



Office of the Board Secretary

LEYTE STATE UNIVERSITY
Visca, Baybay, Leyte 6521 A
Philippines


EXCERPTS OF APPROVED MINUTES OF THE
10th LSU Board of Regents Meeting
01 May 2003 * FARM Bldg.
LSU, Visca, Baybay, Leyte

Proposal to Institute Changes in the
Curriculum of BSAE

Board Resolution No. 34, s. 2003

Approving the Proposed Changes in the Bachelor
of Science in Ag. Engineering Curriculum, as presented.

Certified True and Correct


DANIEL M. TUDTUD JR.
Board Secretary

Board Action: **APPROVED**
Date: 01 May 2003
Attachment: Q

Cc: OVPAA - *9/6/20*
Univ. Registrar *YIN*
College of EAI *[initials]*



LEYTE STATE UNIVERSITY

Visca, Baybay, Leyte 6521
Philippines

Office of the President

1 May 2003

**The Honorable Chairman and
Members of the LSU Board of Regents**

Ladies/Gentlemen:

I am hereby endorsing the "**Proposal to Institute Changes in the Curriculum of the Bachelor of Science in Agricultural Engineering (BSAE)**" which has been deliberated and approved by the University Academic Council during its meeting on April 24, 2003.

I am therefore, recommending the same **FOR APPROVAL** by the Board of Regents.

Very truly yours,

PACIENCIA P. MILAN
President

BOARD ACTION: _____
DATE : 1 May 2003

PROPOSAL TO INSTITUTE CHANGES IN THE CURRICULUM OF BACHELOR OF SCIENCE IN AGRICULTURAL ENGINEERING (BSAE)

Rationale

CHED Memorandum No. 59, series of 1996 requires that baccalaureate degree programs adopt the General Education Curriculum (GEC). Category B or GEC-B (see attached copy) requires degree programs other than the Humanities, Social Sciences and Communications to take at least 51 units listed as general education subjects.

In response to the call of the LSU administration to implement the CHED Memo No. 59 in all degree offerings of LSU effective SY 2002-2003, the BSAE curriculum is hereby revised to incorporate the mandated courses (15 units) to meet the minimum requirement and delete some in the existing program without affecting the minimum requirement set by the Technical Panel for Agricultural Engineering Education.

The revision also includes the substitution of Math 11 (College Algebra) and Math 12 (Plane Trigonometry) with the 5-unit Math 13 (College Algebra & Trigonometry), the renumbering of one of the service courses and, the incorporation of additional 6-unit subjects required for Field Practice option.

Since more subjects were added than deleted, the total number of units required in the degree program is increased from 191 to 196 for thesis option and 202 for field practice option.

A. Additional CHED Courses to be Incorporated

1. English 21- Introduction to Literature	-----	3 units
2. Soc Sci 15- Phil. History and Constitution	-----	3 "
3. Soc Sci 16- Life and Works of Rizal	-----	3 "
4. Fil 11- Sining ng Pakipagtalastasan at Retorika---		3 "
5. Fil 12- Panitikang Filipino	-----	<u>3</u> "
		15 units

Rationale: The five GE courses listed above (15 units) are mandated by CHED. Thus, they are to be incorporated into the proposed curriculum revision.

B. Additional 6-unit Courses from Among the Elective Courses Listed Below are Required to Students Opting for Field Practice, instead of Thesis,:

- Agrib 21- Introduction to Agribusiness-** Principles and concepts of business organizations and management with emphasis on the agribusiness sector.

Prerequisite: Soc Sci 13 (Socio-economic Systems)
3 hrs a week (lec)
Credit: 3 units

- Mgt 120- Feasibility Study Preparation** – Principles of feasibility study preparation

Prerequisite: Soc Sci 13 (Socio-economic Systems)
3 hrs a week (lec)
Credit: 3 units

Rationale: Feedback from several agricultural engineering graduates employed in the industry calls for the inclusion of some courses related to entrepreneurship and management of industry. These two courses shall prepare the students for self-employment and for the challenges required in the industry in dealing with production and business enterprise. Learning to know how to prepare a feasibility study is a prerequisite requirement for a successful business venture.

