The University Faculty approved the recommendations of the Rules Committee.

Dean Ginger announced that the United Community Services drive at the University had been successful and that at that time all but about \$50 of the University's quota had been subscribed.

The Faculty adjourned.

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Robert L. Mills

Secretary

Minutes of the University Faculty, December 12, 1955

The University Faculty met in the Assembly Room of Lafferty Hall at 4:00 p.m., Monday, December 12, 1955. President Donovan presided. Members absent were Staley F. Adams, A. D. Albright*, Frank G. Dickey*, C. Howard Eckel*, W. P. Garrigus, Carsie Hammonds*, W. A. Heinz*, E. J. Humeston, A. D. Kirwan, R. D. McIntyre, L. L. Martin, Helen Reed, Dwight M. Seath*, Earl P. Slone, William G. Survant, W. A. Sutton, Jr.*, and Frank J. Welch.

The minutes of November 14 were read and approved.

Dr. Chamberlain read the resolutions on the death of Lysle W. Croft. The University Faculty approved having the Resolutions included in the minutes of the Faculty and asked that a copy be sent to Mrs. Croft.

LYSLE WARRICK CROFT

Dr. Lysle Warrick Croft, Director of the University Personnel Office and Associate Professor of Psychology, died on December 1, 1955 after an illness of several weeks.

Dr. Croft was an alumnus of the University of Kentucky. He graduated from the College of Commerce in 1926 and in 1932 was awarded the degree of Master of Arts with a major in psychology. He continued his studies in psychology and in 1938 received the degree of Doctor of Philosophy.

From 1936, when he was first employed as a student counselor, until the time of his death Dr. Croft served the University in a number of capacities—-teacher of psychology, Assistant Dean of Men, Assistant Dean of the College of Arts and Sciences, and Director of the University Personnel Office. The latter office came into being as a result of his initiative. In recent years it has rendered many

^{*}Absence explained

and important services to the students, the faculty, and the administration of the University due primarily to Dr. Croft's skillful planning, his leadership, and his peculiar genius in matters of guidance and counseling.

Dr. Croft has contributed signigicantly to the work of a number of professional societies. He was a Fellow of the American Psychological Association, and he served as President of the Southern College Personnel Association for two years. From 1949 to 1951 he was a member of the Executive Board of the American College Personnel Association.

For a period of five and one-half years Dr. Croft served his country as an officer in the United States Army. He was discharged with the rank of Colonel in 1946.

Few men have served the University of Kentucky more faithfully or with greater loyalty than has Lysle Croft. He was devoted to his work and to this institution. His enthusiasm, his unflagging energy even in declining health, and his cheerfulness and optimism won him a host of friends and admirers. He will be sorely missed here on the campus that he loved so much.

It is therefore resolved that this testimony to his life and to his service to his country and his University be made a part of the minutes of the meeting of the University Faculty of December 12, 1955, and that a copy be sent to his wife.

Frank G. Dickey
D. V. Terrell
Leo M. Chamberlain

Dean Terrell presented for the College of Engineering a list of courses to be dropped, changes in courses and new courses; also outlines of revised curricula. The recommendations from the College of Engineering were approved.

At its meeting on November 21, 1955, the Faculty of the College of Engineering made the following recommendations to the University Faculty to be effective the First Semester, 1956-57:

COURSES TO BE DROPPED

Civil Engineering 114 ADVANCED SURVEYING, 3 credits

Civil Engineering 174 GRAPHIC SOLUTIONS, 2 credits

Electrical Engineering 18 GRAPHICAL REPRESENTATIONS, 2 credits

Electrical Engineering 102 ELECTRICAL MACHINERY, 2 credits

Mechanical Engineering 122b SEMINAR, 1 credit

Metallurgical Engr 29 METALLURGY OF THE FERROUS METALS, 3 credits

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Metallurgical Engr 128 METALLURGY OF THE NON-FERROUS METALS, 3

credits NOTE: The two immediately preceding courses will be combined in a new course, Met Engr 33 - Extractive Metallurgy, 5 credits

Metallurgical Engr 121 FUEL AND METALLURGICAL LABORATORY, 2 credits

Metallurgical Engr 167 MINERALS BENEFICIATION LABORATORY, 1 credit

Mining Engineering 131 MINE SURVEYING PRACTICE, 1 credit

Mining Engineering 134 MINING METHODS, 2 credits
Mining Engineering 135 GOAL MINING, 2 credits

NOTE: The two immediately preceeding courses will be combined in a new course, Min Engr 145-Mining Methods, 3 credits

Mining Engineering 138 MINE PLANT DESIGN, 2 credits. (to be incorporated into Min Engr 137 - Mine Plant and Machinery.)

