building. The cost estimate per square meter is approximately \$1175 and includes architectural and mechanical designs, Contract Management/Supervision, and international standards and best practices. NOTE: A detailed report is included with this budget submission. In addition to laboratories, smart classrooms, computer labs, library media center, auditorium, and other key facilities were identified and included as part of the renovations at TSU and GTU, and in the new construction at ISU. A 10% reserve is included in the budget for any additions or modifications. Note: Additional space requirements at GTU and TSU, identified after the Saunder's site visit, were added to the budget using the notional renovation cost per square meter.
2. For Section II, Furniture and Equipment, we have developed listings of the special equipment and materials for each of the laboratories, smart classrooms, offices, auditoriums, etc., which are provided as an attachment to this spreadsheet. In each case, we include the estimated cost for the equipment and materials. We do provide a budget for computers, software (recurring), laboratory supplies (recurring), audio/visual systems, and furnishings for offices, classrooms and laboratories. Lastly, we propose a reserve for additional items/pricing adjustments, etc. of 10% of the budget for each Program.
3. For Section III, Program Development, Subsection, Faculty Development, we propose that faculty (professors, instructors, etc.) designated to eventually teach an SDSU course or laboratory session participate in an orientation session at SDSU prior to the target course being offered in Georgia. These sessions may be conducted as either a 6-week (summer) or 3-month semester period. The budget for this item, Faculty Development, is based on the number of Georgian faculty/instructors listed on the Finalist Program Operations Spreadsheet for each program and for each Compact Year. The cost estimate includes cost of travel, per diem, and related expenses over an average 75-day period for each Georgian faculty/instructor/teacher participating in the program. It is assumed that their salary compensation would be covered by their parent university. (This may be a Partner Program expense item.)

For Section III, Program Development, Subsection, Curriculum Development, we included funding in CY 1 through CY3 to conduct a formal review and articulation assessment of existing Partner degree program courses. In the interim and based on the initial ABET review report we propose to utilize the currently accredited curriculum at SDSU and adapt it to meet the objectives of this program, visa vie improved and accredited degree programs at the Partner University in STEM disciplines. Since many of our courses are already on-line we propose to develop and add additional courses. We also intend to tape the on-line synchronous courses and make them available asynchronously and include them in the Library/Data Media Center. As for women and minorities, we intend to develop special courses dealing with issues impacting this targeted group of the Georgian population and make the courses available at no cost to students, in particular women and minorities, as well as other students needing assistant in English or STEM disciplines.

For Section III, Program Development, Subsection, Student Recruitment/Outreach, we have allocated a modest budget for development of a recruitment and outreach program targeting women and minorities. The program effort will continue throughout the Compact, at least until the combined target cohorts of 500 new entrants per year and 2000 student population is achieved for the Programs.

For Section III, Program Development, Subsection, Library and Resource Information Costs, we propose to fund the establishment of a rich database of reference materials, hard copy and digital, with an initial estimate on the subject matter of the proposed degree programs and to include course materials, videos, and other information.

For Section III, Program Development, Subsection, ABET Accreditation and with the initial assessment reports, we are proposing that the establishment of quality laboratories, smart classrooms, and other quality educational resources; the utilization of accredited curriculum from SDSU, and the plans to conduct Georgian faculty orientation, active participation in the delivery of courses, and progressive transition from co-instructors to Lead instructors, all of which is funded elsewhere in this MCC budget and the Finalist Program Operations plan, will effectively advance the quality and readiness of the Partner Universities to undergo the ABET Accreditation. However, no MCC funding is being allocated at this time, since the Assessment Review and Planning, and the On-site review is not projected to be ready until the first cohort graduates complete the degree programs in CY5.

4. For Section IV, Travel Costs, we propose to cover periodic (quarterly) visits by senior administrators throughout the Compact to conduct onsite reviews, discussions with Partners, and other activities to ensure the Compact is advancing as intended. During the first 3 years, we will also assign and fund the visits of key personnel responsible for ensuring that the key facilities (laboratories, smart classrooms, etc.) are set-up, outfitted, and completed as needed and in time for use in scheduled classes. In addition, key university administrators responsible for admissions, student affairs, finance, and other programs will make on-site visits to assess compliance with university requirements and maintenance of accreditation standards. The travel budgets are based on current roundtrip fares, per diem rates, and other miscellaneous travel costs. Note: Travel for Georgian faculty to participate in the orientation sessions was included in that budget line item.
5. For Section V, Program Development, Scholarships, we propose to provide notionally \$4000 needs/merit-based scholarships and \$1000 Student Aid stipends for qualified individuals (particularly Socially Vulnerable students) for up to 10% of the student enrollment for CY 2 and CY 3. [Note: Funding from the Georgia Regional Development Fund will be used to provide scholarships and aid to an additional 15% of the students enrolled beginning in CY 2 and increasing to 25% of the student enrollment in CY5 through CY 7. The scholarships will thereafter continue as part of the Finalist Program Operations budget. Note: These scholarships are in addition to the GOG merit based grants, which are another source for providing needed scholarships and aid to students.
6. For Section VI, Other Direct Costs, we are proposing that an allocation of \$1.8 million for CY 1, and \$900K for CY 2, be allocated to cover start-up costs, faculty qualification/training/transition, and other program activities that have been budgeted in the Finalist Program Operations budget. The intent would be to have MCC allocate these funds to SDSU at contract award. By CY 3 with a larger cohort, the operating costs will be covered by the tuition and other revenue. Note: There is also other direct cost for miscellaneous items such as communications, internet service, etc.
7. For Section VIII, Overhead, we propose to apply our federally approved off-campus facilities & administration rate of 26% to all costs except, facility renovations/construction, equipment, and scholarships.

Engineers Independent Inspection Report And Cost Estimates



Project Description:	Tbilisi Higher Education Site Constructions and Refurbishments
Produced For:	San Diego State University (SDSU) (Client)
DOCUMENT #:	SG140117
Date:	22/01/2014
REVISION #:	-
DOCUMENT STATUS:	1 st Issue

**Approvals**

	Name	Signature	Date
Prepared	Richard Saunders		22/01/14
Checked	Michael Saunders		22/01/14
Approved			

Document Control

Revision	Date	details	Prepared	Checked	Approved
DRAFT	21/01/14	Draft Issued for comment	RDS	MJS	
-	22/01/14	1st Issue	RDS	MJS	

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1. BACKGROUND AND PROJECT DETAILS

The SDSU are tendering to provide services for internationally accredited higher education facilities in Georgia. In this tender they are to provide proposal for the refurbishment works for approximately 29,750 sq.ft; and new construction for approximately 11,500 sq.ft. of teaching space. Both the rehabilitation and construction are to meet local and international standards for the education facilities and meet the MCC and IFC guidelines. The works are to be spread across three Universities; TSU, ISU and GTU.

The proposed rehabilitation works at TSU are for 24,900 sq.ft. of teaching spaces and involve Chemistry, Physics and Electrical Engineering Laboratories. There is also a requirement for lecture Halls and smart computer classrooms.

The proposed new construction works at ISU are for 11,500 sq.ft. of teaching spaces and involve Civil Engineering and Electrical Engineering Laboratories. There is also a requirement for associated public and administration areas. The ISU has already started on architectural designs for a proposed construction.

The proposed rehabilitation works at GTU are for 4850 sq.ft. of teaching spaces and involves Electrical Engineering Laboratories.

A detailed breakdown of the proposed spaces as proposed by SDSU can be found in Appendix D.

2. PURPOSE AND SCOPE

The purpose of this document is to report to the Client on the current situation in the identified refurbishment sites the new construction and to advice on a preliminary cost estimates for the same. The scope of works is limited to reporting on the findings of site inspection, making comment and recommendations on the inspected conditions, relative to the local market and providing provisional cost estimates.

3. TERMS & DEFINITIONS

Specific terms and definitions used in this report are as follows

SDSU – San Diego State University (Client)

TSU – Tbilisi State University

ISU – Ilia State University

MCC – Millennium Challenge Corporation

IFC – International Finance Corporation (World Bank)

4. METHODOLOGY

The sites are to be visited to document the current situation of existing spaces. Any potential challenges or obstacles are to be noted. Cost estimates are to be prepared with consideration for the requirements of SDSU and local market rates. Local market rates for construction are in USD/m² so estimations will be presented in this format.

5. INTERNATIONAL PERFORMANCE STANDARDS

The construction and refurbishment should comply with all local municipality regulations and also take into consideration local and international standards and industry best practice guidelines.



The project is to comply with MCC guidelines. The proposed works are most probably to be classified as Category C, as the project is unlikely to have adverse environmental and social impacts. While MCC generally will not require environmental and social impact analysis for a Category C project, MCC reserves the right to require specific environmental and social impact studies, reporting, or training where relevant or where positive environmental and social impacts may be enhanced.

The Client has requested the works are in compliance with the IFC performance standards.

- Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts
- Performance Standard 2: Labor and Working Conditions
- Performance Standard 3: Resource Efficiency and Pollution Prevention
- Performance Standard 4: Community Health, Safety, and Security
- Performance Standard 5: Land Acquisition and Involuntary Resettlement
- Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- Performance Standard 7: Indigenous Peoples
- Performance Standard 8: Cultural Heritage

The proposed works will impact on 1-4 and 8 performance standards to some degree. Any proposed works should be assessed relative to these performance standards and a report created on how these performance standards are to be met to best avoid, mitigate, and manage risks and impacts and to run the project in a sustainable way and to benefit all the stakeholders.



6. TSU SITE VISITS

6.1. TSU Site Visit Details

A site visit to TSU was carried out on the 17/01/2014. Various spaces were inspected at two campuses; the campus on 3 Chachavadze Street and the campus at University Street. Pictures from the site inspection are located in Appendix A. The buildings appeared to have generally adequate spaces available for the proposed usage, however some chopping and changing of spaces would be required.

6.2. Fittings, Floors, Walls and Ceilings

The doors and windows were generally functioning and the majority were well used. There was some newly installed double glazed windows. The floor, wall and ceilings were all very tired in the inspected spaces. There was noted some water damage, it is not clear where this has originated from or the actual extent of this damage.

6.3. Air Conditioning and Ventilation

The majority of spaces were heated by a central gas heating system, presumed to be running a water circulation and internal radiation heater system. Cooling is limited to high wall split air-conditioning systems and these are generally confined to office administration spaces but not laboratories or teaching spaces. Most spaces have operable external windows and did not have forced mechanical ventilation.

6.4. Building Insulation

The buildings appear to be solid concrete wall construction, which typically has relatively poor thermal insulation properties. The windows were a mixture of older double pane, old single pane and some recently installed double glazed.

6.5. Lighting

Lighting was limited in some areas, however as the sites were inspected during the day the natural lighting appeared adequate. Some refurbished locations had lighting on motion detector power saving systems.

6.6. Acoustics

The rooms are generally concrete wall with hard floor and ceiling materials resulting in high reverberation levels.

6.7. Fire and Emergency

Emergency exit plans and some fire extinguishers in common spaces were noticed. The free path was obstructed by some fixed doors, however these were open at the time of inspection. No fire detection or alarm systems were noticed

6.8. Electrical

Electrical wiring and switchboards were exposed in many places and presented a hazard, switchboards the same. The Tbilisi power system has had disruptions and surges in the past, UPS or surge protection was not noticed.

6.9. Gas

None of the facilities had operating chemistry lab gas systems. It was reported this lack of gas supply was from soviet era where there were problems in gas supply and they switched to electrical chemical heating systems. It was reported there is boundary connection point for gas, as this is used for central heating.

6.1. Plumbing



Some of the spaces had plumbing, general condition was poor with leaky taps, exposed piping and generally tired installations.

6.2. Structural

The building structure was mostly concrete with some structural steel columns noticed. The building on Chachavadze Street had some brick and mortar walls. What appeared to be structural cracks in the concrete were noticed in a number of areas.

6.3. Chemical Hoods

Some chemistry hoods were inspected, these looked well used and were reported to be functioning.