3. **RS 126- Philippine Rural Society-** Social institutions, problems and value system in rural communities

Prerequisite: Socio 11 (General Sociology)

3 hrs a week (lec)

Credit: 3 units

Rationale: This course will enable students learn about the socio-culture and values as an integral part in dealing with the problems in the rural communities.

4. **Ext 132- Principles, Methods and Strategies in Extension** – Application of selected concepts, principles, methods and strategies in extension that are commonly used in non-formal setting specially the disadvantaged rural population.

Prerequisite: Psycho 11 (General Psychology) and Socio 11 (General Sociology)

3 hrs a week (lec)

Credit: 3 units

Rationale: Several agricultural engineering graduates employed in the private and government sector are also engaged in extension activities. This course will provide students the different approaches in the promotion and effective transfer of new knowledge and technology to the rural communities.

C. Courses to be Deleted

1. **ENGLISH 15- ADVANCED GRAMMAR & COMPOSITION** – Analysis of the English language, structure, mechanics and stylistics variation in composition writing.

Prerequisite: English 12

3 hrs a week (lec)

Credit: 3 units

Rationale: The basic language courses (English 11, English 12, and Speech 11) sufficiently provide the students with the fundamental skills in both oral and written communication. In addition, the students shall adequately learn and apply the skills in written communication in AE 198 (Research Planning and Manuscript Preparation).

2. **ENGLISH 26- ARGUMENTATION AND DEBATE-** Study on the principles of argumentation and debate; application of concept

Prerequisite: English 12 (Communication Skills II)

3 hrs a week (3 lec)

Credit: 3 units

Rationale: The course Speech 11 adequately provides the student with the basic skills in oral communication. This subject shall be replaced by English 21 (Introduction to Literature), a CHED mandated course.

3. **PI 11- PHILIPPINE HISTORY, CONSTITUTION, AND RIZAL-** Socio-economics, cultural and political development of the Philippines, the Philippine constitution and the significance of Rizal's life and works to the Filipino people.

Prerequisite: English 12 (Communication Skills II)

3 hrs a week (3 lec)

Credit: 3 units

Rationale: This course is split into two separate subjects (Soc Sci 15 and Soc Sci 16) as required by CHED to be incorporated in this proposed revision.

C. Change in Course Number and Prerequisite

1. From:

AE 136- THERMODYNAMICS- Basic laws of thermodynamics; characteristics of gases, vapor and mixtures

Prerequisite: Math 123 (Integral Calculus)

3 hrs a week (3 lec)

Credit: 3 units

To:

AE 130- THERMODYNAMICS- (Same course description)

Prerequisite: Math 123 (Integral Calculus) or Math 113 (Analytic Geometry & Calculus II)

3 hrs a week (3 lec)

Credit: 3 units

Rationale: The slight change in the course number is to avoid duplication of number with AE 136 (Thermodynamics and Heat Transfer) under the newly revised curriculum of the BSAE program. The proposed AE 130 shall become a service course to be offered to other interested degree-offering departments.

Since Math 113 (Analytic Geometry & Calculus II) is equivalent to taking Math 123 (Integral Calculus), the prerequisite of AE 130 shall also reflect these two alternative prerequisites.

B. Courses for Substitution

1. From:

Math 11- COLLEGE ALGEBRA- Fundamentals of mathematics; linear and quadratic equations, exponents and radicals; binomial theorem, variation and progression

Prerequisite: None

3 hrs a week (3 lec)

Credit: 3 units

and

Math 12- PLANE TRIGONOMETRY- Trigonometric functions and identities; solutions of triangles; logarithms and their applications; radian measures, complex number and inverse trigonometric functions

To:

Math 13- COLLEGE ALGEBRA AND TRIGONOMETRY- Algebraic functions; systems of equations & inequations; complex numbers; transcendental functions, solutions to triangles (plane and spherical) and their application.