NEW COURSES

Civil Engineering la,b-THE ENGINEERING PROFESSION (Freshman) (0) each I, II

Electrical Engineering la,b-THE ENGINEERING PROFESSION (Freshman) (0) each,
I, II

Mechanical Engineering la,b-THE ENGINEERING PROFESSION (Freshman) (0) each I, II

Metallurgical Engineering la,b-THE ENGINEERING PROFESSION (Freshman)
(0) each, I, II

Mining Engineering la,b-THE ENGINEERING PROFESSION (Freshman) (0) each, I, II

Each of the above courses is described as follows:
Lectures on professional growth, conduct, and ethics. Activities of
the student branches of the corresponding professional societies.

Civil Engineering 175-TIMBER STRUCTURES. (2) I, II Leggett Theory and design of structural timber beams, columns, trusses as related to buildings and bridges. Recitation, one hour; drawing room, three hours. Prereq: C. E. 171a.

Metallurgical Engineering 33-EXTRACTIVE METALLURGY (5) I Crouse

The principles and processes employed in the production, treatment and
preparation of the various economic metals, both ferrous and non-ferrous,
including a consideration of their strategic and economic importance.

Prereq: Met E 27.

Metallurgical Engineering 180-THE CASTING OF METALS. (3) I, II Swift, Crouse Ferrous and non-ferrous foundry Practice. Theory and metallurgy of metal castings. Application of engineering principles to the design and production of castings. Lecture and recitation, three hours.

I Prereq: Met E 26 or 27 or 37.

- Mining Engineering 145-MINING METHODS. (3) I Swift and Spokes Surface and underground mining of coal, metallic ores, and non-metallic minerals. Economic, engineering and operating factors. Lecture and recitation, three hours. Prereq: Min E 126.
- COURSES INVOLVED IN REDUCTION OF CREDIT AND CHANGE IN CATALOG DESCRIPTION
- Civil Engineering 12-PIANE SURVEYING -- 3 credits to 2 credits. Described as follows:
- Civil Engineering 12-PLANE SURVEYING. (2) I, II Blythe Principles, field practice and calculations. General use and care of surveying instruments. Class work, one hour; field work, three hours. Prereq: Math 18.
- Civil Engineering 16a-ROUTE SURVEYING--3 credits to 2 credits. Described as follows:
- Civil Engineering 16a-ROUTE SURVEYING. (2) I, II Shaver Curves, line, grade, earthwork and theory of location as it applies to railroads, highways and pipe lines. Lecture and recitation, two hours. Prereq: C. E. 12.
- Civil Engineering 110a-REINFORCED CONCRETE--4 credits to 3 credits.

 Described as follows:
- Civil Engineering 110a-REINFORCED CONCRETE. (3) I, II Leggett
 Theory and design of beams, slabs, girders, and columns as related to
 building frames, retaining walls and bridges. Lecture and recitation,
 three hours. Prereq: C. E. 171a.
- Reduction of Credit and Change in Catalog Description (Cont.)
- Civil Engineering 110b-REINFORCED CONCRETE--3 credits to 2 credits.

 Described as follows:
- Civil Engineering 110b-REINFORCED CONCRETE. (2) I, II Mory Continuation of C.E. 110a, with special emphasis on complete structures. Lecture, one hour; drawing room, three hours. Prereq: C.E. 110a.
- Electrical Engineering 105a-ELECTRICAL ENGINEERING CIRCUITS AND MACHINERY.
 4 credits to 3 credits. Described as follows:
- Electrical Engineering 105a-ELECTRICAL ENGINEERING CIRCUITS AND MACHINERY.