6.4. Facilities Plant room

Plant rooms were not inspected. The location of central heating plant was not discussed, it is presumed these would be on a separate building for central heating systems and possibly on the roof and walls of buildings for any other HVAC equipment.

6.1. Toilets and Kitchens

Toilet areas or kitchens were not inspected, it would be assumed these were in a tired condition.

6.2. Completed refurbishment Example

An example of completed refurbishments as inspected is attached in Appendix A. It was reported that the average cost for this refurbishment works was 100 USD/m².

7. GTU SITE VISIT

7.1. GTU Site Visit Details

A site visit to GTU was carried out on the 20/01/2014. The building which was inspected was located at the GTU campus on Merab Kostava Street. Pictures from this site inspection can be seen in Appendix B. The building was newer than the buildings visited at TSU.

Spaces were presented which would meet the requirements for the proposed spaces, some walls may need to be removed to achieve the class sizes. Internal refurbishment work had been recently completed on some parts of this building as shown in Appendix B. Most of the comments from TSU site visit would be relevant here, although the structure of building appeared to be reinforced concrete and appeared newer and in better condition.

8. ISU SITE VISIT

The ISU site on Chokolashvili Street opposite Vake Park was visited on the 22/01/2014. The proposed building site was inspected and the Architects for the proposed construction were met to show the conceptual designs and discuss the proposed building functionality, plans and costs. The site pictures and Architectural render are included in Appendix C. The following was reported by the Architect:

- Geologist is investigating the site and making recommendations and working with engineers to determine the building foundation requirements.
- All utilities and infrastructure are available for this building including water supply, waste water, gas, electricity and campus central heating system.
- A basement is to be included all though this is not presented on the drawings.



- The top of building is to be a recreational area.
- Building service ducts are to be added and a plant room placed on roof. The building is to have all air conditioning and ventilation and all services required to function.
- Their estimated cost is \$600/m² at 8000 m² = \$ 4,800,000 'including everything' except furnishing.
- The base building would take approximately 8 months to construct.
- Constructing to three floors only with provision for higher floors in future as suggested by Client will cause major problems to the building and services design. For example the AC plant room is to be on roof, elevator is not so easily extended etc. It was recommended that entire building is constructed and required floors finished. With remaining building left as shell till further expansion is realized.



9. DISCUSSIONS AND RECOMMENDATIONS

9.1. Fittings, floors, walls and ceilings

The existing building fittings, floors, walls and ceilings require refurbishment to bring up to a reasonable level. External flashing and water tightness of building should be assessed and remedied at locations water damage is apparent. A suspended ceiling grid would be advised for concealing services, reduce acoustic reverberation and improve the general appearance of the space. It is recommended the walls be a combination of painted/GIB/wallpaper to suit and it is recommended the floor is re-laid or heavily refurbished in most areas. The new building should incorporate reasonable quality components that will last.

9.2. Air conditioning and ventilation

The existing central heating systems appeared effective on the sites visited. In the summer months in Tbilisi temperatures often get above 30°C, for teaching in these conditions an air conditioning (cooling) system would be advised. It should also be considered the university has summer break during Tbilisi's hottest months from approximately July to September.

Ventilation may become an issue in the cold winter months as windows remain closed to retain heat, some sort of adequate forced ventilation should be considered, particularly in the chemical laboratories. However given the lack of current mechanical ventilation systems and space to install these and to be cost conscious it is recommended the windows are continued to be used as ventilation for the refurbished working spaces.

For the new construction a central plant system with adequate ventilation systems and efficient heating/cooling methods should be incorporated.

9.3. Building Insulation

For existing buildings effective external insulation would improve the building efficiency and post construction insulation cladding methods are available, however this would be considered outside the scope for the existing buildings. Insulation and cladding would be recommended in any new constructions.

9.4. Lighting

The existing lighting systems require replacement in most instances to allow the space to be used after daylight hours, the condition of lighting is generally beyond refurbishment. New lighting should be on time clock or sensor energy conservation systems and incorporate efficient lighting methods.

9.5. Acoustics

The acoustic properties of the existing spaces are very live. It would be expected that the reverberation rates would exceed international standards for educational facilities. It is recommended this is improved by installing an acoustic tile in the suspended ceiling and some soft furnishings, such as cushioned seats and possibly curtains. The lecture theatres should be assessed in this respect also. The new construction should also incorporate acoustic design philosophies.

9.6. Fire and Emergency

Fire systems in existing buildings would currently fall short of international fire standards for these spaces, redesign of entire building fire system is beyond this scope. A fire detection and alarm system should be installed at the minimum for the existing building renovations and fire suppression systems, and emergency exit lighting should be included in the new build.

Appropriate gas safety alarms should be installed in the chemical laboratories.



9.7. Electrical

Electrical wiring should be concealed and points and distribution appropriately rated for each spaces use. Surge protection should be considered for all spaces, particularly where high value equipment/instruments are to be used. Wifi internet network is understood to be functioning in most existing spaces. The new construction should incorporate modern communication and security systems.

9.8. Gas Supply

If gas connections are required in each chemistry class, the piping will have to be installed back to the building service connection. For the purposes of this cost estimate, electrical heating for chemistry is considered as installation of entire gas distribution system will disproportionately affect rates. The installation of a gas system can be estimated if required by the Client.

9.9. Structural

The existing older building structures are of concern, along with most of Tbilisi's building stock. Tbilisi's geological location is prone to seismic activity and it is questionable if the buildings are designed/constructed to sustain a significant seismic event. A proper structural assessment of the existing buildings would be advised.

9.10. Chemical Hoods

Due to the condition of existing hoods, it would be advised that all hoods be replaced with new.

9.11. Facilities Plant room

An accessible facilities plant room would be recommended if central HVAC systems are required in refurbishments. The creation of such space for existing buildings is currently considered outside the scope of works and is not included in cost estimates. The new building should have allocated space for this purpose.

9.12. Completed Refurbishment Examples

An example of some completed refurbishments as inspected are shown in Appendix A and B. It was reported that the average cost for refurbishment works was 100 USD/m² at TSU and 180 USD/m² at GTU. It was noted this was an acceptable, but basic quality and limited level of building services were provided.

9.1. ISU Architectural Designs

The Architectural designs presented are of reasonable standard for conceptual design. The cost estimates provided of \$600 /m² would likely be reflective of a certain level of quality of design detailing, building components, and construction standards offered. Unfortunately the market has not developed to the level of a 'Registered' Architect, Structural Engineer or Building Services Designer; so it is difficult to assure the quality of a build. It would be recommended that any presented designs be Peer Reviewed, and an independent Construction Supervisor or Construction Manager engaged for quality assurance.



10. COST ESTIMATES

Cost can vary significantly depending on the Client specific requirements and accepted levels of quality. In line with IFC guidelines it is recommended that the new construction includes good quality components, green building concepts and energy efficient systems to ensure a long lasting sustainable building within reasonable budget constraints. The relative capital investment and construction cost is somewhat higher for these types of construction. The Georgian market is not developed in these aspects, so there may be resistance to higher cost. The balance between quality and cost is the Client's decision and can be adjusted if required.

The cost estimates have been prepared relative to the limited current scope definition. And should be taken as 'notional' costs. Should the project advance to conceptual stage a building construction task schedule and bill of quantities should be presented and then a more refined and accurate cost estimate can be realized. A full line price cost estimation or similar cost estimation method and cost planning, control and management is recommended by an independent and qualified quantity surveyor.

10.1. ISU Construction and Economies of scale

Due to economies of scale, costs would be expected to come down if more floors are being built. For example an elevator is a similar cost if it covers 3 floors as if it covers 8 floors. So the per meter cost here is significantly reduced for a bigger building, same goes for foundations, site works and roofs etc. The estimated square meter costs are for the Clients proposed building size only, it has been allowed as 3 floors (G, 1, 2) of the Architects presented conceptual design (Approx. 1873m² of working space), note that the ground floor is mostly atrium and courtyard access.

10.2. Contingency and Risks

Certain unknowns and building risks exist, particularly in the refurbishment, an example is the extent of water damage or structural damages to existing buildings which are difficult to assess from basic visual inspection. A cost contingency of 10% is included however the Client may consider adjusting this value.

10.3. Building Element Inclusions

Building elements have been broken into new items and refurbishment items costs, as the cost is inherently different to refurbish as to install complete new systems. The items have been grouped into the following categories and provisional estimates are listed in Appendix D:

- **Base-build** – Includes provisional estimate for the new construction site clearing, foundations, structure, floors, stairs, roofing, external windows, external doors and exterior walls, insulation and cladding.
- **Interior Fit-out** – Includes partitions, internal fittings and joinery, interior doors, internal walls, ceiling, and floor finishing.
- **Conveyance Systems** – Passenger elevators
- **Mechanical** – Plumbing and fixtures, water distribution and drainage, Gas distribution, Central heating/cooling systems (new), air distribution and exhaust systems (new), HVAC controls systems (new), commissioning and testing (new).
- **Fire Protection** – Fire and gas alarm systems for new building, fire suppression systems should be considered.
- **Electrical** – Includes power distribution boards, emergency power, lighting, specialty lighting, power fittings, communications, and security systems (new).
- **Site-work** – provisional sum for local landscaping, plants/trees, basic entrance and pathway.

10.4. Exclusions



The specific exclusions include:

- Excavation works for any below ground basement, significant site clearing, roadways, parking lots, pedestrian paving and site development including landscaping. Connections of services utilities and infrastructure beyond the building envelope.
- As requested by the Client the internal furnishings and laboratory equipment, for example the chemical gas hoods for chemistry laboratories are excluded.
- Gas systems for chemical laboratories have not been included in cost estimate as will require complete system installation and throw off costs here.

10.5. Professional Fees

The professional fees are based on current market rates, it is recommended reputable local Architect, Engineers and Construction Management /Supervisors are used to ensure a good quality outcome. The format of construction has not yet been specified (design-build etc.).



11. APPENDIX A – TSU SITE INSPECTION 17/01/2014



Figure 11-1: TSU building on 3 Chachavadze Street.



Figure 11-2: Small classroom in Chachavadze building. Floors wall and ceiling are tired. Limited building services.



Figure 11-3: Example space of Approximately 150 m² with 2 tier mezzanine floor at Chachavadze building, currently used as physics laboratory. The roof has some damage and the top tier of the overhung mezzanine has a distinct lean and what appears to be water damage raising structural concerns. Lights are missing and electrical wiring is old. Windows are also old two pane style.



Figure 11-4: Foyer stairwell in Chachavadze building. Note the electrical cabling is messy. The stairs have wheelchair ramps.



Figure 11-5 Chemical hoods in Chemistry Lab. Reported to be functioning.

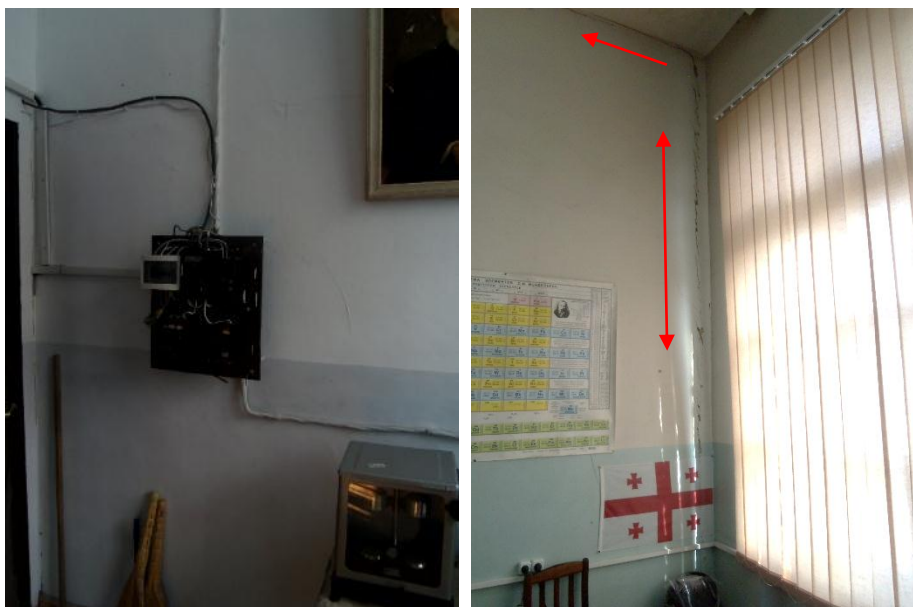


Figure 11-6 Above Right: exposed circuit board in refurbished laboratory Above Left: structural crack in concrete running up wall and across ceiling



Figure 11-7 Lecture Theatre at Chachavadze Street Building. Functioning however generally tired space



Figure 11-8 Refurbished lecture theatre at University Street site, Suspended ceiling grid, painted walls and polyvinyl flooring along with new furnishings, windows not replaced.