Prerequisite: None

5 hours a week (lec)

Credit: 5 units

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2 **Rationale:** The purpose of the substitution is for conformity in the offering of
3 mathematics courses in all engineering degree programs of LSU. The BS in
4 Geodetic and Geomatic Engineering which is proposed to be offered beginning
5 SY 2003-2004 shall be implementing the combined Math 13 for algebra and
6 trigonometry as a 5-unit semester course which is commonly adopted by most
7 engineering schools. Completion of the required mathematics subjects in two
8 years prepares the students to take engineering science courses starting third
9 year.

10
11 Other degree-offering departments, particularly those offering applied
12 sciences, may follow the combined Math 13 in their curricula as equivalent to
13 Math 11 and Math 12.
14

Course Schedule

BACHELOR OF SCIENCE IN AGRICULTURAL ENGINEERING

PRESENT						PROPOSED					
Course No.		Descriptive Title	Lec	Lab	Unit	Course No.		Descriptive Title	Lec	Lab	Unit
FIRST YEAR						FIRST YEAR					
First Semester						First Semester					
Eng	11	Comm. Skills I	3	0	3	Eng	11	Comm. Skills I	3	0	3
Psycho	11	Gen. Psychology	3	0	3	Psycho	11	Gen. Psychology	3	0	3
SocSci	13	Socio-Econ. Systems	3	0	3	SocSci	13	Socio-Econ. Systems	3	0	3
PI	11	Phil.Hist. Const. & Rizal	3	0	3						
Chem	11	General Chemistry I	3	3	4	Chem	11	General Chemistry I	3	3	4
Math	11	College Algebra	3	0	3	Math	13	College Algebra & Trigon.	5	0	5
PE	11	Phys. Fitness & Gymn.			(2)	PE	11	Phys. Fitness & Gymn.			(2)
CMT 11/Euthenics 11					(1.5/1)	NSTP 11					(3)
					19						18
Second Semester						Second Semester					
Eng	12	Comm. Skills II	3	0	3	Eng	12	Comm. Skills II	3	0	3
Socio	11	General Sociology	3	0	3	Socio	11	General Sociology	3	0	3
Philo	12	Contemp Philo Thoughts	3	3	4	Philo	12	Contemp. Philo. Thoughts	3	0	3
Bio	11	General Biology	3	3	4	Bio	11	General Biology	3	3	4
Chem	21	General Chemistry II	2	3	3	Chem	21	General Chemistry II	2	3	3
Math	12	Plane Trigonometry	3	0	3	Math	112	Anal. Geom.& Calc.I	5	0	5
PE	12	Rec'l.Games, Rhyth .Act.			(2)	PE	12	Rec'l. Games,Rhyth,Acti.			(2)
CMT 12/Euthenics 12					(1.5/1)	NSTP 12					(3)
					19						21
SECOND YEAR						SECOND YEAR					
First Semester						First Semester					
Speech	11	Speech Communication	3	0	3	Speech	11	Speech Communication	3	0	3
Eng	15	Adv. Grammar & Comp.	3	0	3	Hum	11	Introd. to Humanities	3	0	3
