



Republic of the Philippines
SOUTHERN LUZON STATE UNIVERSITY
Lucban, Quezon

CERTIFICATION

This is to certify that **Asso. Prof. RENATO R. MAALIW III** has been a **contributor** in the development process of the academic program detailed below:

Program Name	Type of Program	Board Approval	Academic Year Implemented	Contribution
Bachelor of Science in Information Technology	Developed Program	BOR Res. No. 2, s. 2020 CHEDRO IV-RRPA No. 0001, s. 2021	2021-2022	<ul style="list-style-type: none">- curriculum development- preparation of feasibility study- benchmarking with local HEIs- gathering feedback and inputs from potential employers and other stakeholders- setting of learning objectives and learning outcomes- curriculum mapping- presentation of the developed curriculum in the curriculum committee- preparation and submission of documents to CHED for RRPA application- participate in the remote RQAT evaluation

This certification is issued upon the request of Mr. Maaliw for faculty position reclassification (DBM-CHED Joint Circular No. 3, series of 2022) use only.

Maaliw
GONDELINA A. RADOVAN, PhD
Vice President for Academic Affairs

JUL 20 2023

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DIO. HRMO



Republic of the Philippines
SOUTHERN LUZON STATE UNIVERSITY
Lucban, Quezon

AN EXCERPT FROM THE MINUTES OF THE COMBINED THIRD (138TH)
AND FOURTH (139TH) QUARTER REGULAR MEETING OF THE
SOUTHERN LUZON STATE UNIVERSITY BOARD OF REGENTS
HELD ON 14 FEBRUARY 2020, 1:00 P.M. AT THE CHED EXECUTIVE LOUNGE,
HEDC BUILDING, C.P. GARCIA AVE., UP DILIMAN CAMPUS, QUEZON CITY

BOARD RESOLUTION NO. 02, Series of 2020

A RESOLUTION APPROVING THE REQUEST OF SOUTHERN LUZON STATE UNIVERSITY FOR CHED PRELIMINARY ASSESSMENT OF THE PROPOSED OFFERING OF THE BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY (WEB AND MOBILE APPLICATIONS DEVELOPMENT) ✓

WHEREAS, the Southern Luzon State University recognizes the need to offer a program in IT Education in order to meet the demands for IT professionals in both the regions and in the country;

WHEREAS, a feasibility study for the offering of BS Information Technology was crafted following the provisions of CHED Memorandum Order No. 25, s. 2015 entitled "Policies, Standards and Guidelines for Bachelor of Science in Computer Science (BSCS), Bachelor of Science in Information Systems (BSIS) and Bachelor of Science in Information Technology (BSIT) Programs";

WHEREAS, the University Academic Council, by virtue of its Resolution No. 07, s. 2019, endorsed for approval of the Board of Regents the proposed offering of BS Information Technology (Web and Mobile Applications Development);

WHEREAS, the BOR Academic Committee endorsed to the Board of Regents the request of Southern Luzon State University for CHED Preliminary Assessment through BOR Academic Committee Resolution No. 17, s. 2019;

NOW, THEREFORE, BE IT RESOLVED, AS IT IS HEREBY RESOLVED, that upon the recommendation of the Academic Committee, the Board of Regents hereby approved the request of Southern Luzon State University for CHED Preliminary Assessment (CPA) of the Proposed offering of the Bachelor of Science in Information Technology (Web and Mobile Applications Development).

ADOPTED, this 14th day of February 2020 at the CHED Executive Lounge, HEDC Building, C.P. Garcia Ave., UP Diliman Campus, Quezon City.

Certified true and correct:

AURORA L. SUMAGUE
Board Secretary V

Attested:

DORACIE B. ZOLETA-NANTES, PhD
Vice Chair, SLSU Board of Regents and
President, SLSU

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DIC. RPM

	COLLEGE OF INDUSTRIAL TECHNOLOGY	Student Number:
Southern Luzon State University	Date of Admission:	
Lucban, Quezon	Program Adviser:	

FIRST YEAR													
First Semester						Second Semester							
Grade	Code	Course Title	Lec	Lab	Total	Prereq	Grade	Code	Course Title	Lec	Lab	Total	Prereq
	GEC04	The Contemporary World	3	0	3			GEC02	Understanding the Self	3	0	3	
	GEC05	Mathematics in the Modern World	3	0	3			GEC03	Readings in Philippine History	3	0	3	
	GEC08	Science, Technology & Society	3	0	3			GEC06	Purposive Communication	3	0	3	
	GEC10	Kontekstwalisadong Komunikasyon sa Filipino	3	0	3			GEC11	Filipino sa Iba't Ibang Disiplina	3	0	3	
	ITE01	Introduction to Computing	2	1	3			ITE02	Computer Programming 1	2	1	3	ITE01
	PEO01	Physical Fitness	2	0	2			PEO02	Rhythmic Activities	2	0	2	PEO01
	NST01	National Service Training Program 1	3	0	3			NST02	National Service Training Program 2	3	0	3	NST01
		Semestral Weighted Grade		Total Units	20			Semestral Weighted Grade		Total Units	20		