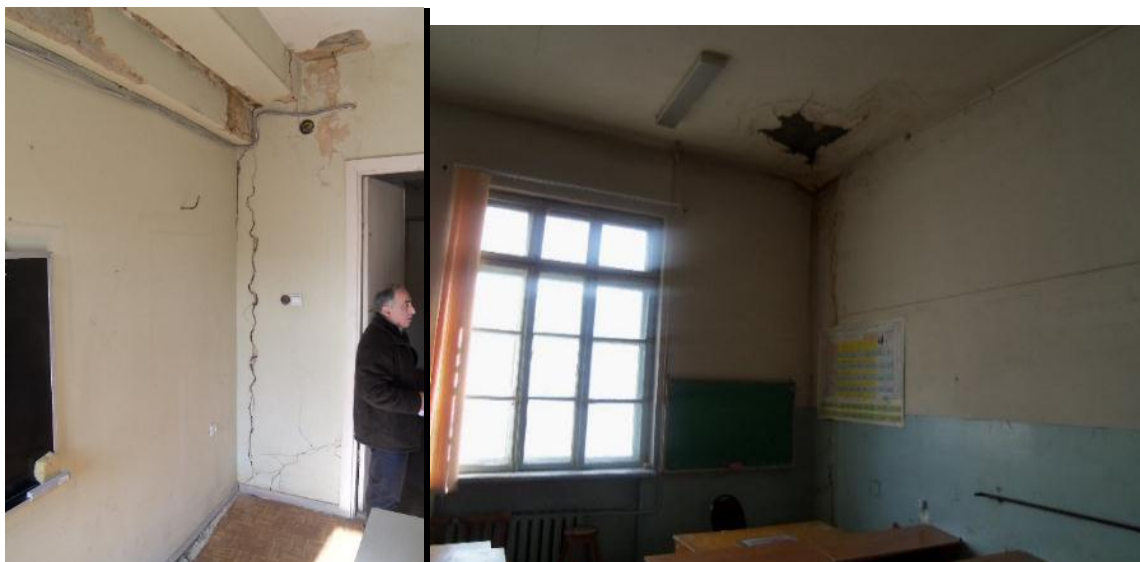


Figure 11-9 Possible structural issues in a proposed space at University Street Building.



12. APPENDIX B – GTU SITE INSPECTION 20/01/2014



Figure 12-1: Building at Merab Kostava Street, proposed 1st, 5th, 8th and 9th floor for housing proposed spaces.



Figure 12-2: Space requiring refurbishment, note exposed electrical installation on left, all services to this space are tired and likely require refurbishment.

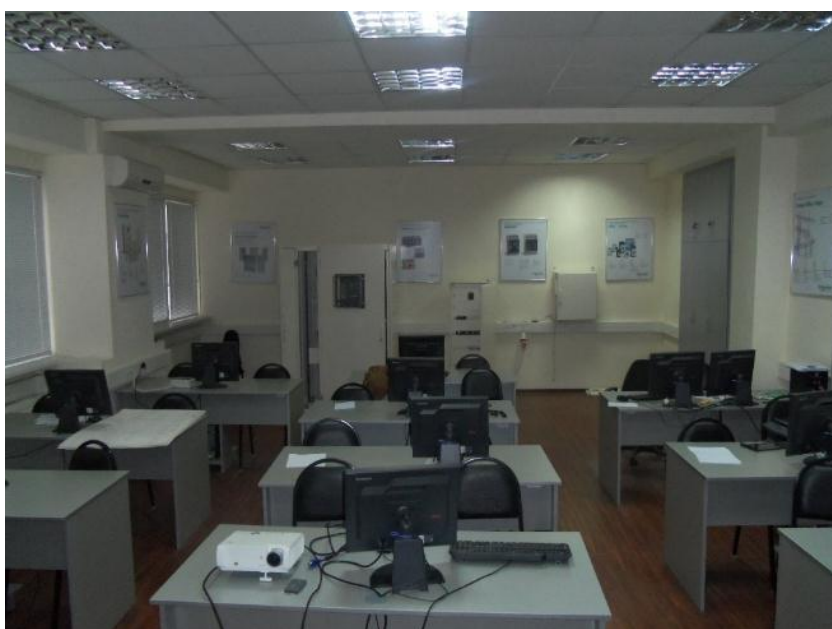


Figure 12-3: Completed refurbishments on ground floor and 9th floor. The space in lower picture has been completed in association with Schneider to a higher standard of refurbishment and an associated higher cost. Note cable trunks and AC high-wall units.

13. APPENDIX C - ISU SITE VISIT



Figure 13-1: Render of Architects proposed building design at ISU on Chokolashvili Street site.



Figure 13-2: Current situation, view from proposed courtyard area (currently a car park) looking toward proposed building site.



14. APPENDIX D – COST ESTIMATES

Please see attached the cost estimates spreadsheet in A3 paper size.