 (3) I Back. (For Mechanical engineers) Study of electrical circuits and machinery and their control as found in modernly equipped installations. Three class hours. Prereq: Phys 3b and Math 20b.
- Electrical Engineering 105b-ELECTRICAL ENGINEERING CIRCUITS AND MACHINERY.
 4 credits to 3 credits. Described as follows:
- Electrical Engineering 105b-ELECTRICAL ENGINEERING CIRCUITS AND MACHINERY.

 (3) II Back. (For Mechanical engineers) Continuation of E. E. 105a.

 Three class hours.

- Mechanical Engineering 129-ELEMENTS OF HEAT TRANSFER. Reduce from 4 credit hours to 3 credit hours. (No change in course write-up.)
- Metallurgical Engineering 60-METALLURGICAL LABORATORY AND SHOP PRACTICE.
 Reduce credit from 6 credits to 3 credits. Described as follows:
- Metallurgical Engineering 60-METALLURGICAL LABORATORY AND SHOP PRACTICE.

 (3) II Duncan and Staff. Metallurgical and Foundry problems. Lecture and recitation, one hour; laboratory six hours. Prereq: Five semesters in Metallurgical Engineering or its equivalent.
- Metallurgical Engineering 37-ADAPTIVE METALLURGY FOR ENGINEERS. Reduce credit from 4 credits to 3 credits. No change in course write-up.
- Metallurgical Engineering 132-METALLURGICAL CALCULATIONS. Reduce credit from 5 credits to 3 credits. Described as follows:
- Metallurgical Engineering 132-METALLURGICAL CALCULATIONS. (3) I Crouse Calculations involved in the application of metallurgical principles. Recitations and problems, three hours. Prereq: Chem 22 and Met E. 33.

as

Applied Mechanics 107--MECHANICAL VIBRATIONS. Reduce from 4 credits to 3 credits.

CHANGE OF COURSE DESCRIPTION

- Change description of Mining Engineering 137, MINE PLANT AND MACHINERY, to read as follows:

 Theory and practice of mine haulage, hoisting, drainage, pumping, and compressed air as power. Application of engineering principles to the mineral industries. Prereq: Min E 126 and senior classification.
- Change description of <u>Civil Engineering 15</u>, GENERAL SURVEYING, to read as follows:
 Given at the Summer Camp, Noble, Kentucky. Theory, field and office practice in Plane and Geodetic surveying including the study and use of aerial photographs. Prereq: Approval of the Head of the Department.
- Change description of Civil Engineering 16b, ROUTE SURVEYING, to read as follows:

 Given at the Summer Camp, Noble, Kentucky. Theory, field and office practice in route-surveys including the application of aerial photographs in this work. Prereq: Approval of the Head of the Department.
- Change description of <u>Civil Engineering 17</u>, HYDROGRAPHIC SURVEYING, to read as follows:

 Given at the Summer Camp, Noble, Kentucky. Theory, field and office practice in hydrographic surveys. Prereq: Approval of the Head of the Department.
- Change description of <u>Civil Engineering 171a</u>, THEORY OF STRUCTURES, to read as follows:

 Analytical and graphical analysis of stresses in simple and indeterminate structures, including beams, girders, trusses, towers and building frames.

 Lecture and recitation, three hours. Prereq. or concur: A. M. 100.

CHANGE OF COURSE TITLE AND DESCRIPTION

Change Mining Engineering 130, MINE ADMINISTRATION, to read as follows:

Mining Engineering 130-MINERAL INDUSTRIES ADMINISTRATION. (3) I Spokes and Swift

The engineering aspects of mineral industries administration and management, including safety engineering. Lecture and recitation, three hours. Prereq: Junior classification.

EXPANSION OF CREDITS

Please expand the number of credits for the following courses:

Mechanical Engineering 114b-AIR CONDITIONING, HEATING AND VENTILATING DESIGN.

Expand from 3 credits to 4 credits.

Mechanical Engineering 137-MOTION AND TIME STUDY. Expand from 3 credits to 4 credits.

Mechanical Engineering 107-FLUID MECHANICS. Expand from 3 credits to 4 credits.

Mining Engineering 136-MINE VENTILATION. Expand from 2 credits to 3 credits.

Mining Engineering 139-VALUATION OF MINERAL PROPERTIES. Expand from 2 credits to 3 credits.