SECOND YEAR													
First Semester						Second Semester							
Grade	Code	Course Title	Lec	Lab	Total	Prereq	Grade	Code	Course Title	Lec	Lab	Total	Prereq
	GEC01	The Life and the Works of Rizal	3	0	3			GEC07	Art Appreciation	3	0	3	
	GEC09	Ethics	3	0	3			GEC13	Literature of the Philippines	3	0	3	
	ITE03	Human Computer Interaction	3	0	3	ITE02		ITE08	Data Structures and Algorithms	2	1	3	ITE05
	ITE04	Discrete Mathematics	3	0	3	*2ND YR. STANDING*		ITE09	Quantitative Methods	2	1	3	ITE02
	ITE05	Computer Programming 2	2	1	3	ITE02		ITE10	Front-End Development	2	1	3	ITE05
	ITE06	Visual Graphic Design	2	1	3	ITE01		ITE11	Database Management Systems 2	2	1	3	ITE07
	ITE07	Database Management Systems 1	2	1	3	ITE02		PEO04	Team Sports/Games	2	0	2	PEO03
	PEO03	Individual/Dual Game Sports	2	0	2	PEO02							
		Semestral Weighted Grade		Total Units	23			Semestral Weighted Grade		Total Units	20		

THIRD YEAR													
First Semester						Second Semester							
Grade	Code	Course Title	Lec	Lab	Total	Prereq	Grade	Code	Course Title	Lec	Lab	Total	Prereq
	ITE12	Information Assurance and Security	3	0	3	ITE11		ITE19	Computer Organization, Architecture and Logic	2	1	3	ITE05
	ITE13	IT Social and Professional Issues	3	0	3	*3RD YR. STANDING*		ITE20	Computer Networking 2	2	1	3	ITE15
	ITE14	Systems Analysis and Design	3	0	3	*3RD YR. STANDING*		ITE21	Operating Systems	2	1	3	ITE05
	ITE15	Computer Networking 1	2	1	3	*3RD YR. STANDING*		ITE22	IT Project Management	3	0	3	ITE14
	ITE16	Object-Oriented Programming	2	1	3	ITE08, ITE11		ITE23	Capstone Project 1	3	0	3	ITE09, ITE14, ITE16
	ITE17	Cognate/Professional Course 1 (Elective)	2	1	3	ITE10, ITE11		ITE24	Cognate/Professional Course 3 (Elective)	2	1	3	ITE16, ITE17
	ITE18	Cognate/Professional Course 2 (Elective)	2	1	3	ITE10, ITE11		ITE25	Cognate/Professional Course 4 (Elective)	2	1	3	ITE16, ITE18
		Semestral Weighted Grade		Total Units	21			Semestral Weighted Grade		Total Units	21		

FOURTH YEAR													
First Semester						Second Semester							
Grade	Code	Course Title	Lec	Lab	Total	Prereq	Grade	Code	Course Title	Lec	Lab	Total	Prereq
	ITE26	Seminars in IT Trends	0	1	1	4TH YR. STANDING		ITE33	Practicum (540 hours)	6	0	6	
	ITE27	User Experience Design	3	0	3	ITE03							
	ITE28	Emerging Technologies in IT	2	1	3	4TH YR. STANDING							
	ITE29	Capstone Project 2	3	0	3	ITE23							
	ITE30	IT Entrepreneurship	3	0	3	4TH YR. STANDING							
	ITE31	Systems Administration and Maintenance	2	1	3	ITE12							
	ITE32	Data Mining and Analytics	2	1	3	ITE09							
		Semestral Weighted Grade		Total Units	19			Semestral Weighted Grade		Total Units	6		

Total number of units: 150

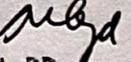
Total number of units earned: _____

General Weighted (GWA): _____

Title of Thesis:	
Thesis Adviser:	
Program Expiration:	Remarks:
Date of Graduation:	
Certified true and correct:	

BOR Resolution No. 02, Series of 2020

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D.I.C., HDMO



Republic of the Philippines
Office of the President
COMMISSION ON HIGHER EDUCATION
REGIONAL OFFICE IV (CALABARZON)
J.P. Rizal Higher Education Development Center Bldg.
C.P. Garcia Avenue, Dillman, Quezon City
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E-mail address: ched4a@ched.gov.ph

CHEDRO IV - RRPA
No. 202 Series 2021

Pursuant to the Provinces of Batangas P.D. Blg. 232 and Republic Act No. 7722, the

SOUTHERN LUZON STATE UNIVERSITY
Quince Ave., Est., Lucban, Quezon

is hereby authorized to operate the

**FIRST AND SECOND YEAR LEVELS OF
BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY PROGRAM**

Effective Academic Year 2020-2021

Based on the Report on the Result of Preliminary Assessment (RRPA) conducted by this Office, the above-mentioned institution has complied with the prescribed minimum requirements for the First and Second Year Levels of the program per CHED Memorandum Order (CMO) No. 25, series of 2015.