Appendix C - Laboratory and Classroom Space Requirements

Important : Must be read in conjunction with report

Important : Must be read in conjunction with report							Estimated USD construction cost per square meter								/Professional Fees			Sub Total Cost Estimates			
Partner	Degree	# Spaces	Type	Total Sq Ft	Sq m	Notes (per space)	New	Base building	Interior fitout	Conveyance	Mechanical	Fire	Electrical	Site	Architecture and IFC report	Structural and MEP designs	CM /Supervision	Construction	Professional	Combined	
							Refurb	\$ 400.00	\$ 350.00	\$ 125.00	\$ 125.00	\$ 10.00	\$ 75.00	\$ 10.00	\$ 30.00	\$ 25.00	\$ 25.00	\$ 1,095.00	\$ 80.00	\$ 1,175.00	/m2
							Refurb	\$ -	\$ 100.00	\$ -	\$ 40.00	\$ -	\$ 40.00	\$ -	\$ 5.00	\$ 3.00	\$ 10.00	\$ 180.00	\$ 18.00	\$ 198.00	/m2
TSU	Elec Eng	3	Electrical Engineering Labs	2400	223	15 Work Stations each lab; 800 sqft each		\$ -	\$ 22,296.73	\$ -	\$ 8,918.69	\$ -	\$ 8,918.69	\$ -	\$ 1,114.84	\$ 668.90	\$ 2,229.67				
	Chemistry	1	Chemistry & Gen Educ	1000	93	Power, Gas (12), Water, Vent (7 hoods), 24 Work Stations		\$ -	\$ 9,290.30	\$ -	\$ 3,716.12	\$ -	\$ 3,716.12	\$ -	\$ 464.52	\$ 278.71	\$ 929.03				
	Chemistry	1	Chemistry/Environ/Gen Educ	1000	93	Power, Gas (12), Water, Vent (7 hoods), 20 Work Stations		\$ -	\$ 9,290.30	\$ -	\$ 3,716.12	\$ -	\$ 3,716.12	\$ -	\$ 464.52	\$ 278.71	\$ 929.03				
	Chemistry	2	Chemistry 232 and 432	2000	186	Power, Gas (12), Water, Vent (25 hoods), 20 Work Stations		\$ -	\$ 18,580.61	\$ -	\$ 7,432.24	\$ -	\$ 7,432.24	\$ -	\$ 929.03	\$ 557.42	\$ 1,858.06				
	Chemistry	1	Chemistry 417/427/457	1000	93	Power, Gas (12), Water, Vent (2 hoods), 15 Work Stations		\$ -	\$ 9,290.30	\$ -	\$ 3,716.12	\$ -	\$ 3,716.12	\$ -	\$ 464.52	\$ 278.71	\$ 929.03				
	Chemistry	1	Chemistry 457 special	1000	93	Power, Gas, Water, Hoods (2), 15 work stations;		\$ -	\$ 9,290.30	\$ -	\$ 3,716.12	\$ -	\$ 3,716.12	\$ -	\$ 464.52	\$ 278.71	\$ 929.03				
	Chemistry	1	Chemistry 567	1000	93	Power, Gas (12), Water, Vent (25 hoods), 20 Work Stations		\$ -	\$ 9,290.30	\$ -	\$ 3,716.12	\$ -	\$ 3,716.12	\$ -	\$ 464.52	\$ 278.71	\$ 929.03				
	Physics	1	Gen Educ	1000	93	25 Work Stations		\$ -	\$ 9,290.30	\$ -	\$ 3,716.12	\$ -	\$ 3,716.12	\$ -	\$ 464.52	\$ 278.71	\$ 929.03				
	Elec Eng	2	Computer Labs	3200	297	30 Computer Stations each Lab		\$ -	\$ 29,728.97	\$ -	\$ 11,891.59	\$ -	\$ 11,891.59	\$ -	\$ 1,486.45	\$ 891.87	\$ 2,972.90				
	Elec Eng	2	Storeroom	1000	93	Electronic Parts and Supplies; Chemicals and Supplies		\$ -	\$ 9,290.30	\$ -	\$ 3,716.12	\$ -	\$ 3,716.12	\$ -	\$ 464.52	\$ 278.71	\$ 929.03				
	Elec Eng	2	Laboratory Office	700	65	Chemistry and Electrical Eng Lab Offices		\$ -	\$ 6,503.21	\$ -	\$ 2,601.29	\$ -	\$ 2,601.29	\$ -	\$ 325.16	\$ 195.10	\$ 650.32				
	Gen Educ	2	Lecture Hall	4800	446	Advanced Lecture Halls-Media Centers -- 100 seats		\$ -	\$ 44,593.46	\$ -	\$ 17,837.38	\$ -	\$ 17,837.38	\$ -	\$ 2,229.67	\$ 1,337.80	\$ 4,459.35				
	Gen Educ	3	Smart/Computer Classrooms	4800	446	Smart/Computer Classrooms -- 30 stations		\$ -	\$ 44,593.46	\$ -	\$ 17,837.38	\$ -	\$ 17,837.38	\$ -	\$ 2,229.67	\$ 1,337.80	\$ 4,459.35				
	GENERAL	1	Comunal Areas/auditorium	5000	465			\$ -	\$ 46,451.52	\$ -	\$ 18,580.61	\$ -	\$ 18,580.61	\$ -	\$ 2,322.58	\$ 1,393.55	\$ 4,645.15				
	GENERAL	1	Toilets and facilities	3000	279			\$ -	\$ 27,870.91	\$ -	\$ 11,148.36	\$ -	\$ 11,148.36	\$ -	\$ 1,393.55	\$ 836.13	\$ 2,787.09				
		24		32900	3057			\$ -	\$ 305,651.00	\$ -	\$ 122,260.40	\$ -	\$ 122,260.40	\$ -	\$ 15,282.55	\$ 9,169.53	\$ 30,565.10	\$ 550,171.80	\$ 55,017.18	\$ 1,210,377.97	
ISU	Elec Eng	1	Electrical Engineering Lab	800	74	15 Work Stations		\$ 29,728.97	\$ 26,012.85	\$ 9,290.30	\$ 9,290.30	\$ 743.22	\$ 5,574.18	\$ 743.22	\$ 2,229.67	\$ 1,858.06	\$ 1,858.06				
	Elec Eng	1	Antenna & Microwave Lab	800	74	15 Work Stations		\$ 29,728.97	\$ 26,012.85	\$ 9,290.30	\$ 9,290.30	\$ 743.22	\$ 5,574.18	\$ 743.22	\$ 2,229.67	\$ 1,858.06	\$ 1,858.06				
	Elec Eng	1	Senior Design Laboratory	800	74	15 Work Stations		\$ 29,728.97	\$ 26,012.85	\$ 9,290.30	\$ 9,290.30	\$ 743.22	\$ 5,574.18	\$ 743.22	\$ 2,229.67	\$ 1,858.06	\$ 1,858.06				
	Civ Eng	1	Hydraulics	1000	93	25 work stations		\$ 37,161.22	\$ 32,516.06	\$ 11,612.88	\$ 11,612.88	\$ 929.03	\$ 6,967.73	\$ 929.03	\$ 2,787.09	\$ 2,322.58	\$ 2,322.58				
	Civ Eng	1	Structural	2000	186	25 work stations		\$ 74,322.43	\$ 65,032.13	\$ 23,225.76	\$ 23,225.76	\$ 1,858.06	\$ 13,935.46	\$ 1,858.06	\$ 5,574.18	\$ 4,645.15	\$ 4,645.15				
	Civ Eng	1	Geotechnical	1000	93	25 work stations		\$ 37,161.22	\$ 32,516.06	\$ 11,612.88	\$ 11,612.88	\$ 929.03	\$ 6,967.73	\$ 929.03	\$ 2,787.09	\$ 2,322.58	\$ 2,322.58				
	Civ Eng	1	Surveying Lab	200	19	25 work stations		\$ 7,432.24	\$ 6,503.21	\$ 2,322.58	\$ 2,322.58	\$ 185.81	\$ 1,393.55	\$ 185.81	\$ 557.42	\$ 464.52	\$ 464.52				
	EE & CE	2	Computer Labs	3200	297	30 Computer Stations per lab		\$ 118,915.89	\$ 104,051.40	\$ 37,161.22	\$ 37,161.22	\$ 2,972.90	\$ 22,296.73	\$ 2,972.90	\$ 8,918.69	\$ 7,432.24	\$ 7,432.24				
	EE & CE	2	Storeroom	1000	93	Electronic Parts and Supplies		\$ 37,161.22	\$ 32,516.06	\$ 11,612.88	\$ 11,612.88	\$ 929.03	\$ 6,967.73	\$ 929.03	\$ 2,787.09	\$ 2,322.58	\$ 2,322.58				
	EE & CE	2	Laboratory Office	700	65	One each for EE and Civ/Con		\$ 26,012.85	\$ 22,761.24	\$ 8,129.02	\$ 8,129.02	\$ 650.32	\$ 4,877.41	\$ 650.32	\$ 1,950.96	\$ 1,625.80	\$ 1,625.80				
	GENERAL	1	Comunal Areas/hallways/stoi	4000	372			\$ 148,644.86	\$ 130,064.26	\$ 46,451.52	\$ 46,451.52	\$ 3,716.12	\$ 27,870.91	\$ 3,716.12	\$ 11,148.36	\$ 9,290.30	\$ 9,290.30				
	GENERAL	1	Building Plant room	500	46			\$ 18,580.61	\$ 16,258.03	\$ 5,806.44	\$ 5,806.44	\$ 464.52	\$ 3,483.86	\$ 464.52	\$ 1,393.55	\$ 1,161.29	\$ 1,161.29				
	GENERAL	1	Administration areas	1000	93			\$ 37,161.22	\$ 32,516.06	\$ 11,612.88	\$ 11,612.88	\$ 929.03	\$ 6,967.73	\$ 929.03	\$ 2,787.09	\$ 2,322.58	\$ 2,322.58				
	GENERAL	1	Toilets and facilities	2000	186			\$ 74,322.43	\$ 65,032.13	\$ 23,225.76	\$ 23,225.76	\$ 1,858.06	\$ 13,935.46	\$ 1,858.06	\$ 5,574.18	\$ 4,645.15	\$ 4,645.15				
		17		19000	1765			\$ 706,063.10	\$ 617,805.22	\$ 220,644.72	\$ 220,644.72	\$ 17,651.58	\$ 132,386.83	\$ 17,651.58	\$ 52,954.73	\$ 44,128.94	\$ 44,128.94	\$ 1,932,847.75	\$ 141,212.62	\$ 2,074,060.37	
GTU	Elec Eng	1	Power Systems EE Lab	800	74	15 Work Stations		\$ -	\$ 7,432.24	\$ -	\$ 2,972.90	\$ -	\$ 2,972.90	\$ -	\$ 371.61	\$ 222.97	\$ 743.22				
	Elec Eng	1	Power Electronics EE Lab	800	74	15 Work Stations		\$ -	\$ 7,432.24	\$ -	\$ 2,972.90	\$ -	\$ 2,972.90	\$ -	\$ 371.61	\$ 222.97	\$ 743.22				
	Elec Eng	1	Senior Design Lab	800	74	15 Work Stations		\$ -	\$ 7,432.24	\$ -	\$ 2,972.90	\$ -	\$ 2,972.90	\$ -	\$ 371.61	\$ 222.97	\$ 743.22				
	Elec Eng	1	Computer Labs	1600	149	30 Computer Stations		\$ -	\$ 14,864.49	\$ -	\$ 5,945.79	\$ -	\$ 5,945.79	\$ -	\$ 743.22	\$ 445.93	\$ 1,486.45				
	Elec Eng	1	Storeroom	500	46	Electronic Parts and Supplies		\$ -	\$ 4,645.15	\$ -	\$ 1,858.06	\$ -	\$ 1,858.06	\$ -	\$ 232.26	\$ 139.35	\$ 464.52				
	Elec Eng	1	Laboratory Office	350	33			\$ -	\$ 3,251.61	\$ -	\$ 1,300.64	\$ -	\$ 1,300.64	\$ -	\$ 162.58	\$ 97.55	\$ 325.16				
	GENERAL	1	Comunal Areas/auditorium	1200	111	Hallways also included		\$ -	\$ 11,148.36	\$ -	\$ 4,459.35	\$ -	\$ 4,459.35	\$ -	\$ 557.42	\$ 334.45	\$ 1,114.84				
	GENERAL	1	Toilets and facilities	600	56			\$ -	\$ 5,574.18	\$ -	\$ 2,229.67	\$ -	\$ 2,229.67	\$ -	\$ 278.71	\$ 167.23	\$ 557.42				
		8		6650	618			\$ -	\$ 61,780.52	\$ -	\$ 24,712.21	\$ -	\$ 24,712.21	\$ -	\$ 3,089.03	\$ 1,853.42	\$ 6,178.05	\$ 111,204.94	\$ 11,120.49	\$ 122,325.43	
Totals							\$ 706,063.10	\$ 985,236.74	\$ 220,644.72	\$ 367,617.33	\$ 17,651.58	\$ 279,359.44	\$ 17,651.58	\$ 71,326.31	\$ 55,151.89	\$ 80,872.10	\$ 2,595,499.49	\$ 207,448.29	\$ 3,408,136.77		
including 10% contingency							\$ 776,669.41	\$ 1,083,760.41	\$ 242,709.19	\$ 404,379.06	\$ 19,416.74	\$ 307,295.39	\$ 19,416.74	\$ 78,458.94	\$ 60,667.08	\$ 88,959.31	\$ 2,855,049.44	\$ 228,193.12	\$ 3,748,950.44		

	Budget for Labs for Electrical and Computer Engineering				
	Equipment for Labs 1 (covers courses EE 210L, EE 330L, EE430L)				
Qty	Manufacturer	Model No.	Description	Mfr Suggested Retail/Base	Cost Per Seat
1	Agilent	MSO-X 3014A	Mixed Signal Oscilloscope	\$3,876	\$3,876
1	Agilent	TDS3012	Digital Storage Scope	\$5,160	\$5,160
1	Agilent	N2791A	25MHz Differential Probe	\$632	\$632
1	Agilent	33210A	10 MHz Function/Arbitrary Waveform Generator	\$1,279	\$1,279
1	Tektronix	DMM4040	6-1/2 Digit Digital Multi Meter	\$1,170	\$1,170
1	Keithley	2200-60-2	Programable Power Supply	\$1,110	\$1,110
2	Agilent	34450A	Digital Multimeter with Display(2)	\$787	\$1,574
1	BK Precision		150W DC Electronic Load	\$525	\$525
1	Dell Precision		Desktop PC with Monitor	\$2,500	\$2,500
1	National Instruments	ELVIS II+	Desktop Development Station	\$4,140	\$4,140
2	Agilent	U8001A	Single output power supply(2)	\$331	\$662
1	Extech	380193	LCR Meter	\$220	\$110
1	Powerstat	501-C	Variac	\$200	\$100
				Total for each station	\$22,838
	Number of stations	15	Cost for the lab equipment (not including furniture)		\$342,570
	Equipment for Lab 2 (COMPE 270, CompE 335, CompE 470L)				
Qty	Manufacturer	Model No.	Description	Mfr Suggested Retail/Base	Cost Per Seat
1	Agilent	TDS3012	Digital Storage Scope	\$5,160	\$5,160
1	Tektronix	DMM 4040	6-1/2 Digit Digital multimeter	\$1,170	\$1,170
1	Agilent	33210A	10 MHz Function/Arbitrary Wave form Generator	\$1,279	\$1,279
1	National Instruments	Elvis II+	Desktop Development Station	\$4,140	\$4,140
1	Quanser	Motor control set	control board and motors	\$9,000	\$9,000
1	Dell Precision		Desktop PC with monitor	\$2,500	\$2,500
				Total per station	\$23,249
	Number of stations	15	Cost of lab equipment (not including furniture and software)		\$348,735
	Equipment for Lab #3 (Digital communication Lab)				
Qty	Manufacturer	Model No.	Description	Mfr Suggested Retail/Base	Cost Per Seat
1	Agilent	DSO1022A	200 MHz Digital Storage Oscilloscope	\$1,854	\$1,854
1	Emona Industries	TIMS-301C	Telecom's Signals Modeling Equipment	\$13,200	\$13,200
1	Dell Precision		Computer with monitor	\$2,500	\$2,500
1	Dell Precision		Computer with monitor	\$2,500	\$2,500
				Total per station	\$20,054
	Number of stations	15	cost of lab equipment (not including furniture and software)		\$300,810

[illegible]

[illegible]