Agro	21	Fund. of Crop Prod.	2	3	3	Agro	21	Fund. of Crop Prod.	2	3	3
AnSci	22	Prin.of Animal Prod.	2	3	3	An.Sci	22	Prin. of Animal Prod.	2	3	3
Physics	11	General Physics	3	3	4	Physics	11	General Physics	3	3	4
Math	112	Anal. Geom. & Calc. I	5	0	5	Math	113	Anal. Geom.& Calc.II	5	0	5
PE	13	Team Sports			(2)	PE	13	Team Sports			(2)
CMT 21/Euthenics 13					(1.5/1)						
					21						21
Second Semester						Second Semester					
Eng	26	Argument & Debate	3	0	3	SocSci	15	Phil. Hist. & Const.	3	0	3
SS	22	Fund. of Soil Science	2	3	3	SS	22	Fund. of Soil Science	2	3	3
Phys	21	College Physics	2	3	3	Phys	21	College Physics	2	3	3
Math	113	Anal.Geom. & Calc. II	5	0	5	CS	21	Introd. to Computers	2	3	3
CS	21	Introd. to Computers	2	3	3	Math	114	Calc. III & Diff. Eqns.	5	0	5
AE	122	Eng'g. Graphics I	1	6	3	AE	122	Eng'g. Graphics I	1	6	3
PE	14	Individual Sports			(2)	PE	14	Individual Sports			(2)
MS/					(1.5/1)						
					20						20
THIRD YEAR						THIRD YEAR					
First Semester						First Semester					
Math	114	Calc. III & Diff. Eqns	5	0	5	SocSci	16	Life & Works of Rizal	3	0	3
CS	134	Prin. of Comp. Program.	2	3	3	CS	134	Prin. of Comp. Program.	2	3	3
AE	131	Eng'g. Graphics II	1	3	2	AE	131	Eng'g. Graphics II	1	3	2
AE	133	Eng'g. Mechanics	5	0	5	AE	133	Eng'g. Mechanics	5	0	5
AE	135	Fund. of Surveying	1	6	3	AE	135	Fund. of Surveying	1	6	3
AE	137	Eng'g. Materials	2	3	3	AE	137	Eng'g. Materials	2	3	3
					21						19
Second Semester						Second Semester					
Stat	21	Elem. Statistics	2	3	3	Stat	21	Elem. Statistics	2	3	3
AE	132	Shop Practice	1	6	3	AE	132	Shop Practice	1	6	3
AE	134	Fluid Mechanics	3	3	4	AE	134	Fluid Mechanics	3	3	4
AE	136	Thermo. & Heat Transfer	5	0	5	AE	136	Thermo.& Heat Transfer	5	0	5
AE	138	Dynamics of Machinery	2	3	3	AE	138	Dynamics of Machinery	2	3	3
AE	142	Strength of Materials	3	0	3	AE	142	Strength of Materials	3	0	3
					21						21
FOURTH YEAR						FOURTH YEAR					
First Semester						First Semester					
AE	151	Structural Design	2	3	3	AE	151	Structural Design	2	3	3
AE	153	Machinery Design	2	3	3	AE	153	Machinery Design	2	3	3
AE	155	Hydrometeorology	2	3	3	AE	155	Hydrometeorology	2	3	3
AE	157	Water Mngt. Eng;'g.	2	3	3	AE	157	Water Mngt. Eng'g.	2	3	3
AE	159	Agricultural Power	3	0	3	AE	159	Agricultural Power	3	0	3
AE	161	Crop Processing	2	3	3	AE	161	Crop Processing	2	3	3
AE 198/ Elective Res. Plann. & Manus. Prep.*/Elective**			3	0	3	AE 198/Elective Res. Plann. & Manus. Prep.*/Elective**			3	0	3
					21						21

