LAMAR UNIVESITY
COLLEGE OF ARTS AND SCIENCES
Calendar Year 2016

Department:_____**Computer Science**_____

Please take a few minutes to reflect on your department/program's progress toward the each of the following:

1. ***IE Plans***—What has the department learned from the assessment data so far? What are your plans as a result of the evaluation? Do you need anything to enhance your plans?

- The department learned that we need to monitor some of the courses as per the yearly ABET assessment report.
- Engaging all the Faculty and Staff members in academic activities meant to accomplish the LU strategic plan at the departmental level.
- Hiring a new Assistant Professor in the area of cybersecurity in 2016-2017.
- Continuing the yearly assessment and preparing the 6-year self-study for the ABET accreditation. All Faculty continued this goal.
- The department acquired some computer equipment, but we need to replace some of the older equipment by new ones. In addition, some labs need new furniture.

2. ***Strategic Plans***—Which of the following strategic initiatives has your department contributed to this year? What are your plans for next year?

- Firstly, we shall continue to involve students in undergraduate and graduate research, programming competitions, and other academic activities.
- Secondly, we shall maintain our programs accreditation (e.g., ABET, SACS), considering new programs (e.g., Computer Graphics Animation) and improve our effective recruitment and retention practices.
- Thirdly, we shall continue to cooperate for getting support from the higher administration, advisory board, industry, and collaborate with other academic departments.
- Fourthly, we shall continue to submit proposals to funding agencies.
- Lastly, we shall continue our cooperation with high schools and community colleges from many counties, including Golden Triangle and Harris County.

3. *__Enrollment-__*-Review the enrollment (SCH + Student FTE) data for the past three (3) years. Has your SCH/FTE's increased/decreased or remained static? Please provide a rationale for your results.

Enrollment:

		Fall 2014		Fall 2015		Fall 2016	
		Female	Male	Female	Male	Female	Male
CIS	White	1	19	3	20	2	18
	Black	4	7	3	10	4	15
	Hispanic	0	2	0	2	1	2
	Asian	0	2	1	0	0	1
	American-Indian	0	1	1	0	0	0
	Multiracial	0	0	0	0	0	0
	Intl	0	0	0	0	0	0
	Unknown	0	1	0	0	0	1
	TOTAL	5	32	8	32	7	37
	GRAND TOTAL		**37**		**40**		**44**
CS	White	12	90	16	110	12	91
	Black	7	21	6	25	4	25
	Hispanic	1	4	0	9	7	26
	Asian	3	12	3	11	5	14
	American-Indian	0	0	1	0	0	1
	Multiracial	0	0	0	0	0	5
	Intl	0	2	0	2	0	2
	Unknown	0	0	5	2	0	1
	TOTAL	23	129	31	159	28	165
	GRAND TOTAL		**152**		**190**		**193**
	UNDERGRADUATE TOTAL		**189**		**230**		**237**
MCS	White	0	3	1	1	0	1
	Black	0	0	0	0	0	0
	Hispanic	0	0	0	0	0	0
	Asian	19	39	15	32	0	1
	American-Indian	0	0	0	0	0	0
	Multiracial	0	0	0	0	0	0
	Intl	5	28	31	168	33	172
	Unknown	0	0	0	2	0	1
	TOTAL	24	70	47	203	33	175
	GRAND TOTAL		**94**		**250**		**208**

Semester
credit hours:

	Fall 2014	Fall 2015	Fall 2016
CIS	413	491	536
CS	1792	2291	2218
MCS	959	2698	1874
TOTAL	**3164**	**5480**	**4628**

The **undergraduate** student enrollment increased in Fall 2016 by 3**%** compared to Fall 2015. However, the semester credit hours decreased in Fall 2016 by **3%** compared to Fall 2015. It demonstrated that even if we have a larger population of undergraduate students, they tend to take less classes.

Regarding the **graduate** studies, the graduate student enrollment decreased in Fall 2016 by **17%** compared to Fall 2015. The semester credit hours decreased in Fall 2016 by **31%** compared to Fall 2015.

> What is your proposed plan of action to increase your SCH/FTE? Do you need any resources to implement this plan of action?

There is a slight increase in the number of students, but the SCH decreased by the same amount.

4. <u>*Graduation Rates*</u>--Compare graduation rates for past three (3) years, has the number increased/decreased or remained static?

> The below table indicates the graduation rates for the past three years relative to the last six years:

Graduation rates for the past three years				FY 2014	FY 2015	FY 2016	**Three years total**
11010100	2	BS	Computer Science	19.0%	42.9%	31.3%	**31.1%**
11010100	2	BSCISC	Computer Information Science	0.0%	20.0%	0.0%	**14.3%**
11070100	3	MSCS	Computer Science	30.3%	25.0%	68.2%	**44.1%**

The below table indicates the number of degrees awarded for the past three years:

Degrees Awarded for the past three years				FY 2014	FY 2015	FY 2016	**Three years total**
11010100	2	BS	Computer Science	12	14	14	**40**

11010100	2	BSCISC	Computer Information Science	3	3	1	**7**
11070100	3	MSCS	Computer Science	5	35	108	**148**

What does the department need to increase the number of graduates?