C100 Lab (1000SF) 24/sec, 50 Fall, 18 Sp Locker x 12 x 1k 12 Hoods x 7 x 35k 245 Gas lines x 12 x 6k 72 Chem Supplies 5 Misc 4 Small Equip: 11 Balances* Remedial course by Georgian universities Total (\$k) 349	C102 Lab (1000 SF) 24/sec, 2 Fall, 5 Sp Locker x 12 x 1k 12 Hoods x 7 x 35k 245 Gas lines x 12 x 6k 72 Chem Supplies 12 Miscellaneous 4 Small Equip: Balances, Spec-20, pH meters 48 This lab is needed only if nursing/med students are involved from the Tbilisi med school Total (\$k) 393	C200/202 Lab (1000 SF) 24/sec, 31 Fall, 27 Sp Locker x 12 x 1k 12 Hoods x 7 x 35k 245 Gas lines x 12 x 6k 72 Chem Supplies 14 Misc 4 Small Equip: Balances, pH meters, Explorer GLX. Red Tide Spec, Power Supply 86 Total (\$k) 433	C201 Lab (1000 SF) 24/sec, 12 Fall, 12 Sp Locker x 24 x 1k 24 Hoods x 7 x 35k 245 Gas lines x 12 x 6k 72 Chem Supplies 13 Misc 4 Small Equip: Balances, Spec-20, pH meters 60 Total (\$k) 418	C232 Lab (1000 SF) 20/sec, 9 Fall, 8 Sp Locker x 24 x 2k 48 Hoods x 25 x 35k 875 Gas lines x 12 x 6k 72 Chem Supplies 5 Misc 4 Small Equip: Heating mantle, power control, hot plate, thermometer, rotovap, oven 30 Total (\$k) 1,034	C251 Lab (1000 SF) 20/sec, 4 Sp Locker x 20 x 2k 40 Hoods x 7 x 35k 245 Gas lines x 12 x 6k 72 Chem Supplies 6 Misc 4 Small Equip: Balances, Spec-20, pH meters 8 Titrator x 2 x 2k 4 GC 8 UV-Vis Spec 7 Ultra Purify Sys 6 Ovens 5 Analytical balances 20 Total (\$k) 425
C410A Lab (1000 SF) 15/sec, 3 Fall Locker Hoods Gas lines Chem Supplies Small Equip Computers x 25 x 4k 100 Shared with C457 Shared with EE CE Total (\$k) 100	C432 Lab (1000 SF) 20/sec, 6 Fall, 6 Sp Locker x 24 x 2k 48 Hoods x 25 x 35k 875 Gas lines x 12 x 6k 72 Chem Supplies 7 Small Equip: Heating mantle, power control, hot plate, thermometer 30 Rotovap 8 Oven 3 Total (\$k) 1,043	C417 Lab (1000 SF) 12/sec, 2 Sp Locker Shared 2 Hoods x 2 x 35k 70 Gas lines Chem Supplies 5 Small Equip: Balances, pH meter, heating mantle, magnetic stirrer, HeNe 12 Fluorometer 45 UV-vis spec x 2 x 15k 30 Nitrogen laser 25 Diff scanning calorimeter 20 Tensiometer 15 Raman spectrometer 30 IR spectrometer 25 NMR (see C457) Total (\$k) 279	C567 Lab (1000 SF) 15/sec, 1 Fall, 1 Sp Locker 12 Hoods Gas lines Chem Supplies 3 Small Equip: Balances, Spec-20, pH meters. Pipetman, light boxes, LC columns 35 PCR 20 Supercentrifuge x 3 120 Ultracentrifuge 99 Rotor centrifuge GSA x 2 12 Rotor centrifuge GSE x 2 12 Rotor, centrifuge, TV850 25 Rotor, centrifuge, TV865 25 UV-Vis Spec x 6 36 Fraction collector x 8 28 Centrifuge refrigerated table-top 20 Shaker refrigerated controlled temper. 19 Photographic digital camera w/light box 8 Incubator 3 Double-distilled generating system & 6 Tissue culture incubator 10 Tissue culture hood 16 Tissue culture microscope 10 Electrophoresis systems 40 Ultralow (-80C) freezer 15 Autoclave 55 Total (\$k) 629	C457 Lab (1000 SF) 15/sec, 3 Fall Locker Shared 5 Hoods Gas lines Chem Supplies 5 Small Equip: Balances, pH meter 10 HPLC x 4 x 50k 200 GC x 4 x 40k 160 UV-Vis x 2 x 15k 30 LCMS 100 GCMS 100 NMR 450 Lasers 35 O'scopes, Elec x 5 35 FTIR 40 Drying Oven 4 Balance x 4 x 2k 8 Desktop PCs x 4 x 3k 12 Raman spectrometer/microscope 90 Total (\$k) 1284	C427 Lab (1000 SF) 15/sec, 2 Sp Locker 21 Hoods Gas lines Chem Supplies 5 Small Equip: Heating mantle, power control, hot plate, thermometer 16 FTIR 30 Rotovap 8 Oven 3 NMR (see C457) UV-vis Spec 20 Magnetometer 10 Total (\$k) 113

This C567 Lab will be located at GTU or split or preferably duplicated at both GTU and TSU

[illegible]

Hydraulics Lab

25 capacity 30 capacity
478400 616200

LABS	EQUIPMENT NEEDED	NUMBER	COST	TOTAL		
Basic Bench	F1-10-B Basic Bench	3	8400	25200	33600	
Flow over weirs, culvers, etc.	S16-10 Hydraulic Flow D	3	25300	75900	101200	
Pipe Friction	C6-Mk11-10 Basic Fluid F	3	26300	78900	105200	
Flow Meters	F1-21 Flow Meter Demo	3	7200	21600	28800	
Bernoulli's Equation	F1-15 Bernoulli's Theore	3	4500	13500	18000	
Hydrographs	S-10 Rainfall Hydrograph	1	65000	65000	65000	
Pipe Networks	C11-Mk 11 Pipe Network	3	25300	75900	101200	
Pumps	F1-27 Centrifugal Pump	3	9900	29700	39600	
Turbines	F1-25 Demonstration Pe	3	13200	39600	52800	
	F1-32 Demonstration Fra	3	12700	38100	50800	
Misc Lab Equip	Extensions, pipe, flowme	1	15000	15000	20000	

Structures Lab

25 capacity 30 capacity
391970 397980

LABS	EQUIPMENT NEEDED	NUMBER	COST	TOTAL	
Misc Lab ware	Pans, forms, gages, data LS		45000	45000	45000
Tensile strength	Universal Testing Machir	2	110000	220000	220000
Concrete Slump	Mixer	1	1900	1900	1900
	Slump kit with pan	6	125	750	1000
Concrete Beam	Tester	1	2800	2800	2800
Compression	Compression Machine	1	78000	78000	78000
	Cylinder Accessories LS		11500	11500	11500
Unit Weight	Measures	4	155	620	930
	Strike Plates	4	75	300	450
Aggregate	LA Abrasion	1	6700	6700	6700
Specific Gravity	Bench Set	1	3200	3200	3200
Marshall	Test set	4	5300	21200	26500

Geotechnical Lab

25 capacity 30 capacity
161840 198755

LABS	EQUIPMENT NEEDED	NUMBER	COST	TOTAL	
Misc Lab ware	Spoons, spatulas, racks, . LS		10000	10000	10000
Soil Visual Classification	Glassware, bowls, pans LS		2500	2500	2500
Atterberg Limits	Casagrande devices	6	425	2550	3400
	Plates	6	95	570	760
	Shrinkage Limit	3	110	330	440
Gradation	Shaker	1	1050	1050	1050
	Sieve sets with pan	6	920	5520	7360
	Scale	3	2750	8250	11000
Water content and void ratio	Oven	2	770	1540	1540
	Micrometers	2	255	510	765
Compaction	Molds	8	175	1400	1750
	Std Hammers	3	100	300	400
	Modified hammers	3	120	360	480
	Sand cone devices	8	245	1960	2450
Direct shear	Motorized dead weight r	2	8300	16600	24900
	Boxes	5	600	3000	4200
	Weights	2	1200	2400	3600
	Sample prep	1	1800	1800	1800
	Data Acquisition	2	4500	9000	13500
Consolidation	Dead weight machines	4	1200	4800	6000
	Frames	4	350	1400	1750
	Weight sets	4	1200	4800	6000
	Fixed Ring cells	4	400	1600	2000
	Data acquisition	4	5200	20800	26000
Swell	Swell/expansion pods	5	560	2800	3920
	Swell pressure	2	3250	6500	9750
Permeability	CH permeameter set	4	720	2880	4320

Hydrometer	Mixer	1	500	500	500
	Hydrometers	4	250	1000	1500
Triaxial	Load frame	2	5760	11520	11520
	2 cell control panel	1	8450	8450	8450
	VC device	1	1600	1600	1600
	PP transducers and conti	1	6500	6500	6500
	De-airing chamber	1	1500	1500	1500
	Vacuum pump	1	800	800	800
	4 in cells	3	2250	6750	6750
	Prep, tubing, misc	1	8000	8000	8000

Surveying Lab

25 capacity
40500

LABS	EQUIPMENT NEEDED	NUMBER	COST	TOTAL
Misc Lab ware	Tripods, rods, prisms, ch LS		4500	4500
Total station w/auto level	Instruments	4	9000	36000

SDSU Financial Template - Cross Cutting Operations

BUDGET CATEGORY		Unit	Compact Year 0 (AY 2013/14)				Compact Year 1 (AY 2014/15)				Compact Year 2 (AY 2015/16)				Compact Year 3 (AY 2016/17)				Compact Year 4 (AY 2017/18)				Compact Year 5 (AY 2018/19)				Compact Year 6 (AY 2019/20)				Compact Year 7 (AY 2020/21)			
			No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total				
EXPENSES																																		
FACILITIES/EQUIPMENT O&M																																		
A. Program 1a Electrical Engineering																																		
1. Facilities Maintenance					\$0				\$0				\$0				\$0																	
General Maintenance and Cleaning		Sq. Meters			\$0				\$0				\$0				\$0																	
2. Equipment Operations and Upkeep					\$0				\$0				\$0				\$0																	
Depreciation budget for computer replacement (5 years)		Percent			\$0				\$0				\$0				\$0																	
3. Utilities					\$0				\$0				\$0				\$0																	
Utilities (electricity, gas, water, trash)		Sq. Meters			\$0				\$0				\$0				\$0																	
4. Other					\$0				\$0				\$0				\$0																	
for example: Other		Number			\$0				\$0				\$0				\$0																	
Sub-Total for Program 1					\$0				\$0				\$0				\$0																	
B. Program 1b Computer Engineering (Civil/Construction added in CY3)																																		
1. Facilities Maintenance					\$0				\$0				\$0				\$0																	
General Maintenance and Cleaning		Sq. Meters			\$0				\$0				\$0				\$0																	
2. Equipment Operations and Upkeep					\$0				\$0				\$0				\$0																	
Depreciation budget for computer replacement (5 years)		Percent			\$0				\$0				\$0				\$0																	
3. Utilities					\$0				\$0				\$0				\$0																	
Utilities (electricity, gas, water, trash)		Rate/Sq Mtr			\$0				\$0				\$0				\$0																	
4. Other					\$0				\$0				\$0				\$0																	
for example: Other		Number			\$0				\$0				\$0				\$0																	
Sub-Total for Program 2					\$0				\$0				\$0				\$0																	
C. Program 2 Applied Sciences (Chemistry (Biochem) and Computer Science)																																		
1. Facilities Maintenance					\$0				\$0				\$0				\$0																	
General Maintenance and Cleaning		Sq. Meters			\$0				\$0				\$0				\$0																	
2. Equipment Operations and Upkeep					\$0				\$0				\$0				\$0																	
Depreciation budget for computer replacement (5 years)		Percent			\$0				\$0				\$0				\$0																	
3. Utilities					\$0				\$0				\$0				\$0																	
Utilities (electricity, gas, water, trash)		Rate/Sq Mtr			\$0				\$0				\$0				\$0																	
4. Other					\$0				\$0				\$0				\$0																	
for example: Other		Number			\$0				\$0				\$0				\$0																	
Sub-Total for Program 3					\$0				\$0				\$0				\$0																	
Total Facilities/Equipment O&M					\$0				\$0				\$335,514				\$339,599				\$343,787				\$348,079				\$352,478			\$184,888		
II OTHER CROSS-CUTTING COSTS																																		
B. Programs 1 through 3																																		
Joint Admin/Library resources/Student Life		Students			\$0				\$0				\$0				\$0																	
Total Other Cross-cutting Costs					\$0				\$0				\$198,000				\$415,200				\$639,180				\$871,488				\$942,288			\$980,988		
TOTAL CROSS-CUTTING COSTS					\$0				\$0				\$533,514				\$754,799				\$982,967				\$1,219,567				\$1,294,766			\$1,165,878		

Assumptions for Cross Cutting Operations

Using the space requirements listed in the Detailed MCC Budget document and data gathered on maintenance, utilities, etc. for facilities in Georgia, we calculated the O&M costs for facilities. In addition, we used a 5 year depreciation for computers, a/v systems, and other select equipment. Currently, most of the program expenses are budgeted in either the Partner Program Operations or Finalist Program Operations Budget with expenses anticipated to be paid from the tuition and other revenue.