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PRESENT						PROPOSED					
Course No.	Descriptive Title		Lec	Lab	Unit	Course No.	Descriptive Title		Lec	Lab	Unit
		<u>Second Semester</u>						<u>Second Semester</u>			
Ecol	21	Fund. of Ecology	2	3	3	Eng	21	Introd. to Literature	3	0	3
AE	152	Agricultural Structures	2	3	3	AE	152	Agricultural Structures	2	3	3
AE	154	Electronics & Instrum.	2	3	3	AE	154	Electronics & Instrum.	2	3	3
AE	156	Environ. Control Eng'g	2	3	3	AE	156	Environ. Control Eng'g.	2	3	3
AE	158	S & W Conserv. Eng'g.	2	3	3	AE	158	S & W Conserv. Eng'g.	2	3	3
AE	162	Ag. Machinery & Eqpt.	2	3	3	AE	162	Ag. Machinery & Eqpt.	2	3	3
AE	200	Undergraduate Thesis			<u>1</u>	AE	200	Undergraduate Thesis			<u>1</u>
					19						19
<u>Summer</u>						<u>Summer</u>					
AE 200/200a – Undergraduate Thesis*/ Field Practice ***					2/4	AE 200/200a- Undergraduate Thesis*/ Field Practice ***					2/3
<u>FIFTH YEAR</u>		<u>First Semester</u>				<u>FIFTH YEAR</u>		<u>First Semester</u>			
Hum	11	Intro. To Humanities	3	0	3	Fil	11	S. ng Pakipagtalastasan at Retorika	3	0	3
						Ecol	21	Fund. Of Ecology	2	3	3
SocSci	14	Phil.Soc.Prob., Agrar. Reform & Taxation	3	0	3	SocSci	14	Phil.Soc.Prob., Agrar. Reform & Taxation	3	0	3
PP	21	Prin. Of Plant Protection	2	3	3	PP	21	Prin. Of Plant Prot.	2	3	3
Econ	21	Farm Management	2	3	3	Econ	21	Farm Management	2	3	3
AE	171	Rural Electrification	2	3	3	AE	171	Rural Electrification	2	3	3
AE	173	Ref.& Air Conditioning	3	0	3	AE	173	Ref. & Air Conditioning	3	0	3
AE 200/200a- Undergraduate Thesis*/ Field Practice***					<u>1</u>	AE 200/200a Undergraduate Thesis*/ Field Practice **					<u>1</u>
					19						22
		<u>Second Semester</u>						<u>Second Semester</u>			
						Fil	12	Panitikang Filipino	3	0	3
						Elective***			3	0	3
						Elective***			3	0	3
AE	182	Eng'g. Economy	3	0	3	AE	182	Eng'g. Economy	3	0	3
AE	184	Eng'g. Specifications, Contract & Ethics	3	0	3	AE	184	Eng'g. Specifications, Contract & Ethics	3	0	3
AE	199	Undergraduate Seminar	1	0	1	AE	199	Undergraduate Seminar	1	0	1
AE 200/200a – Undergraduate Thesis*/ Field Practice***					<u>2/1</u>	AE 200/200a Undergraduate Thesis*/ Field Practice ***					<u>2</u>
					9/8						12/18