CHANGE OF COURSE NUMBER

Change <u>Civil Engineering 1</u>, CIVIL ENGINEERING PROBLEMS, to <u>Civil Engineering</u> 5, CIVIL ENGINEERING PROBLEMS. (Change in course number only.)

CHANGE IN COURSE NUMBER, TITLE, AND DESCRIPTION

Change Mechanical Engineering 1, MECHANICAL ENGINEERING PROBLEMS to Mechanical Engineering 5, SLIDE RULE.

Mechanical Engineering 5-SLIDE RULE (1) I, II walton
Theory and application of the slide rule. One recitation per week.
Prereq: Math 18.

Admission. On entering the College of Engineering, each student must select the curricula in which he expects to do his major work and register in the appropriate department. In addition to meeting the general requirements for admission to the University, the applicant for admission to the freshman class of the College of Engineering shall include in high school credits one unit of plane geometry and one and one-half units of algebra. It is recommended that the student offer one-half unit in solid geometry, otherwise this subject will be added to the requirements of the freshman year.

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Students who have had sufficient mathematics in high school and who score high on the classification test may, by special examination, be excused from College Algebra and Trigonometry and begin their college mathematics with Plane Analytic Geometry.

Students whose scores on the University classification tests are in the lower one-fourth, or those lacking in the requirements for mathematics, may enter the College of Engineering. The schedules of such students will be adjusted in accordance with their placement tests as directed by a special orientation committee of the College of Engineering and the Personnel Office.

Options and Electives. In some of the curricula certain options or electives are allowed. All electives must be approved by the Head of the Department in which the student is taking his major work. In general the non-technical electives shall be selected from the following fields: -- history, economics, government, literature, sociology, philosophy, psychology, and fine arts.

Requirements for Graduation. To receive the Bachelor of Science degree in any one of the five branches of engineering a student must meet the following requirements:

(a) Complete a minimum of 130 semester hours with a standing of 2.0, exclusive of the basic work in Military Science and Physical Education.

(b) Complete the curriculum of the department in which he is taking his major work.

Curricula Leading to the Degree of Bachelor of Science in Civil Engineering

FRESHMAN YEAR

	SECOND SEMESTER	
Crs		Crs
0	C E 1b The Engineering Profession	0
3	C E 5Civil Engineering Problems	1
3	Eng 1bEnglish Composition	3
3	Math 19 Plane Analytic Geometry	3
4	Chem 2bGen Chem for Engineers	4
	0 3 3 3	Crs O C E 1bThe Engineering Profession 3 C E 5Civil Engineering Problems 3 Eng 1bEnglish Composition 3 Math 19Plane Analytic Geometry

Minutes of the University Faculty, December 12, 1955

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E D laElem Engineering Drawing	2	E D 1bDescriptive Geometry 2
Military or Air Science	2	C E 12Plane Surveying 2
Physical Education	1.	Military or Air Science 2
		Physical Education 1
	18	18
	OPTION	ONE
General (Civil 1	Engineering
SOPI	HOMORE	
FIRST SEMESTER		SECOND SEMESTER
	Crs	Crs
C E 2a-The Engineering Profession	0	C E 2bThe Engineering Profession 0
Math 20aDifferential Calculus	4	Math 20bIntegral Calculus 4
Phys 3aGeneral College Physics	3	Phys 3bGeneral College Physics 3
Phys 4aPhysics Laboratory	2	Phys 4bPhysics Laboratory 2
C E 16a Route Surveying	2	A M 3Statics
C E 18Mapping & Topo Drawing	2	Military or Air Science 2
Military or Air Science	2	*Non-technical Elective 4
*Non-technical Elective	3	20
	18	18
III	IOR YE	A P
FIRST SEMESTER	TON 114	SECOND SEMESTER
FIRST SEMESTER	Crs	Crs Crs
C. F. On The Engineering Profession	0	
C E 3aThe Engineering Profession	4	C E 3bThe Engineering Profession 0 A M 4Dynamics 2
A M 100Strength of Materials	1	Geol 12bElem Geology for Engrs 3
C E 81Testing of Materials E E 101Fund of Elec Machinery	3	M E 134-Elem of Engr Thermodynamics 3
Geol 12a-Elem Geol for Engineers	3	C E 107-Soil Mechanics
C E 171a Theory of Structures	3	
*Non-technical Elective	3	C E 173a-Steel Structures 3
WOUL DECIMICAL PIECOTAE	,	*Non-technical Elective 2
	17	C E 171bTheory of Structures 3 C E 173aSteel Structures 3 *Non-technical Elective 2 19
SUMMER	TERM	
Surveying Ca	mp - 6	Weeks
		Crs .
C E 15General S	urveyi	ng 3
C E 16BRoute Su	rveyin	g 3
C E 17Hydrograp	hic Su	
		7
		45
	IOR YE	
FIRST SEMESTER		SECOND SEMESTER Crs
	Crs	
C E 4a The Engineering Profession	0	C E 4bThe Engineering Profession 0
A E 7aBuilding Construction	3	E A 102Engineering Administration 3
C E 110aReinforced Concrete	3	O E 23 - Deminar
C E 120Hydraulics	2	O E IIODECHEIMIGICER COMOZOGO
C E 123Hydraulies Laboratory	1	C E 130bHighway Engineering 3