SDSU Financial Template - PARTNER PROGRAM OPERATIONS

BUDGET CATEGORY		Unit	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total																											
REVENUE																																																													
ESTIMATED REVENUE																																																													
A. Per Student Budget Allocation																																																													
Program 1a Electrical Engineering		Students	0	\$ -	\$0		150	\$ -	\$0		124	\$ 500	\$61,875		241	\$ 500	\$120,525		362	\$ 500	\$180,875		477	\$ 500	\$238,375		492	\$ 500	\$245,875		504	\$ 500	\$251,875																												
Program 1b Computer Engineering (Civil/Construction added in CY3)		Students	0	\$ -	\$0		124	\$ -	\$0		124	\$ 500	\$61,875		276	\$ 500	\$138,025		433	\$ 500	\$216,625		581	\$ 500	\$290,527		644	\$ 500	\$322,027		644	\$ 500	\$322,027																												
Program 2 Applied Sciences (Chemistry (Biochem) and Computer Science)		Students	0	\$ -	\$0		300	\$ -	\$0		248	\$ 500	\$123,750		482	\$ 500	\$241,050		724	\$ 500	\$361,755		950	\$ 500	\$475,250		982	\$ 500	\$491,250		1,007	\$ 500	\$503,750																												
B. Government of Georgia Project Contribution				\$ 1,350	\$0		600	\$ 1,350	\$810,000		660	\$ 1,350	\$891,000		1,384	\$ 1,350	\$1,868,400		2,131	\$ 1,350	\$2,876,310		2,905	\$ 1,350	\$3,921,696		3,141	\$ 1,350	\$4,240,296		3,270	\$ 1,350	\$4,414,446																												
C. Other Estimated Revenue (explain/describe)																																																													
Total Revenue					\$0				\$810,000				\$810,000				\$1,138,500				\$2,368,000				\$3,635,570				\$4,925,858				\$5,492,108																												
EXPENSES																																																													
SALARIES																																																													
A. Program 1a Electrical Engineering																																																													
1. Georgian Faculty and Teaching Staff					\$0				\$81,390				\$116,640				\$194,832				\$242,820				\$396,830				\$425,825				\$446,246																												
Partner Faculty for teaching non-SDSU enrollees		FTE	0	\$ -	\$0		5.00	\$ 16,278	\$81,390		1.50	\$ 17,280	\$25,920		3.50	\$ 17,712	\$61,992		5.00	\$ 18,155	\$90,774		7.50	\$ 18,609	\$139,565		8.50	\$ 19,074	\$162,128		9.00	\$ 19,551	\$175,957																												
Professors (Hybrid - face-to-face/online)		FTE	0	\$ -	\$0		0.00	\$ -	\$0		0.00	\$ 17,280	\$0		0.00	\$ 17,712	\$0		0.50	\$ 18,155	\$9,077		1.00	\$ 18,609	\$18,609		1.00	\$ 19,074	\$19,074		1.00	\$ 19,551	\$19,551																												
Professor (Co-Instruction, incl GE CAL Eng.)		FTE	0	\$ -	\$0		0.00	\$ -	\$0		3.00	\$ 17,280	\$51,840		3.00	\$ 17,712	\$53,136		3.00	\$ 18,155	\$54,464		5.25	\$ 18,609	\$97,696		5.25	\$ 19,074	\$100,138		5.25	\$ 19,551	\$102,641																												
Lecturers (Major and GE Courses)		FTE	0	\$ -	\$0		0.00	\$ -	\$0		3.00	\$ 12,960	\$38,880		5.00	\$ 13,284	\$66,420		5.00	\$ 13,616	\$61,272		6.50	\$ 13,957	\$90,717		6.50	\$ 14,305	\$92,985		6.50	\$ 14,663	\$95,310																												
Lab Instructors and Support Staff		FTE	0	\$ -	\$0		0.00	\$ -	\$0		0.00	\$ 10,368	\$0		1.00	\$ 13,284	\$13,284		2.50	\$ 10,893	\$27,232		4.50	\$ 11,165	\$50,243		4.50	\$ 11,444	\$52,344		4.50	\$ 11,730	\$54,451																												
Sub-Total for Program 1					\$0				\$81,390				\$155,520				\$274,536				\$331,325				\$537,791				\$570,309				\$594,342																												
B. Program 1b Computer Engineering (Civil/Construction added in CY3)																																																													
1. Georgian Faculty and Teaching Staff					\$0				\$81,390				\$123,120				\$279,185				\$368,656				\$470,916				\$530,254				\$563,061																												
Partner Faculty for teaching non-SDSU enrollees		FTE	0	\$ -	\$0		5.00	\$ 16,278	\$81,390		1.50	\$ 17,280	\$25,920		4.00	\$ 17,712	\$70,848		6.00	\$ 18,155	\$108,920		9.00	\$ 18,609	\$167,478		10.50	\$ 19,074	\$200,276		11.50	\$ 19,551	\$224,833																												
Professors (Hybrid - face-to-face/online)		FTE	0	\$ -	\$0		0.00	\$ -	\$0		0.00	\$ 17,280	\$0		0.50	\$ 17,712	\$8,856		2.75	\$ 18,155	\$49,926		3.88	\$ 18,609	\$72,109		3.88	\$ 19,074	\$73,911		3.88	\$ 19,551	\$75,759																												
Professor (Co-Instruction, incl GE CAL Eng.)		FTE	0	\$ -	\$0		0.00	\$ -	\$0		3.00	\$ 17,280	\$51,840		6.50	\$ 17,712	\$115,128		4.75	\$ 18,155	\$86,235		3.75	\$ 18,609	\$69,793		3.75	\$ 19,074	\$71,527		3.75	\$ 19,551	\$73,315																												
Lecturers (Major and GE Courses)		FTE	0	\$ -	\$0		4.75	\$ 13,284	\$63,069		3.50	\$ 12,960	\$45,360		4.75	\$ 13,284	\$63,069		5.88	\$ 13,616	\$79,995		8.38	\$ 13,957	\$116,886		8.50	\$ 14,305	\$121,596		8.50	\$ 14,663	\$124,636																												
Lab Instructors and Support Staff		FTE	0	\$ -	\$0		0.00	\$ -	\$0		0.00	\$ 10,368	\$0		2.00	\$ 10,627	\$21,254		4.00	\$ 10,893	\$43,572		4.00	\$ 11,165	\$44,661		5.50	\$ 11,444	\$62,944		5.50	\$ 11,730	\$64,517																												
Sub-Total for Program 2					\$0				\$81,390				\$168,480				\$363,539				\$492,222				\$632,462				\$714,794				\$762,214																												
C. Program 2 Applied Sciences (Chemistry (Biochem) and Computer Science)																																																													
1. Georgian Faculty and Teaching Staff					\$0				\$162,780				\$188,352				\$401,177				\$603,647				\$748,999				\$805,872				\$882,716																												
Partner Faculty for teaching non-SDSU enrollees		FTE	0	\$ -	\$0		10.00	\$ 16,278	\$162,780		3.00	\$ 17,280	\$51,840		6.50	\$ 17,712	\$115,128		10.00	\$ 18,155	\$181,548		14.50	\$ 18,609	\$269,828		16.50	\$ 19,074	\$314,719		17.50	\$ 19,551	\$362,716																												
Professors (Hybrid - face-to-face/online)		FTE	0	\$ -	\$0		0.00	\$ -	\$0		1.00	\$ 17,280	\$17,280		2.50	\$ 17,712	\$44,280		4.50	\$ 18,155	\$81,697		7.00	\$ 18,609	\$130,261		7.00	\$ 19,074	\$133,517		7.50	\$ 19,551	\$136,732																												
Professor (Co-Instruction, incl GE CAL Eng.)		FTE	0	\$ -	\$0		0.00	\$ -	\$0		4.50	\$ 17,280	\$77,760		4.50	\$ 17,712	\$79,704		2.25	\$ 18,155	\$40,848		2.25	\$ 18,609	\$41,870		2.25	\$ 19,074	\$42,916		2.25	\$ 19,551	\$43,989																												
Lecturers (Major and GE Courses)		FTE	0	\$ -	\$0		0.00	\$ -	\$0		2.00	\$ 12,960	\$25,920		5.00	\$ 13,284	\$66,420		9.00	\$ 13,616	\$122,545		10.00	\$ 13,957	\$139,565		10.00	\$ 14,305	\$143,054		10.00	\$ 14,663	\$146,631																												
Lab Instructors and Support Staff		FTE	0	\$ -	\$0		0.00	\$ -	\$0		1.50	\$ 10,368	\$15,552		1.50	\$ 10,627	\$15,935		9.00	\$ 10,893	\$97,009		15.00	\$ 11,165	\$167,478		15.00	\$ 11,444	\$171,665		14.00	\$ 11,730	\$164,226																												
Sub-Total for Program 3					\$0				\$162,780				\$229,824				\$563,242				\$903,201				\$1,096,042				\$1,120,991				\$1,193,872																												
Total Salaries					\$0				\$325,560				\$553,824				\$1,201,316				\$1,726,748				\$2,226,295				\$2,405,694				\$2,540,129																												
GENERAL OPERATIONS																																																													
A. Program 1a Electrical Engineering																																																													
1. Administration		Student			\$0				\$66,420				\$73,062				\$147,674				\$224,787				\$305,362				\$325,730				\$338,572																												
Administration (16.6% of budget)		Student			\$0		150	\$ 224.10	\$33,615		165	\$ 224.10	\$36,977		334	\$ 224.10	\$74,737		508	\$ 224.10	\$113,764		690	\$ 224.10	\$154,543		736	\$ 224.10	\$164,851		765	\$ 224.10	\$171,350																												
Infrastructure/Overhead (16.2%)		Student			\$0		150	\$ 218.70	\$32,805		165	\$ 218.70	\$36,086		334	\$ 218.70	\$72,936		508	\$ 218.70	\$111,023		690	\$ 218.70	\$150,819		736	\$ 218.70	\$160,879		765	\$ 218.70	\$167,221																												
Library / Information Resource Costs		Student			\$0		150	\$ 27.00	\$4,050		165	\$ 27.00	\$4,455		334	\$ 27.00	\$9,005		508	\$ 27.00	\$13,707		690	\$ 27.00	\$18,620		736	\$ 27.00	\$19,862		765	\$ 27.00	\$20,645																												
Library (2.0%)		Student			\$0		150	\$ 70.20	\$4,050		165	\$ 70.20	\$4,455		334	\$ 70.20	\$9,005		508	\$ 70.20	\$13,707		690	\$ 70.20	\$18,620		736	\$ 70.20	\$19,862		765	\$ 70.20	\$20,645																												
Communications (5.2%)		Student			\$0		150	\$ 70.20	\$4,050		165	\$ 70.20	\$4,455		334	\$ 70.20	\$9,005		508	\$ 70.20	\$13,707		690	\$ 70.20	\$18,620		736	\$ 70.20	\$19,862		765	\$ 70.20	\$20,645																												
Supplies and Materials		Student			\$0		150	\$ 70.20	\$4,050		165	\$ 70.20	\$4,455		334	\$ 70.20	\$9,005		508	\$ 70.20	\$13,707		690	\$ 70.20	\$18,620		736	\$ 70.20	\$19,862		765	\$ 70.20	\$20,645																												
Procurements (7.2%)		Student			\$0		150	\$ 70.20	\$4,050		165	\$ 70.20	\$4,455		334	\$ 70.20	\$9,005		508	\$ 70.20	\$13,707		690	\$ 70.20	\$18,620		736	\$ 70.20	\$19,862		765	\$ 70.20	\$20,645																												
Student Life Programs		Student			\$0		150	\$ 97.20	\$14,580		165	\$ 97.20	\$16,038		334	\$ 97.20	\$32,416		508	\$ 97.20	\$49,344		690	\$ 97.20	\$67,031		736	\$ 97.20	\$71,502		765	\$ 97.20	\$74,321																												
Student Support (9.4% of Budget)		Student			\$0		150	\$ 97.20	\$14,580		165	\$ 97.20	\$16,038		334	\$ 97.20	\$32,416		508	\$ 97.20	\$49,344		690	\$ 97.20	\$67,031		736	\$ 97.20	\$71,502		765	\$ 97.20	\$74,321																												
Sub-Total for Program 1					\$0				\$96,390				\$106,029				\$214,307				\$326,216				\$443,147				\$472,706				\$491,342																												
B. Program 1b Computer Engineering (Civil/Construction added in CY3)																																																													
1. Administration					\$0				\$66,420				\$73,062				\$169,814				\$269,510				\$372,889				\$415,397				\$432,667																												
Administration (16.6% of budget)		Student			\$0		150	\$ 224.10	\$33,615		165	\$ 224.10	\$36,977		384	\$ 224.10	\$85,942		609	\$ 224.10	\$136,398		842	\$ 224.10	\$188,718		938	\$ 224.10	\$210,232		977	\$ 224.10	\$218,971																												
Infrastructure/Overhead (16.2%)		Student			\$0		150	\$ 218.70	\$32,805		165	\$ 218.70	\$36,086		384	\$ 218.70	\$83,671		609	\$ 218.70	\$133,112		842	\$ 218.70	\$184,171		938	\$ 218.70	\$205,166		977	\$ 218.70	\$213,695																												
Library / Information Resource Costs		Student			\$0		150	\$ 27.00	\$4,050		165	\$ 27.00	\$4,455		384	\$ 27.00	\$10,355		609	\$ 27.00	\$16,434		842	\$ 27.00	\$22,329		938	\$ 27.00	\$25,329		977	\$ 27.00	\$26,382																												
Library (2.0%)		Student			\$0		150	\$ 27.00	\$4,050		165	\$ 27.00	\$4,455		384	\$ 27.00	\$10,355		609	\$ 27.00	\$16,434		842	\$ 27.00</																																					