Per CMO No. 14, series of 2019, the institution shall have two (2) years to secure the Certificate of Program Compliance (COPC) for the Bachelor of Science in Information Technology program upon full compliance with the CHED minimum requirements.

This authorization shall be subject to revocation if the herein institution fails to operate in accordance with the laws of the Republic of the Philippines and/or fails to comply with the rules and regulations of the Commission on Higher Education pertaining to the organization, administration and supervision of public and private higher education institutions in the Philippines. The school authorities shall inform the Commission of any plan or action regarding closure or phasing out of the program or any change(s) in the prescribed requirements.

Furthermore, this authorization does not extend to the other campuses of the institution, if any, whether located in the same place or elsewhere.

Issued at Quezon City this 5th day of February 2021.

FOR THE COMMISSION:

AMELIA A. BIGLETE
Director IV

(Not valid without CHEDRO and
Dr. with Erasures/Alterations)

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A Feasibility Study on the Program Offering of Bachelor of Science in Information Technology (Web and Mobile Applications Development)

Renato R. Maaliw III, Debbie Salvatierra-Bello, Mariebeth Placino-Seño, Reynaldo V. Danganan

Abstract— This study aimed to determine the feasibility of offering a Bachelor of Science in Information Technology with specialization in Web and Mobile applications development program in terms of the university's strengths and weaknesses, the demands and supply of the program offering's graduates for the next five years, the course feasibility and viability, and the socio-economic benefits in offering the degree. Using literature review and descriptive survey method, data were gathered from 448 students for the seven high schools in neighboring areas of Southern Luzon State University Lucban, Quezon. The findings showed that 83.1% (372) of the respondents were interested and willing to enroll in the proposed curricular offering. Results also showed that the proposed program is viable and sustainable based from the internal and external aspect analysis.

Index Terms— information technology, feasibility study, mobile applications, socio-economic, web applications

1 INTRODUCTION

Higher Education Institutions (HEIs) are recognized as the centers of higher learning and are considered as the catalyst of development in nation building. As one of the producers of professionals such as engineers, educators, managers, scientists, leaders, highly skilled workers and men of different work capabilities, they are the primary contributors of economic growth. The principal objective of HEI is to meet the socio-cultural and development needs of a country by providing opportunity for each individual to develop and enhance their potentials. Moreover, HEI's are serving to develop morally sound and ethical individual regardless of their cultural differences or ethnic origins. These facts are concretely revealed by varieties of researches by prominent leaders and decision-makers stating that the future of a nation depends largely on the quality of education received from HEIs. With regards to these revelations, institutions need to offer educational programs that will answer the demands of time and that will also be beneficial to the society [1].

At present times, ICT industries are at the forefront and serviced many major industries such as manufacturing, banking/finance, insurance, high/technology, electronics, telecommunications, aviation, travel/hospitality, healthcare, pharmaceuticals, power & utilities, real estate, entertainment (media & publishing), construction, (architecture & engineering), transportation and government to name a few. The reasons for the fast evolution of the ICT sector in the world are the drivers of change specifically in business

investments, policy changes, competitive workforce, infrastructure, government support and new technologies.

According to reference [2], the ever presence of ICT in most industries today permeates all aspects of the economy and society that it has become an enabler of development and contributes to both social and economic growth through innovations and technologies that reinforce the economy, social inclusion and culture.

In the Philippines contrary to popular belief, there are varieties of jobs available in the country in different industries such as ICT sectors, health, medical tourism, agribusiness, cyber services (contact services), hotel and restaurant, and mining industries. The Department of Labor and Employment (DOLE) published the results of employment opportunities in the Philippines and identified Information and Communications Technology (ICT) as the number one key sectors of in demand jobs in the country. In addition their research also identified several hard-to-fill jobs in the country which include jobs from the ICT sectors.

The CALABARZON (Cavite, Laguna, Batangas, Rizal and Quezon) regions aspire to be a model on ICT development by enabling sectors for growth and promoting regional development according to the Information and Communications Technology Plan (2018 - 2022) of the Regional Development Council (RDC) through its special committee, the Regional Information and Communications Technology Committee (RICTC). The committee crafted a plan in harnessing the potential of the region as one of the centers of ICT development in the Philippines by recognizing the importance of the ICT in nation building. The plan adopts the four pillars of ICT development that includes human resource, infrastructure, enabling environment and promotion.