Crs

19

C E 130aHighway Engineering C E 49Railway Constr & Maint		C E 151Water Supply & Waterworks C E 152Sewers & Sewage Disposal C E 159Design & Operation of	2 2
C E 175Timber Structures C E 173bSteel Structures		Waterworks and Sewers *Non-technical Elective	2 3
*Non-technical Elective	19	The ampropriation of the second	18

*See Statement on Options and Electives.

FIRST SEMESTER

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OPTION TWO

Architectural Engineering

FRESHMAN YEAR same as Option One.

SOPHOMORE YEAR

Crs

	0		
C E 2a The Engineering Profession	0	C E 2bThe Engineering Profession	0
Math 20aDifferential Calculus	4	Math 20bIntegral Calculus	4
Phys 3a General College Physics	3	Phys 3bGeneral College Physics	3
Phys 4aPhysics Laboratory	2	Phys 4bPhysics Laboratory	2
C E 16a Route Surveying	2	A M 3Statics	3
Art 61-Elementary Drawing	2	Art 62Basic Design	3
Military or Air Science	2	A E 1Architectural Rendering	2
*Non-technical Elective	3	Military or Air Science	2
	18		19
JUNIOR	YEA	R	
FIRST SEMESTER		SECOND SEMESTER	
	Crs		Crs
C E 3a The Engineering Profession	0	C E 3bThe Engineering Profession	0
A M 100 Strength of Materials	4	C E 171b Theory of Structures	3
C E 81 Testing Materials	1	C E 173aSteel Structures	3
C E 171a Theory of Structures	3	A E 7bBuilding Construction	3
A E 7aBuilding Construction	3	A E 4b Architectural Design	3
A E 4aArchitectural Design	3	Art 145bHistory of Architecture	2
Art 145a History of Architecture	2	E E 101 Fund of Elec Machinery	3
*Non-technical Elective	2	A M 4Dynamics	2
	On the last of		

SECOND SEMESTER

SUMMER TERM

Surveying Camp - 6 Weeks

C	E	15General Surveying	3
C	E	16bRoute Surveying	3
C	E	17 Hydrographic Surveying	1
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SENIOR YEAR SECOND SEMESTER FIRST SEMESTER Crs Crs C E 4a-The Engineering Profession O C E 4b-The Engineering Profession O 3 C E 110b -- Reinforced Concrete C E 110a -- Reinforced Concrete 2 2 C E 173b--Steel Structures C E 120 -- Hydraulics C E 123 -- Hydraulics Laboratory 1 C E 23--Seminar 4 E A 102-Engineering Administration 3 A E 6a--Advanced Arch Design M E 141a-Mech & Rec Equip for bldgs 3 M E 141b-Mech & Elec Equip for Bldgs 3 FP & SE 101a--Fire Protection Engr 2 A E 6b--Adv Architectural Design 4 3 Econ 51--Principles of Economics 3 *Non-technical Elective *See statement on Options and Electives.