Assumptions and Justification for Partner Program Operations

Section I Revenue: Two sources of funding have been identified for Partner Program operations. In particular, SDSU and the Partners have agreed that students enrolled in an SDSU degree would be dual enrolled in one of the Partner institutions. As such, all Georgian students who are qualified as a result of the national exam to attend one or more of the Partners would enroll at a Partner University and provide the 2250 GEL merit-based scholarship to cover their enrollment or part thereof to the Partner University. In addition, SDSU would provide a supplement of \$500 per student enrolled in an SDSU degree program to cover additional programmatic costs associated with the program such as new faculty recruitment, augmented salaries for teaching faculty, travel, and other operating expenses.

Expenses

Section I Salaries: The faculty and support staff requirements are based on the FTE estimates and salaries listed on the Faculty Staff Spreadsheet. No administrative staff and associated costs were specified. However, we believe that the revenue as listed above should support program operations. In particular and with information provided by our Georgian Partner, we have developed a cost estimate for key university operations based on a university notional budget breakout per student. In particular, the cost per student in GEL and U.S. dollars for key university programs and expense categories is as listed in the following table:

Notional Breakout per Student University Costs

<u>Category</u>	<u>%</u>	<u>Cost/Student</u> <u>(2250 gels)</u>	<u>Cost in \$s</u> <u>(\$0.60 = 1gel)</u>
Administration (salaries)	16.6%	373.5	\$ 224.10
Faculty (salaries)	35.4%	796.5	\$ 477.90
Infrastructure	12.6%	283.5	\$ 170.10
Communications	5.2%	117	\$ 70.20
Student Support	5.6%	126	\$ 75.60
British Council	5.8%	131	\$ 78.30
Supplies & Materials	7.2%	162	\$ 97.20
Other Direct Costs	8.0%	180	\$ 108.00
Overhead	3.6%	81	\$ 48.60
	100.0%	2250	\$ 1,350.00

Using this information and the projected student enrollment data, we projected the cost for these individual categories as listed in the Partner Program Operations spreadsheet. For example,

Section II General Operations: The estimated cost for Administration salaries in CY2 with a total student population for all program would be approximately \$147,906 (660 X \$224.1). Similarly, Library, communications, Procurements (supplies, materials, other contracts, and Student S would be calculated using the student population for each program times the Cost in \$s.

Section III Capacity Building: During the initial 5 years of the Compact, capacity building is primarily being funded using a combination of MCC funds and part of the Tuition revenue collected by SDSU. This includes travel, faculty training, and other related expenses.

Section VI Cross Cutting (Note Template did not include Sections IV or V). The allocation of cross cutting cost is based on the ratio of students enrolled at the Partner Institutions divided by the combined enrollment at SDSU and the Partner Institutions for the Compact Year.

Section VII Other Costs: It should be noted that there is a surplus of revenue versus expenses as currently budgeted for several of the Compact Years. We propose that this surplus fund sustainment, new programs, facilities, ABET, etc.

BUDGET CATEGORY		Compact Year 0 (AY 2023/24)				Compact Year 1 (AY 2024/25)				Compact Year 2 (AY 2025/26)				Compact Year 3 (AY 2026/27)				Compact Year 4 (AY 2027/28)				Compact Year 5 (AY 2028/29)				Compact Year 6 (AY 2029/30)				Compact Year 7 (AY 2030/31)			
		No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total	No.Units	Amount	Subtotal	Total				
REVENUE																																	
ESTIMATED REVENUE																																	
A. Tuition and Fees																																	
Program 1a Electrical Engineering																																	
Program 1b Computer Engineering (Civil/Construction added in CY3)																																	
Program 2 Applied Sciences (Chemistry (Biochem) and Computer Science)																																	
B. GoS Profit Contribution (operating expenses and financial aid)																																	
C. GRDF Investment funding for scholarships and student aid (\$2.4M)																																	
D. MCC Investment Funds Allocation for Startup Education CY2 and CY3																																	
Total Revenue			\$0		\$2,460,000				\$5,850,750				\$9,890,279				\$14,189,453				\$19,120,598				\$20,104,292				\$20,889,136				
EXPENSES																																	
SALARIES																																	
A. Program 1a Electrical Engineering																																	
1. US Partner Faculty (Home Campus)																																	
College/Department/GE/Eng-Stem Coordinators																																	
Professors (Hybrid - face-to-face/online)																																	
Professors (Co-Instruction)																																	
Instructors (Lab Courses)																																	
GE Professors (CAL Eng - on site)																																	
English/Stem Preparatory Program Instructors (GRDF)																																	
Instructors (GE/Major Courses online)																																	
2. International Hire Faculty																																	
for example: Professors																																	
for example: Associate Professors																																	
3. Georgian Faculty and Teaching Staff																																	
Professors (Hybrid - face-to-face/online)																																	
Professor (Co-Instruction, incl GE CAL Eng.)																																	
Lecturers (Major and GE Courses)																																	
Lab Instructors and Support Staff																																	
4. Administration																																	
Dean (US)																																	
Associate Dean- Business/Finance (US)																																	
Director, External Relations (GE)																																	
Director, Student/Faculty Affairs - GTU (GE)																																	
Director, Student/Faculty Affairs - ISU (GE)																																	
Director, Student/Faculty Affairs - TSU (GE)																																	
Director, Admissions (US)																																	
Director, Facilities (US)																																	
Director Information Technology Systems (GE)																																	
Assistant External Relations (internships, career services) (GE)																																	
Assistant Admissions (records/transcripts/registration) (GE)																																	
Assistant Finance (HR, payroll, budget, reporting) (GE)																																	
Assistant Student Affairs/Admissions (GE)																																	
Support Staff (Admin, clerical, cashier, etc.) (GE)																																	
Sub-Total for Program 1			\$0		\$539,373				\$846,740				\$1,253,795				\$1,469,231				\$2,114,391				\$2,604,630				\$2,217,864				
B. Program 1b Computer Engineering (Civil/Construction added in CY3)																																	
1. US Partner Faculty (Home Campus)																																	
College/Department/GE/Eng-Stem Coordinators																																	
Professors (Hybrid - face-to-face/online)																																	
Professors (Co-Instruction)																																	
Instructors (Lab Courses)																																	
GE Professors (CAL Eng - on site)																																	
English/Stem Preparatory Program Instructors (GRDF)																																	
Instructors (GE/Major Courses online)																																	
2. International Hire Faculty																																	
for example: Professors																																	
for example: Associate Professors																																	
3. Georgian Faculty and Teaching Staff																																	
Professors (Hybrid - face-to-face/online)																																	
Professor (Co-Instruction, incl GE CAL Eng.)																																	
Lecturers (Major and GE Courses)																																	
Lab Instructors and Support Staff																																	
4. Administration																																	
Dean (US)																																	
Associate Dean- Business/Finance (US)																																	
Director, External Relations (GE)																																	
Director, Student/Faculty Affairs - GTU (GE)																																	
Director, Student/Faculty Affairs - ISU (GE)																																	
Director, Student/Faculty Affairs - TSU (GE)																																	
Director, Admissions (US)																																	
Director, Facilities (US)																																	
Director Information Technology Systems (GE)																																	
Assistant External Relations (records/transcripts/registration) (GE)																																	
Assistant Finance (HR, payroll, budget, reporting) (GE)																																	
Assistant Student Affairs/Admissions (GE)																																	
Support Staff (Admin, clerical, cashier, etc.) (GE)																																	
Sub-Total for Program 2			\$0		\$539,373				\$846,740				\$1,253,795				\$1,469,231				\$2,114,391				\$2,604,630				\$2,217,864				
C. Program 2 Applied Sciences (Chemistry (Biochem) and Computer Science)																																	
1. US Partner Faculty (Home Campus)																																	
College/Department/GE/Eng-Stem Coordinators																																	
Professors (Hybrid - face-to-face/online)																																	
Professors (Co-Instruction)																																	
Instructors (Lab Courses)																																	
GE Professors (CAL Eng - on site)																																	
English/Stem Preparatory Program Instructors (GRDF)																																	
Instructors (GE/Major Courses online)																																	
2. International Hire Faculty																																	
for example: Professors																																	
for example: Associate Professors																																	
3. Georgian Faculty and Teaching Staff																																	
Professors (Hybrid - face-to-face/online)																																	
Professor (Co-Instruction, incl GE CAL Eng.)																																	
Lecturers (Major and GE Courses)																																	
Lab Instructors and Support Staff																																	
4. Administration																																	
Dean (US)																																	
Associate Dean- Business/Finance (US)																																	
Director, External Relations (GE)																																	
Director, Student/Faculty Affairs - GTU (GE)																																	
Director, Student/Faculty Affairs - ISU (GE)																																	
Director, Student/Faculty Affairs - TSU (GE)																																	
Director, Admissions (US)																																	
Director, Facilities (US)																																	
Director Information Technology Systems (GE)																																	
Assistant External Relations (records/transcripts/registration) (GE)																																	
Assistant Finance (HR, payroll, budget, reporting) (GE)																																	
Assistant Student Affairs/Admissions (GE)																																	
Support Staff (Admin, clerical, cashier, etc.) (GE)																																	
Sub-Total for Program 3			\$0		\$539,373				\$846,740				\$1,253,795				\$1,469,231				\$2,114,391				\$2,604,630				\$2,217,864				
Total Salaries			\$0		\$1,618,118				\$3,152,455				\$5,067,820				\$6,554,655				\$7,839,944				\$8,331,371				\$8,774,846				