In terms of human resource, the CALABARZON region ranks second as to the number of HEIs with 328, only the National Capital Region (NCR) have more at 350. Number of graduates wise, the region ranks fifth with an average of 18,235 graduates from its State Universities and Colleges (SUCs).

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- Debbie Salvatierra-Bello is currently pursuing a Doctorate in Information Technology degree and an Assistant Professor of Southern Luzon State University in Lucban, Quezon, Philippines.
- Mariebeth Placino-Seño has a Master of Science degree in Information Systems and an Assistant Professor of Southern Luzon State University in Lucban, Quezon, Philippines.
- Reynaldo V. Danganan is currently pursuing a Doctorate in Information Technology degree and an Assistant Professor of Southern Luzon State University in Lucban, Quezon, Philippines.

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The regions infrastructure includes four out of the seven operational cable landing stations in the country indicating progressive increases on the number of cell sites with broadband or internet connection in the region. According to a survey conducted by Philippine Statistics Authority (PSA) on information and communications technology, about 98.6 percent of establishments related to the Information Economy (IE) in the region used computer, software and other hardware in their business operations. [2]

In terms of enabling environment, the region ranks second for the largest contribution to the national Gross Regional Domestic Product or GRDP amounting to PhP 1.365 trillion or 16.8 percent of the Philippines GDP in 2019. Other than Metro Manila, the region is second as the most economically important region in the country for the reason of its proximity to NCR. This geographic feature makes the region a hot-bed for investors in the ICT sectors. The region houses 13 IT Parks and Centers that offers low rental rate and tax incentives to IT-related business.

Promotion wise, there exists a strong collaboration between local stakeholders composed of public and private sectors that regularly craft plans and discuss meetings to promote the region as one of the ICT Centers in the Philippines.

The opportunities of the ICT development in the region are reinforced through several factors such as big pool of quality human resource, established institutions to support to ICT, improvement of infrastructure interconnectivity among regions, efficient government service, good information channels and growing real-estate development.

In spite of the aforementioned reasons for the growth of ICT development in both the regions and in the country, the DOLE research findings concludes that the ICT job opportunities are in-demand in the Philippines but there are still hard-to-fill occupations in the industries such as business analyst, database administrators, game developer, graphic artist, IT security engineer, IT support staff, system & network engineer, network administrator, programmer, web developer and mobile applications developer [3].

Web applications including mobile applications have become an essential component of business in today's world. Through these applications, businesses infrastructures are being developed to become simpler to achieve their objectives faster. In an article published [4], mobile application are projected to hit 188.9 billion dollars in revenue by 2020, this signifies that there is a strong marketability for individuals who have sets of particular skills in this field as consumers are becoming more attached to their mobile devices. This fact is confirmed with another article [5], stating that web and mobile applications development market is booming and it is expected to reach new heights as the mobile application industry has skyrocketed. The article also conclude that for the next 10 years the market is far from being saturated which means that there is a strong demand for web and mobile applications developer. Information Technology (IT) jobs are considered as one of the lucrative careers with salary ranging from \$42,535 to \$114,243 per year [6].

The Southern Luzon State University (SLSU) is one of the

premier higher educational institutions in the province of Quezon offering free tertiary education consisting of 11 campuses with the main campus located in Lucban, Quezon, Philippines.

Despite numerous program offerings ranging from the fields of allied medicine, agriculture, fisheries, arts, sciences, administration, business, accountancy, hospitality, engineering, education and other relevant field of studies, the university has yet to offer a program in IT Education in order to contribute to the demands of ICT development and job opportunities presented in the region. Therefore, there is a need for the university to offer Bachelor of Science in Information Technology (BSIT) program with specialization in Web and Mobile applications development. The researchers believe that the university can offer and sustain the proposed program offering.

2 OBJECTIVES OF THE STUDY

The objectives of the study focused on gathering and analyzing the gathered data to prepare a feasibility study of offering a four-year course in BSIT with Web and Mobile Applications Development track at Southern Luzon State University, Lucban Campus. The specific objectives of this study are to identify the Strength and Weakness of the program offering in terms of external & internal factors and to determine whether the proposed curricular program is feasible.

3 METHODOLOGY

This study employed the descriptive method type of research by utilizing questionnaire. Interviews and documentary analysis were the main data gathering instruments in the conduct of the study. This method was used since the intention of the study is to describe analytically an existing situation regarding the operations of a secondary as basis for the preparation of a preliminary plan for the offering of a new curricular program.

Respondents

The respondents of this study consisted of seven (7) high schools both in the area and neighboring municipalities of Lucban, Quezon. Most of the graduates of selected schools based from the admission data are the probable freshmen students of the university. The total graduating student population is four hundred forty-eight (448) from the said schools. Table 1 presents the respondents of the study.