Curricula Leading to the Degree of Bachelor of Science in Electrical Engineering

FR	ESHM	AN YEAR	
FIRST SEMESTER		SECOND SEMESTER	
	Crs		Crs
E E la The Engineering Profession	0	E E 1bThe Engineering Profession	0
Eng laEnglish Composition	3	Eng 1bEnglish Composition	3
Math 17College Algebra	3	Math 19Plane Analytic Geometry	3
Math 18 Plane Trigonometry	3	Chem 2bGen Chemistry for Engrs	4
Chem 2a Gen Chemistry for Engrs	4	E D 1bDescriptive Geometry	2
E D la Elem Engineering Drawing	2	*Non-technical Elective	3
Military or Air Science	2	Military or Air Science	2
Physical Education	1	Physical Education	1
	18		18

SOPHOMO	DRE :	YEAR	
FIRST SEMESTER		SECOND SEMESTER	
	Crs		Crs
E E 2a The Engineering Profession	0	E E 2bThe Engineering Profession	0
Phys 3a General College Physics	3	Phys 3bGeneral College Physics	3
Phys 4a Physics Laboratory	2	Phys 4b Physics Laboratory	2
Math 20aDifferential Calculus	4	Math 20bIntegral Calculus	4
Met E 26Engineering Metallurgy	3	A M 3Statics	3
E E 11 Electrical Laboratory	1	E E 21RPrinciples of Elec Engr	3
M E 15a Manufacturing Processes	2	E E 21LPrinciples of Flec Engr Lab	1
Military or Air Science	2	Military or Air Science	2
	17		18

	FIRST SEMESTER				PECOND PELEBIEIT	
		Crs				Crs
EE	3aThe Engineering Profession 114RAlternating Current Circ 114LAlt Current Circ Lab	3	E	E	3bThe Engineering Profession 116RAlternating Current mechinery 116LAlternating Current mechinery	7 3

JUNIOR YEAR

ORGOND CHARGED

	Eng 6Essentials of Speech	E E 161RVacuum Tube Electronics E E 161LVacuum Tube Electronics Lab M E 134Elem of Engr Thermodynamics A M 4Dynamics	
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OPTION ONE Electronics and Communication Engineering

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
	Crs		Crs
E E 4a The Engineering Profession	0	E E 4bThe Engineering Profession	0
E E 151aSeminar	1	E E 151bSeminar	1
E E 108RIndustrial Electronics	2	E E 172RAutomatic Control Systems	3
E E 108L-Industrial Elec Lab	1	E E 172LAutomatic Control Sys Lab	1
E E 135RNetworks and Lines	3	E E 164RRadio and TV Circuits	3
E E 135L-Networks and Lines Lab	1	E E 164LRadio and TV Circuits Lab	1
E E 162RRadio Circuits	3	E E 165Fields and Waves	2
E E 162L-Radio Circuits Lab	1	E A 102 Engineering Administration	3
#Technical Elective	3	English 30Business English	2
*Non-technical Elective	3	*Non-technical Elective	3
	18		19

#Math 146Algebraic Methods in Engineering	3 credits
#Physics 155aFundamental Atomic and Nuclear Physics	3 credits
#Physics 111Electricity and Magnetism	3 credits

^{*}See statement on Options and Electives.

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OPTION TWO Electric Power Engineering

SENIOR YEAR

DINI OIL LIMI	44		
FIRST SEMESTER		SECOND SEMESTER	
	Crs		Crs
E E 4a The Engineering Profession	0	E E 4bThe Engineering Profession	0
E E 151aSeminar	1	E E 151bSeminar	1
E E 107RElectrical Controls	2	E E 108RIndustrial Electronics	2
E E 107L-Electrical Controls Lab	1	E E 108L Industrial Electronics Lab	1
E E 123Elec Equipment Problems	2	E E 135RNetworks and Lines	3
E E 137Elec Power Trans & Dist	3	E E 135L Networks and Lines Lab	1
E A 102 Engineering Administration	3	E E 136RIllumination Engineering	2
#Technical Elective	3	E E 136L-Illumination Engr Lab	1
*Non-technical Elective	3	E E 118 Elec Power Plant Equipment	3
		English 30Business English	2
		*Non-technical Elective	3
	18		19

#E E 117 Advanced Alternating Current Machinery	3 credits
#Math 146Algebraic Methods in Engineering	3 credits
#M E 108Internal Combustion Engines	3 credits
#M E 116Elementary Heating, Ventilating, and Air Conditioning	3 credits
*See statement on Options and Electives.	