II GENERAL OPERATIONS					
A. Program 1a Electrical Engineering					
1. Student Recruitment / Admissions					
English/STEM Assessment and Preparatory Education Program (GRDP/Tuition Funded)	Students	\$0		\$80,000	\$50,000
Recruitment Activities MCC Budget Funding CY1 thru CY5; Tuition Funding CY6 and CY7	Number		200 \$ 400	\$0	\$0
		\$0		\$0	\$0
		\$0		\$0	\$0
2. Library/Information Resource Costs					
Library/Digital Media Annual Fee-Maintenance/Upgrades	Students	\$0		\$19,800	\$19,800
(Initial investment in library resources/databases MCC CY1-CY2)		\$0		\$0	\$0
		\$0		\$0	\$0
3. Supplies and Materials					
MCC Budget Funding CY1 and CY2 Startup; Tuition Funding CY3 plus	Number	\$0		\$0	\$0
		\$0		\$0	\$0
4. Student Life Programs					
Clubs/Speakers/Field Trips/Memberships/Job Fairs/Job Counseling Services	Students	\$0		\$14,375	\$14,375
Student Mentors/Aides/Teaching Assistants (Graduate/Upper division students)	Students	\$0		\$12,375	\$12,375
		\$0		\$2,000	\$2,000
Sub-Total for Program 1		\$0		\$90,000	\$84,175
B. Program 1b Computer Engineering (Civil/Construction added in CY3)					
1. Student Recruitment / Admissions					
English/STEM Assessment and Preparatory Education Program (GRDP/Tuition Funded)	Students	\$0		\$80,000	\$50,000
Recruitment Activities MCC Budget Funding CY1 thru CY5; Tuition Funding CY6 and CY7	Number		200 \$ 400	\$0	\$0
		\$0		\$0	\$0
		\$0		\$0	\$0
2. Library/Information Resource Costs					
Library/Digital Media Annual Fee-Maintenance/Upgrades	Students	\$0		\$19,800	\$19,800
(Initial investment in library resources/databases MCC CY1-CY2)		\$0		\$0	\$0
		\$0		\$0	\$0
3. Supplies and Materials					
MCC Budget Funding CY1 and CY2 Startup; Tuition Funding CY3 plus	Number	\$0		\$0	\$0
		\$0		\$0	\$0
4. Student Life Programs					
Clubs/Speakers/Field Trips/Memberships/Job Fairs/Job Counseling Services	Students	\$0		\$14,375	\$14,375
Student Mentors/Aides/Teaching Assistants (Graduate/Upper division students)	Students	\$0		\$12,375	\$12,375
		\$0		\$2,000	\$2,000
Sub-Total for Program 2		\$0		\$90,000	\$84,175
C. Program 2 Applied Sciences (Chemistry (Biochem) and Computer Science)					
1. Student Recruitment / Admissions					
English/STEM Assessment and Preparatory Education Program (GRDP/Tuition Funded)	Students	\$0		\$160,000	\$100,000
Recruitment Activities MCC Budget Funding CY1 thru CY5; Tuition Funding CY6 and CY7	Number		400 \$ 400	\$0	\$0
		\$0		\$0	\$0
		\$0		\$0	\$0
2. Library/Information Resource Costs					
Library/Digital Media Annual Fee-Maintenance/Upgrades	Students	\$0		\$39,600	\$39,600
(Initial investment in library resources/databases MCC CY1-CY2)		\$0		\$0	\$0
		\$0		\$0	\$0
3. Supplies and Materials					
MCC Budget Funding CY1 and CY2 Startup; Tuition Funding CY3 plus	Number	\$0		\$0	\$0
		\$0		\$0	\$0
4. Student Life Programs					
Clubs/Speakers/Field Trips/Memberships/Job Fairs/Job Counseling Services	Students	\$0		\$27,750	\$27,750
Student Mentors/Aides/Teaching Assistants (Graduate/Upper division students)	Students	\$0		\$24,750	\$24,750
		\$0		\$3,000	\$3,000
Sub-Total for Program 3		\$0		\$160,000	\$167,350
Total General Operations		\$0		\$320,000	\$335,700
III CAPACITY BUILDING					
A. Program 1a Electrical Engineering					
1. Faculty Development					
MCC Budget Funding CY1 thru CY5; Tuition Funding CY5 thru CY7	Number	\$0		\$0	\$0
Doctoral Scholarship Program (ABET Certification initiative) CY 5 plus	Number	\$0		\$0	\$0
		\$0		\$0	\$0
2. Curriculum Development					
MCC Budget Funding CY1 thru CY5; Tuition Funding CY6 and CY7	Number	\$0		\$0	\$0
Alternate/Major Electives/Certificates-- CY 6 plus	Number	\$0		\$0	\$0
Sub-Total for Program 1		\$0		\$0	\$0
B. Program 1b Computer Engineering (Civil/Construction added in CY3)					
1. Faculty Development					
MCC Budget Funding CY1 thru CY5; Tuition Funding CY5 thru CY7	Number	\$0		\$0	\$0
Doctoral Scholarship Program (ABET Certification initiative) CY 5 plus	Number	\$0		\$0	\$0
		\$0		\$0	\$0
2. Curriculum Development					
MCC Budget Funding CY1 thru CY5; Tuition Funding CY6 and CY7	Number	\$0		\$0	\$0
Alternate Major Electives/Certificates-- CY 5 plus	Number	\$0		\$0	\$0
Sub-Total for Program 2		\$0		\$0	\$0
C. Program 2 Applied Sciences (Chemistry (Biochem) and Computer Science)					
1. Faculty Development					
MCC Budget Funding CY1 thru CY5; Tuition Funding CY5 thru CY7	Number	\$0		\$0	\$0
Doctoral Scholarship Program (ABET Certification initiative) CY 5 plus	Number	\$0		\$0	\$0
		\$0		\$0	\$0
2. Curriculum Development					
MCC Budget Funding CY1 thru CY5; Tuition Funding CY6 and CY7	Number	\$0		\$0	\$0
Alternate/Major Electives/Certificates-- CY 6 plus	Number	\$0		\$0	\$0
Sub-Total for Program 3		\$0		\$0	\$0
Total Travel Costs		\$0		\$0	\$0
IV TRAVEL COSTS					
A. Program 1a Electrical Engineering					
1. Airfare					
Faculty teaching in Georgia (Hybrid/Labs - 1 rt)	Number	\$0		\$15,000	\$15,000
Faculty teaching in Georgia (Co-Instruction - 2 rt)	Number	\$0		\$0	\$0
		\$0		\$0	\$0
2. Per Diem					
Faculty teaching in Georgia (Hybrid/Labs - 16 days)	Days	\$0		\$17,880	\$17,880
Faculty teaching in Georgia (Co-Instruction - 10 days)	Days	\$0		\$0	\$0
		\$0		\$0	\$0
3. Other					
Faculty teaching in Georgia (Hybrid/Labs - 1 rt)	Number	\$0		\$3,000	\$3,000
Faculty teaching in Georgia (Co-Instruction - 2 rt)	Number	\$0		\$0	\$0
Sub-Total for Program 1		\$0		\$35,880	\$35,880
B. Program 1b Computer Engineering (Civil/Construction added in CY3)					
1. Airfare					
Faculty teaching in Georgia (Hybrid/Labs - 1 rt)	Number	\$0		\$15,000	\$15,000
Faculty teaching in Georgia (Co-Instruction - 2 rt)	Number	\$0		\$0	\$0

Assumptions and Justification for Finalists Program Operations

1. **Section I Revenue:** We have included 4 sources of funding to cover operations to include capacity development, ABET certifications (i.e., training of Partner faculty, use of accredited SDSU courses, etc.), and execution of Program operations. The primary source of funding for Compact Years 2 through 7 is the tuition of \$7500 escalated at 2.5% per year, if required, to be paid by the enrolled students. The second source of funding is the GOG Project Contribution of 2250 GELs per enrolled Georgian student or approximately \$1350 based on current exchange rate of .6 dollars to 1 GEL. These funds will augment the tuition revenue and will be used for operating expenses. (Note: the amount is capped for 500 students in CY2, 1000 in CY3, 1500 in CY4, and 2000 in CY5 plus. The third source of funding is from the Georgia Regional Development Fund of \$2.6 million, which will be used for scholarships, financial aid, and English/STEM preparatory education on a needs/merit basis. The last source of funding is to cover initial operating expenses, start-up costs, training of faculty in a teaching-modality, etc. and includes \$1.8M of the \$29M in CY 1 to cover all startup costs and \$900K in CY 2 to cover costs over and above the estimated tuition, GOG annual lump sum, and GRDF funds.
2. **Section I Expenses: Salaries.** For each of the 2 programs, 4 degrees, the FTE compensation and extended amount for SDSU faculty and the Program Management and administrative staff have been derived from the enrollment and Faculty Staff worksheets. The CY1 staffing is for on-site program startup and development with an emphasis on student recruitment, facilities development and outfitting, and Georgian faculty indoctrination/training to support degree programs commencing in CY2. The only instruction in CY 1 is in support of the English/STEM Preparatory Program. We do not intend to use International hires or Georgian Faculty at this time, but propose to recruit educators from within Georgia as well as in the U.S. who would be interested (and qualified) to teach in Georgia. As for the Administrative staff, the FTE and compensation is spread across each of the 3 programs; ergo the .33 FTE for each key position.
3. **Section II General Operations:** Most items are self-explanatory. When the listed line item has been included in the Detailed Investment (MCC) Budget, a reference note has been inserted; e.g. non-labor costs for Recruitment/Admissions, library/Information Resources, etc. However, the intent is for these types of expenses to be picked up under this operating budget after the MCC allocation has been exhausted. The English/STEM Preparatory Program will commence in CY1, funded by the GRDF grant. Goal is to recruit up to 800 students who will be tested for English and STEM subjects (e.g. mathematics) and provided English/STEM education in advance of enrollment in a SDSU degree program. The assessment and training is at no cost to the students.
4. **Section III Capacity Building:** The non-labor costs for capacity building such as faculty and curriculum development are also expenses against the MCC Budget. Note: the training of faculty in actual delivery of courses is funded out of the Tuition and other revenue sources starting in CY6.
5. **Section IV Travel Costs:** The costs listed here are for SDSU faculty travel to Georgia for delivery of courses using one of the various modalities discussed in the notes for the faculty & staff workload spreadsheet. For example, faculty teaching under the hybrid modality will travel to Georgia and spend 2 full weeks delivery the course materials. Similarly, faculty using the face-to-face co-teaching modality will make 2 trips to Georgia, one at the start of the semester and one additional one during the semester. Note: a Georgian faculty will be engaged to co-teach the courses; the indoctrination/training of Georgian faculty is funded initially by MCC funds and then covered in the program operations budgets. The Georgian faculty salaries are to be paid by the Partner Institution from the 2250 GEL enrollment fee and the \$500 per student allocation included in the SDSU Program Operations budget.
6. **Section V Scholarships and Financial Aid:** We intend to provide scholarships of notionally \$4000 on a needs/merit basis to 25% of the students being enrolled in a degree program. In addition, \$1000 student aid grants will be provided as well on a needs/merit basis. MCC funding will support 10% of the scholarships and grants in CY2 and CY3. The SDSU Program Operations Budget includes funding for the additional 15% of the students in CY2 and CY3 and the full 25% in all subsequent years. The GRDF and GOG Lump sum funding will be the primary source for funding the scholarships and financial aid grants. Note: These scholarships are separate from the GoG merit scholarships used by qualified students for enrollment in a Georgian Partner university.
7. **Section VI Cross-Cutting Costs:** All data under this Category of Expenses is derived from the Cross-Cutting Operations spreadsheet and is self-populated.

8. Section VII Other Costs, the following applies: These costs are covered out of the tuition and are common to the standard operations at SDSU. The costs include:
- a. Facilities and Administration costs: We propose to use our federally negotiated off campus rate of 26%.
 - b. Partner Allocation of \$500 per student: To support the additional financial burden to the Partner institutions associated with faculty development, co-teaching, administrative facilities, utilities and other support costs, we are including a \$500 per student allocation to be paid directly to the Partner for each student dual enrolled at that Partner University and the SDSU degree program.
 - c. Operational Reserve: The budget recognizes the potential for carryover of unexpended revenue. These funds will be allocated to an Operational Contingency account to cover unplanned or underfunded requirements and a Programs Development account to cover equipment replacements (computers), the addition of new degree and certificate programs to include faculty development, facilities, equipment, etc. These carry forward funds may also be used for additional scholarships, student aid, and other programs.