Table 1. Respondents of the Study

School	No. of Respondents	Percentage
Liceo De Luisiana	44	10.3%
Lucban Academy	85	19%
Paaralang Sekundarya ng Lucban	60	13.7%
Sta. Catalina	77	17.5%
San Buenaventura	72	16.7%
SLSU - Laboratory High School	62	14%
Luis Palad National High School	45	18.8%
TOTAL	448	100%

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Data Gathering Tools

Several tools were employed in gathering the needed information in this research, namely, questionnaire-checklist both in paper and electronic form, and documentary analysis. In terms of preparation of questionnaire, the researchers considered to adopt previous instruments in the conduct of the feasibility study for the reasons that adopted questionnaires are already subjected for validation. The questionnaires were then reproduced for the final distribution. The researchers personally distributed the questionnaires to the target respondents and retrieved the same after a few days. Only verbal permit was secured from the different head of the schools. The data were then tabulated, analyzed and interpreted. The table shows that majority of the respondents came from Lucban Academy. It was noted that this school is situated in the heart of the municipality of Lucban, Quezon and it offers multiple sections for its high school per academic levels. The smallest school which participated is the Liceo de Luisiana (Laguna) which is situated about 14 kilometers of Lucban, Quezon.

Documentary Analysis

Since the research aims to study the feasibility of offering BSIT with Web and Mobile applications development track, the need for documentary analysis was considered a necessity. Important documents which were subjected to analysis include faculty profile, laboratory facilities and library holdings.

Statistical Treatment

A simple statistical percentage technique was used to determine the sample size of the population per participating schools including the response to each set of questions in the questionnaires. Moreover, simple mathematical calculations were used in deriving the results of the cost-benefit analysis.

4 RESULTS AND DISCUSSIONS

Strength, Weakness, Opportunity and Threat (SWOT) Analysis

Some important documents such as records, data and files from the university were utilized by the researchers for SWOT analysis. Personnel who keep important documents were involved for the strength, weakness, opportunities and threats analysis.

Strengths

Based on the assessments made the following are the strengths. Southern Luzon State University (SLSU) is International Standard Organization (ISO) certified institution. The learning environment on which the campus is situated are very conducive for learning, laboratory facilities are equipped with software and hardware technology including internet facilities. In terms of teaching personnel, most of the faculties are master's degree holder. Administrative personnel are equally educationally qualified with appropriate extensive experiences. Moreover, transaction processing in the university is highly systematized with the aid of management

information systems (MIS).

Moreover, the Bachelor of Science in Information Technology is listed as one of the priority courses of the Commission on Higher Education (CHED) in the Philippines and graduates of the program are in demand due to the evolving ICT industries both locally and abroad. Finally, the specialization track chosen is unique based on the data gathered and interviews by the researchers from different neighboring state college and universities in Region IV-A and Quezon Province as can be seen in Table 2 and Table 3.

Two HEIs in National Capital Region (NCR) such as Far Eastern University Institute of Technology (FIT) and University of Santo Tomas (UST) have the same specialized tracks as can be seen in Table 4.

Table 2. BSIT Specialization Tracks of SUCs in Region IV-A

HEI	Specialization Track
Batangas State University	Network Technology Business Analytics Service Management
Cavite State University	[No specialized track]
Laguna State Polytechnic University	Data Science Multimedia
Polytechnic University of the Philippines	[No specialized track]
Southern Luzon State University	Web and Mobile Applications Development (Proposal)
University of Rizal System	[No specialized track]

Table 3. BSIT Specialization Tracks of Private HEIs in Quezon Province

HEI	Specialization Track
ABE Int'l Business College (Lucena)	[No specialized track]
ACT Computer College (Infanta)	[No specialized track]
AMA Computer College (Lucena)	[No specialized track]
Asian Institute of Technology and Education (Tiaong)	[No specialized track]
Colegio De Santo Cristo de Burgos Corporation (Sariaya)	[No specialized track]
CSTC College of Sciences, Technology and Communications, Inc. (Sariaya)	[No specialized track]
Manuel S. Enverga University Foundation, Inc. (Lucena)	CISCO Networking Business Analytics Multimedia
St. Anne College Lucena, Inc. (Lucena)	[No specialized track]
STI Education Services Group, Inc. (Lucena)	[No specialized track]

Table 4. BSIT Specialization Tracks of HEIs in National Capital Region

HEI	Specialization Track
Adamson University (ADU)	[No specialized track]
AMA University (AMAU)	Data Communications and Networking
Asia Pacific College (APC)	Internet Technology
Arellano University	[No specialized track]
Ateneo De Manila (ADMU)	Data Science and Analytics Enterprise Systems Interactive Multimedia
Colegio de San Juan de Letran (CSJL)	Systems Engineering Software Development