TOTAL UNITS -----

191

TOTAL UNITS -----

196/202

* - For Thesis Option

** - Elective for Field Practice Option. English 24 (Scientific Writing) or AE 198 (Res. Planning and Manuscript Preparation)

*** - For Field Practice Option

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1 ANALYSIS OF COURSES

2

PRESENT				PROPOSED			
1. General Education Courses				1. General Education Courses			
Eng	11	Communication Skills I	3	Eng	11	Communication Skills I	3
Eng	12	Communication Skills II	3	Eng	12	Communication Skills II	3
Eng	15	Adv. Grammar & Composition	3	SocSci	16	Life & Works of Rizal	3
Speech	11	Speech Communication	3	Speech	11	Speech Communication	3
Socio	11	General Sociology	3	Socio	11	General Sociology	3
Psycho	11	General Psychology	3	Psycho	11	General Psychology	3
Hum	11	Intro. to Humanities	3	Human	11	Intro. to Humanities	3
Philo	12	Contemp. Philo Thoughts	3	Philo	12	Contemp. Philo. Thoughts	3
PI	11	Phil. Hist. Const. & Rizal	3	Soc.Sci	15	Phil. Hist. & Constitution	3
SocSci	13	Socio-Economics Systems	3	SocSci	13	Socio-Economic Systems	3
Soc.Sci	14	Phil. Soc. Prob. Agrarian Reform and Taxation	3	Soc.Sci	14	Phil. Soc. Prob., Agrarian Reform and Taxation	3
Chem	11	General Chemistry I	4	Chem	11	General Chemistry I	4
Bio	11	General Biology	4	Bio	11	General Biology	4
Math	11	College Algebra	3	Math	13	College Algebra & Trigonometry	5
Math	12	Plane Trigonometry	3				
Physics	11	General Physics	4	Physics	11	General Physics	4
				Fil	11	Sining ng Pakipagtalastasan at Retorika	3
				Fil	12	Panitikang Filipino	3
		Subtotal Units ---	51			Subtotal Units ---	56
2. Fundamental Courses				2. Fundamental Courses			
Eng	26	Argument & Debate	3	Eng	21	Introduction to Literature	3
PP	21	Prin. of Plant Protection	3	PP	21	Prin. of Plant Protection	3
Econ	21	Farm Management	3	Econ	21	Farm Management	3
Chem	21	General Chemistry II	3	Chem	21	General Chemistry II	3
Agro	21	Fund. of Crop Production	3	Agron	21	Fund. of Crop Production	3
AnSci	22	Principles of Animal Production	3	AnSci	22	Principle of Animal Production	3
SS	22	Fund. of Soil Science	3	SS	22	Fundamental of Soil Science	3
Stat	21	Elementary Statistics	3	Stat	21	Elementary Statistics	3
Physics	21	College Physics II	3	Physics	21	College Physics II	3
CS	21	Intro. to Computers	3	CS	21	Intro. to Computers	3
Ecol	21	Fund. of Ecology	3	Ecol	21	Fund. of Ecology	3
		Subtotal Units -----	33			Subtotal Units -----	33
3. Major Courses				3. Major Courses			
Math	112	Anal. Geom. & Calculus I	5	Math	112	Anal. Geom. & Calculus I	5
Math	113	Anal. Geom. & Calc. II	5	Math	113	Anal. Geom. & Calculus II	5
Math	114	Calculus III and Diff. Equations	5	Math	114	Calc. III & Diff. Equations	5
CS	134	Prin. of Computer Programming	3	CS	134	Prin. of Computer Programming	3
AE	122	Engineering Graphics I	3	AE	122	Engineering Graphics I	3
AE	131	Engineering Graphics II	2	AE	131	Engineering Graphics II	2
AE	132	Shop Practice	3	AE	132	Shop Practice	3
AE	133	Engineering Mechanics	5	AE	133	Engineering Mechanics	5
AE	134	Fluid Mechanics	4	AE	134	Fluid Mechanics	4
AE	135	Fundamental of Surveying	3	AE	135	Fundamental of Surveying	3
AE	136	Thermo. & Heat Transfer	5	AE	136	Thermo. & Heat Transfer	5
AE	137	Engineering Materials	3	AE	137	Engineering Materials	3
AE	138	Dynamics of Machinery	3	AE	138	Dynamics of Machinery	3
AE	142	Strength of Materials	3	AE	142	Strength of Materials	3
AE	151	Structural Design	3	AE	151	Structural Design	3
AE	152	Agricultural Structures	3	AE	152	Agricultural Structures	3
AE	153	Machinery Design	3	AE	153	Machinery Design	3
AE	154	Electronics & Instrumentation	3	AE	154	Electron. and Instrumentation	3
AE	155	Hydrometeorology	3	AE	155	Hydrometeorology	3
AE	156	Environ. Control Engineering	3	AE	156	Environ. Control Engineering	3
AE	157	Water Management Engineering	3	AE	157	Water Management Engineering	3
AE	158	S & W Conservation Engineering	3	AE	158	S & W Conservation Eng'g.	3
AE	159	Agricultural Power	3	AE	159	Agricultural Power	3

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AE	161	Crop Processing	3	AE	161	Crop Processing	3
AE	162	Ag. Machinery and Equipment	3	AE	162	Ag. Machinery and Equipment	3
AE	171	Rural Electrification	3	AE	171	Rural Electrification	3
AE	173	Ref. & Air Conditioning	3	AE	173	Ref. & Air Conditioning	3
AE	182	Engineering Economy	3	AE	182	Engineering Economy	3
AE	184	Eng'g. Specifications, Contract & Ethics	3	AE	184	Eng'g. Specifications, Contract & Ethics	3
AE	198	Res. Planning & Manus. Prep.	3	AE	198	Res. Planning & Manus. Prep.	3
AE	199	Undergraduate Seminar	1	AE	199	Undergraduate Seminar	1
AE 200/200a		Undergraduate Thesis*/Field Practice***	6	AE 200/200a		Undergraduate Thesis*/Field Practice***	6
Subtotal Units -----			107	Subtotal Units ---			107
4. Electives***				4. Electives*** (select 2 courses only)			
				Agrib	21	Introduction to Agribusiness	3
				Mgmt	130	Feasibility Study Preparation	3
				Ext	132	Principles, Methods and Strategies in Extension	3
				RS	126	Philippine Rural Society	3
TOTAL UNITS -----			191	Subtotal Units ---			6
							196/202

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Summary

5

6

Present Proposed

7

General Education 51 56

Fundamental Courses 33 33

Major Courses 107 107

Elective Courses 6***

TOTAL UNITS ----- 191 196/202

13

*** - For field practice option only.

15

16

17