The graduation rate for our undergraduate students in Fall 2016 decreased by 27% compared to Fall 2015, and we did not graduate any CIS student. However, we had a large amount of graduate students graduating in Fall 2016 with 133%. This is because we had a very large population of graduate students in Fall 2015.

The number of degree awarded looks better that the graduation rate. We graduated the same number of undergraduate CS students in 2016 compared to 2015. We had two less CIS students awarded in 2016. However, the number of degrees awarded for Master in Computer Science increased by 209%.

What does the department need to increase the number of graduates?

Although the number of graduates increases, we need to check the number of degrees awarded in FY 2017.

Student Workers
Please indicate how many students are currently employed and how they are utilized:

SPRING 2016

Numbers	Undergraduate Students	How Utilized?	Graduate Students	How Utilized?	GRAND TOTAL
3		Office Assistant	3	Office Assistant	G – 1,197.00
2		Webmaster	2	Webmaster	G – 6,498.00
5	1	Technicians	4	Technicians	UG – 540.00 G – 11,552.00
49		Graders	49	Graders	G – 24,426.00

SUMMER 2016

Numbers	Undergraduate Students	How Utilized?	Graduate Students	How Utilized?	GRAND TOTAL
2		Office Assistant	2	Office Assistant	G – 1,035.00
1		Webmaster	1	Webmaster	G – 2,394.00
5	1	Technicians	4	Technicians	UG – 2,052.00 G – 7,380.00
11	1	Graders	10	Graders	UG – 162.00 G – 3,044.00
11		Research Assistants	11	Research Assistants	G – 5,263.00

	FALL 2016					
Numbers	Undergraduate Students	How Utilized?	Graduate Students	How Utilized?	GRAND TOTAL	
2		Office Assistants	2	Office Assistants	U – 1,700.00	
1		Webmaster	1	Webmaster	G – 1,690.00	
4	1	Technicians	3	Technicians	UG – 1,690.00 G – 5,070.00	
21	1	Graders	20	Graders	UG – 2,040.00 G – 20,060.00	
7		Research Assistants	7	Research Assistants	G – 5,370.00	

Department of Computer Science

Is your budget sufficient for student workers? If not, provide a plan of action that indicates the needs of your department, estimated costs and benefits.

Total Costs/Semester and Year

Total Cost for Spring 2016:	$44,213.00
Total Cost for Summer 2016:	$21,330.00
Total Cost of Fall 2016:	$37,620.00
2016 Total:	$103,163.00

Is your budget sufficient for student workers? If not, provide a plan of action that indicates the needs of your department, estimated costs and benefits.

We actually struggled to be able to pay the student workers this academic year due to the large number of students willing to work for the department. We have to maintain a balance between helping students and instructors, and at the same to preserve the quality of our program. We will consider approaching the Higher Administration for a budget adjustment, if needed.

Student Honors, Accomplishments and Recognition

Identify any honors or recognition that your students have achieved.

SPRING 2016

Student	Honors/Accomplishments
Matthew Hari	Crawford/Lewis Scholarship
Odessa Henry	
Brock Terry	
Lauren Forse	Bill Nylin Scholarship
Lauren Forse	Bobby Waldron Scholarhsip

FALL 2016

Student	Honors/Accomplishments

Carolyn Langhoff	**Crawford/Lewis Scholarship**
Thomas King	
Caitlin Ambeau	
Lauren Forse	**Bill Nylin Scholarship**
Bailey Moore	
Judah Roden	**Bobby Waldron Scholarhsip**

Does your Department have a Mirabeau Scholar? Yes   No
1. Timothy Gonzales
2. Cameron Henry
3. Christopher LaChance

All these students were awarded the Mirabeau scholarship in 2012. We didn't have any new students awarded this impressive scholarship to the Computer Science majors in the last couple of years.

Describe any student mentoring activities undertaken by faculty.

All faculty do student mentoring and advising in Graduate Project class, course projects, research projects, and more. Most of our faculty have publications co-authored with undergraduate and/or graduate students. STAIRSTEP is our impressive research undergraduate program which has a positive attitude in the department and LU in general.