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	Digital Arts
De La Salle University (DLSU)	Internet of Things Big Data Financial Management Business Continuity and Disaster Recovery Network Security Administration Tools Development Cybersecurity Operations Security Law and Governance
Emilio Aguinaldo College (EAC)	[No specialized track]
FEU Institute of Technology (FIT)	Animation and Game Development <u>Web and Mobile Applications Development</u> Digital Arts Business Analytics
Jose Rizal University (JRU)	Game Development Business Analytics
Lyceum of the Philippines University (LPU)	Information Security Technopreneurship
MAPUA University	CCNP HP-UX Administration Java Programming .NET Programming Cobol Programming Data Management Business Analytics IT Audit and Control IT Service Management
National University (NU)	[No specialized Track]
Pamantasan ng Lungsod ng Maynila (PLM)	[No specialized track]
Philippine Christian University (PCU)	[No specialized track]
Philippine State College of Aeronautics (PHILSCA)	Aviation Information Technology
Philippine Women's University (PWU)	[No specialized track]
Polytechnic University of the Philippines (PUP)	[No specialized track]
Rizal Technological University (RTU)	[No specialized track]
San Beda University (SBU)	[No specialized track]
San Sebastian College (SSC)	Game Development Digital Animation-Technology
Technological Institute of the Philippines (TIP)	Human Computer Interaction Networking
Technological University of the Philippines (TUP)	[No specialized track]
University of Santo Tomas (UST)	Network Security <u>Web and Mobile Applications Development</u> Robotics
University of the East (UE)	Systems Administration Software Engineering Telecommunications

Weaknesses

In some situations based from the CHED memorandum order, maximum load of 24 units is not followed in the university that directly affects the faculty's research and

extension activities. Although the university has the needed number of laboratories in offering the curricular program, some computer units are recommended to undergo upgrades to meet modern computing requirements.

Opportunities

Exposures to the latest software and hardware trainings are opportunities for faculty development. Recently, the CHED is offering non-degree professional advancement grants (graduate certificates, diploma or short courses, leadership development programs) for faculty and non-teaching personnel to further enhance their competencies to better serve their institutions, hence, contribute to the improvement of higher education in the country. Researches in the field of IT are also given emphasis by the Department of Science and Technology (DOST) and research grants are being given to develop research capability of the faculty which in turns produces technological innovations.

Threats

Some private colleges and universities within the area are offering premium salary and additional benefits for IT faculty and practitioners to keep at par with the equivalent salaries in the IT industry to entice them to teach in their institutions which is a great threat in the recruitment of future possible faculty for the program. In addition, the steep requirements of having a vertically aligned master's degree as a minimum requirement to teach in state colleges and universities in the Philippines has resulted to exodus of would be tertiary faculty as the Department of Education with the advent of the K to 12 transition program offers a lot of vacant item positions for the next years to come; some IT faculty may consider teaching in senior high schools than to teach in tertiary levels with almost the same salaries but lower educational qualification requirements.

Internal Aspects

Faculty Needed for the Curricular Program

The BSIT with specialization in Web and Mobile applications development have the following faculty complement which are presently available in the university. There are a total of nine (9) faculty in SLSU including satellite campuses with plantilla positions to handle BSIT subjects. Two of which are Doctor in Information Technology (DIT) degree holders and the rest are Master in Information Technology (MIT) degree holders and related fields. Three of the four faculty assigned in the main campus have taken web-based programming (web applications) & multimedia technology as an elective in their respective master's degree, and one faculty has a master's degree in Information System. Furthermore, out of the four faculty mentioned, one faculty has also a Doctor in Information Technology (DIT) degree specializing in data mining & analytics, and likewise a contributor as a code and plugin author of web and mobile applications for Codecanyon.net.
(<https://codecanyon.net/user/peanutcode/portfolio>)

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DIG., HRMO

Laboratory & Facilities

SLSU has the MIS building which houses 5 computer laboratories composed of approximately 25 to 35 computer terminals. Moreover, the Computer Technology laboratory is also available which houses 40 computer terminals including computer network laboratories. All laboratories are properly lighted and ventilated with air-conditioning units. A total of 4 classrooms are available in the Andres Bonifacio building which also houses the Industrial Technology programs.

The Library is a standalone 3-storey building with collection of books, references, journals, publications and varieties of other learning materials and resources. Most of the required library holdings for the program are intact in the library for the reasons that an allied field of Computer Engineering program is also offered in the main campus. The campus is provided with Internet services for all students and faculty. Gymnasium, covered court, auditorium, audio-visual rooms and open fields which serves as locations for students activities such as sports and cultural presentations. Chemistry and Physics laboratories are also available situated in the Science and Technology building in the main campus.

Financial Feasibility

Based from cost-benefit analysis conducted on financial feasibility for the projected four-year period offering of the program, a positive cost-benefit ratio of 1.65 that is greater than 1.0 correlates that the program is expected to deliver a positive net value and will have a positive internal rate of return. This suggests that the net value of the program offering outweighs the cost, and that the program should be considered. Detailed analysis can be seen in the appendix section in Figure 1, Figure 2 and Figure 3.

External Aspects

Demand and Supply of Graduates of the Curricular Offering for the Next Five (5) Years

The employment opportunities of the graduates of the program were determined through statistical data published on different sources. According to statistics, business sectors affirmed the demands for graduates along the field of Information Technology as the business process outsourcing in the Philippines including the global market is growing.

According to reference [7], the market demand for graduates who possesses skills in web and mobile applications development would surpass most internal organization's capacity on recruitment which means that an even higher demand rate for applications developer will be needed for the next ten (10) years.

On Attractiveness of the Program Offering

Based from the questionnaires, 372 (83.1%) of the respondents answered 'Yes' on the question of their intention to take a Bachelor of Science in Information Technology degree with specialization in Web and Mobile applications development if the curricular program will be offered in SLSU

Lucban Campus.

On Viability of the Program Offering

To offer the BSIT with specialization in Web and Mobile applications development is very vital based on the results of the survey conducted to the participating high schools. Majority of the respondents are willing to enroll in the said program offering with the interest in both web applications (42.9%) and mobile applications development (52%) as answered by the respondents.

The Socio-Economic benefits in offering a four - year course in Bachelor of Science in Information Technology with specialization in Web and Mobile applications development.

Based from the study conducted, it shows that offering of the program is feasible for the following reasons: The curricular program is unique in the region which offers a field of specialization in Web and Mobile applications development; there are few graduates that specialize on these sets of fields in order to sustain the high demands for the jobs. There exists a strong job market for graduates of this curricular offering not just locally but globally and these demands will continue for the next ten (10) years. The program offering's role in enabling economic growth has become more significant as governments are investing heavily in improving infrastructure in hardware and software applications development. Beyond economic benefits, the program is uniquely positioned to help build a more socially sustainable future in terms of business economics.

5 CONCLUSIONS AND RECOMMENDATIONS

The study revealed that offering an additional program such as the Bachelor of Information Technology with track in Web and Mobile applications development is feasible. The internal and external aspect are favorable to the university since based on the presented data gathered, the needed tools, equipment and human resources needed for the program offering are available. The course is included as one of the CHED's priority courses for the next years and the university can continually sustain the operation of this new program. On administration, the university is very supportive in offering new programs as stipulate in the strategic development plan. On higher institutions offering this course in the region, the course is unique in terms of specialization track and the demands for the chosen set of skills of would be graduates are promising.

There are strong and weak points along the areas of evaluation and this should be strengthened and be improved. Quality and not quantity of graduates should be given emphasis and institutional faculty development of the university must be continually monitored to address the changing needs of time.

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D.O., KAMO

APPENDIX

COST-BENEFIT ANALYSIS

PROJECTED COSTS		Year 1	Year 2	Year 3	Year 4	TOTAL COSTS
Personnel						
A. Contract of Service Instructor (IT) - Salary				183504	183504	367008
B. Trainings	50000	50000	50000	50000	200000	
C. Supplies	7000	7000	7000	7000	28000	
Equipment/Tools (Additional)						
Computers	250000	250000	250000	250000	1000000	
Softwares	150000	150000	150000	150000	600000	
Projectors	36000	36000	36000	36000	144000	
LED TV	26000	26000	26000	26000	104000	
Printers	28000	28000	28000	28000	112000	
Others						
B. Repairs (Rooms)	120000	120000	120000	120000	480000	
C. Maintenance (Computers, Networks)	150000	150000	150000	150000	600000	
				Grand Total	3,527,008.00	

Fig. 1 Projected Cost

BS Information Technology (Student Billing)			
No. of Students	Average Billing per Student	Semesters	Total
45	6500	2	585,000.00
			-
90	6500	2	1,170,000.00
			-
135	6500	2	1,755,000.00
			-
180	6500	2	2,340,000.00
* Average Billing per Student			5,850,000.00