Faculty Productivity Measures
1. Publications

   _3__ # of Manuscripts submitted not yet published
   _26__ # of Manuscripts published

      _23__ Refereed
      _3__ Non-refereed

   __0__ # Books published (book chapters)

2. Professional Presentations

   _3_ Local presentations
   _7_ State / Regional
   ___ National
   _12_ International
   _22_ TOTAL #

3. Describe professional development activities undertaken by you or the faculty in your area.

   N/A

4. Faculty holding office in national/international professional organization - **Only**

| **Faculty** | **Organization** | **Office** |

None		

5. Faculty Honors

Faculty	Honors
None	

6. Any issues/problems with faculty?

N/A

Budget

What were your major capital expenditures this year?

Capital Expenditures for 2016	
Apple Inc. – Research Project Supplies	747.00
CDW Government, Inc. - Computer Equipment	4,316.66
Dell – Laptops for Faculty/External Hard Drives	3,900.19
Dell Marketing - Laptop	1,994.39
Dynamism – 3D Printer Supplies	3,263.37
Educational Testing Service (ETS) – Major Field Tests for Undergraduate Students	420.00
GHA Technologies – Computer Equipment & Printer Cartridges	598.80
GOVConnection, Inc. – Office Equipment & Supplies	2,627.21
Hernandez Office Supplies – Office Supplies for the Department	7,341.15
Kirksey's – Business Cards	167.50
Laminating & Binding Solutions – Large Laminator & Printer	3,259.99
Lenovo – Think Pad	2,529.05
MakerBot – 3D Supplies	506.35
Mathworks – Contract Renewal	3,034.70
Microsoft Corporation–DreamSpark Program Contract Renewal	799.00
National Cap & Gown	777.78
Oracle – Contract Renewal	1,724.14
PT Morrison – Portable Hard Drives & Flash Drives	899.85
Star Graphics – Copier	1,068.00
GRAND TOTAL	$39,075.13

What are your immediate and longer term major capital needs?

Major Capital Needs for 2016
Computer Furniture and Chairs

	$18,300.04
Solaris UNIX machines in Room 214 (D8G63AV-1 – Configurable – HP Z1 G2 Workstations	
20 needed	**$35,800.00**
Renovation of Labs 214 and 215	**$40,000.00**

The computer lab 208 needs proper computer tables, since the current tables are from the Writing Center left over when they move out some years back. Those furniture are not proper for the computer lab. Power cables are hanging on the floor, and tables are easy to push around.

Computer lab rooms 214 and 215 have raising floors and all power cables and network cables are under floor. It is vulnerable to flood in our Hurricane region. It is intended to divide this room into two Labs: Cybersecurity Lab and Prototyping and Innovation Lab.

Centers/Endowed Chairs or Distinguished Faculty
Report on the Center(s) in your department (*goals accomplished, problems, and major goals for next year*). How does the Center promote the goals of the department, College and University?

> None

Report of activities/accomplishments of Endowed Chairs in your department. How did the individual support the program's goals?

> N/A

Departmental Analysis

Report any initiatives or special projects under taken this year by your unit.

Most of the Department of Computer Science Faculty are involved in research, publishing papers and writing grants. All of the Department of Computer Science Faculty are involved in teaching, improving their courses and revising their online courses. All Faculty submitted their assessment materials, necessary for the ABET yearly assessment. In addition, Faculty uploaded their assessment results in the online website. All Faculty reviewed publications including journals, books, and conferences. Our department organized the Spring 2016 Advisory Board on March 7, 2016. All Advisory Board members, students, faculty and participating staff appreciated the event.
Aside from these initiatives, we had on April 4, 2016 our First Computer Science Career Forum at Lamar University. It was a very successful event for students, faculty and industry
https://www.lamar.edu/news-and-events/news/2016/04/computer-science-career-forum-brings-bright-students-big-prospects.html

Identify special projects or initiatives you plan for next year.

Firstly, we shall continue to involve students in undergraduate and graduate research, programming competitions, and other academic activities. Secondly, we shall maintain our programs accreditation (e.g., ABET, SACS), considering new programs (e.g., Computer Graphics Animation) and improve our effective recruitment and retention practices. Thirdly, we shall continue to cooperate for getting support from the higher administration, advisory board, industry, and collaborate with other academic departments. Fourthly, we shall continue to submit proposals to funding agencies. We shall continue our cooperation with high schools and

community colleges from Golden Triangle and Harris County. We shall organized the Spring 2017 Advisory Board Conference, too.
In addition, we shall continue our new event about the Computer Science Career Forum with its 2017 edition.

What are the major challenges in your department?

1. Hiring an Assistant Professor in the area of cyber-security
2. Renovate Labs 214 and 215
3. Cope with the apparent sudden decrease of international students that we had in Spring 2017 while maintaining the same quality of learning.

What are the major strengths of your department?

1. We cooperate and help each other to fulfil students, staff, faculty, and higher Administrators requests.
2. We do yearly ABET assessment of our Bachelor in Computer Science.
3. Cooperate and help with other departments from the college and university.