Fig. 2 Projected Benefit

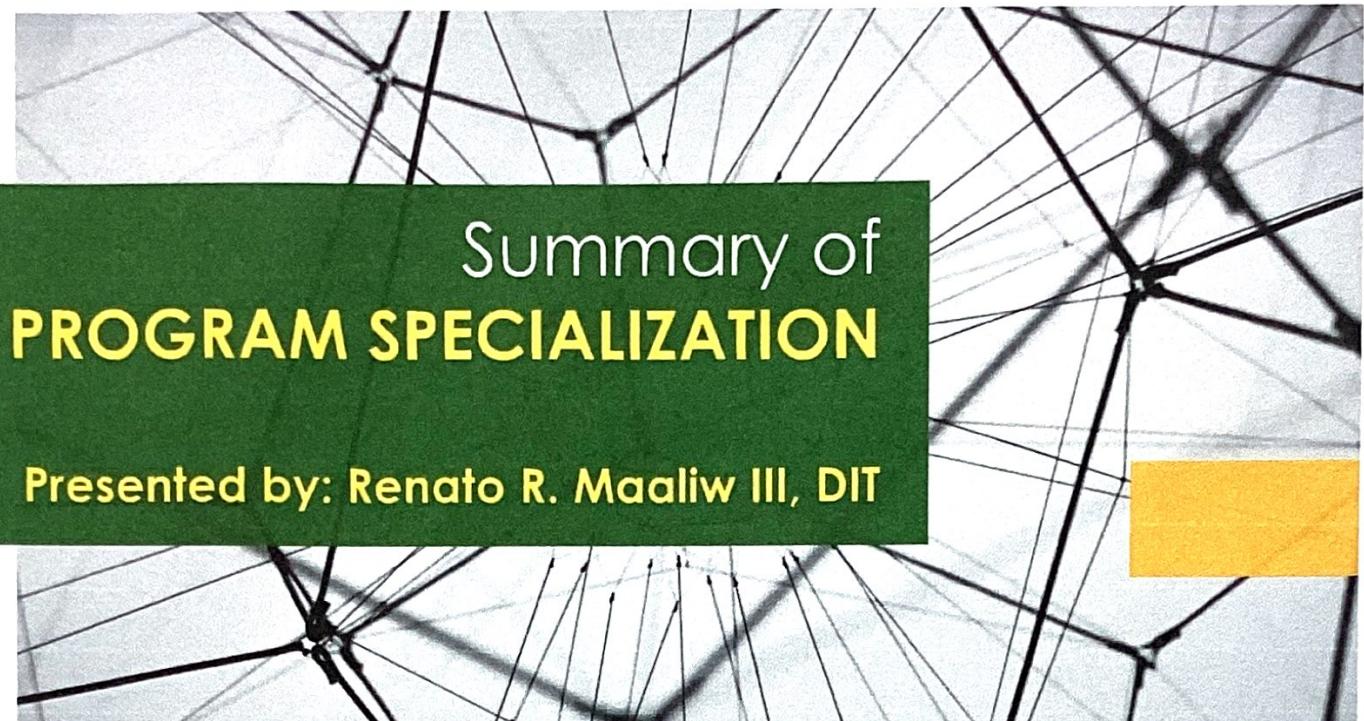
COST BENEFIT RATIO	
COST	3,527,008.00
BENEFIT	5,850,000.00
COST-BENEFIT RATIO	1.658629637

Fig. 3 Cost-Benefit Ratio

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Summary of
PROGRAM SPECIALIZATION

Presented by: Renato R. Maaliw III, DIT

**Bachelor of Science
in Information Technology**

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DIT, HRMO

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PROGRAM

BS in Information Technology >>>

CHED CMO 25, s. 2015:
Minimum requirements: 146 units
SLSU: 150 units

Additional: 4 units

Seminars in IT Trends (1 unit)
Data Mining & Analytics (3units)

Area of Specialization:

- ✓ Web and Mobile Applications Development

Rationale:

Web and Mobile Applications development introduces different techniques of technology assimilation and deployment in a real-world environment.

Students will design, employ and deploy the needs of information resources to support an organization.

This specialization will gain a broad foundation in user interaction and global communication as well as digital technologies using the state of the art computer system focused on the development of web and mobile apps.

With the rapid growth of mobile devices and people accessing the web on performing transactions on handheld devices, the opportunities in this field is on an upward trend.

PROGRAM

BS in Information Technology >>>

Competency:

- ✓ Ability to analyze complex problems, and identify and define the computing requirement needed to design an appropriate solution
- ✓ Ability to apply computing and other knowledge domains to address real-world problems
- ✓ Ability to integrate IT-based solutions into the user environment effectively
- ✓ Ability to apply knowledge through the use of current techniques, skills, tools and practices necessary for the IT profession
- ✓ Ability to understand professional, ethical, legal, security and social issues and responsibilities in the utilization of information technology
- ✓ Ability to analyze the local and global impact of computing information technology on individuals, organizations, and society.

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DIG. HRMO**

PROGRAM

BS in Information Technology >>>

Job Opportunities:

- ✓ Software Engineer
- ✓ Web and Mobile Applications Developer
- ✓ Database Administrator
- ✓ System Administrator
- ✓ Game Developer
- ✓ Business Analyst
- ✓ IT Project Manager

Availability of Resources

FACULTY

✓ Complied

- 1 – Faculty with Doctor in Information Technology with specialization in Data Mining and Machine Learning
- 2- Faculty with Master in Information Technology specialization in Web Technologies
- 1- Faculty with Master of Science in Information Systems

LAB

✓ Complied

- Open Computer Laboratory
- Information Technology Laboratory
- Computer Networking Laboratory

LIBRARY

✓ Complied

- GE Books
- Professional Information Technology Books
- Journals
- e-journals subscription
- Magazines

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