Curricula Leading to the Degree of Bachelor of Science in Mechanical Engineering

FRE	SHMA	N YEAR	
FIRST SEMESTER		SECOND SEMESTER	
	Crs		Crs
M E la The Engineering Profession	0	M E 1b The Engineering Profession	0
Eng laEnglish Composition	3	M E 5Slide Rule	1
Math 17College Algebra	3	Eng lbEnglish Composition	3
Math 18 Plane Trigonometry	3	Math 19 Plane Analytic Geometry	3
Chem 2aGen Chem for Engineers	4	Chem 2bGen Chem for Engineers	4
E D laElem Engineering Drawing	2	E D 1bDescriptive Geometry	2
Military or Air Science	2	*Geog 10-Economic Geog Survey	3
Physical Education	1	Military or Air Science	2
		Physical Education	1
	18		. 19
SOPHO	MORE	YEAR	

FIRST SEMESTER	SECOND SEMESTER	
	Crs	Crs
M E 2a The Engineering Profession	0 M E 2bThe Engineering Profession	0
Phys 3a General College Physics	3 Phys 3bGeneral College Physics	3
Phys 4a Physics Laboratory	2 Phys 4bPhysics Laboratory	2
Math 20aDifferential Calculus	4 Math 20bIntegral Calculus	4
E D 18 Adv Engineering Drawing	2 M E 20 Anal of Experimental Data	2
M E 15aManufacturing Processes	2 M E 15bManufacturing Processes	2
*Econ 51Principles of Economics	3 A M 3Statics	3
Military or Air Science	2 Military or Air Science	2
	18	18

JUNIO	RYE	AR		
FIRST SEMESTER			SECOND SEMESTER	
	Crs			Crs
M E 3a The Engineering Profession	0	ME	3b The Engineering Profession	0
M E 104aEngineering Thermodynamics	3	ME	104b Engineering Thermodynamic	cs3
A M 2Mechanisms	3	ME	107Fluid Mechanics	4
A M 7Dynamics	3	ME	100aMachine Design	3
A M 100Strength of Materials	4	ME	112 Mechanical Laboratory	2
Math 35 Differential Equations	2	Met	E 37 Adapt Metallurgy for Eng	rs3
*Eng 6Essentials of Speech	3	*So	c 25Collective Behavior	3
	18			18

OPTION ONE Air Conditioning

SENIOR YEAR

	FIRST SEMESTER		SECOND SEMESTER	~
		Crs		Crs
ME	4a The Engineering Profession	0	M E 4b The Engineering Profession	0
	109Refrigeration	3	M E 113bMechanical Laboratory	2
ME	114aAir Cond, Heat, & Ventila	3	M E 114b Air Cond, Heat, & Ventila De	\$4
ME	129 Elements of Heat Transfer	3	M E 105Power Plant Engineering	3
	113a-Mechanical Laboratory	2	A M 107Mechanical Vibrations	3
	122aSeminar	1	E E 105bElec Engr Circ & Mach	3
	105a Elec Engr Circ & Mach	3	E A 102-Engineering Administration	3
ME	100bMachine Design	3	or	
			Chem 147a Physical Chem for Engrs	4
			or	
			Phys 155a Fund Atomic & Nuclear Phys	3
		18	18 0	

OPTION TWO Aeronautical Engineering

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Crs 0

Crs

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SENIOR YEAR

		FIRST SEMESTER				PECOND PEMERIEU	
			Crs				Crs
M	E	4a The Engineering Profession	0	M	E	.4b The Engineering Profession	0
		130Applied Aerodynamics	3	M	E	135 Experimental Aerodynamics	3
		13laAirplane Design	3	M	E	131bAirplane Design	3
		129 Elements of Heat Transfer	3			or	
		100bMachine Design				105Power Plant Engineering	3
M	E	113aMechanical Laboratory	2	M	E	108 Internal Combustion Engines	3
M	E	122aSeminar	1	M	E	13bInternal Comb Engine Lab	1
I	E	105a Elec Engr Circuits & Mach	3	M	E	113bMechanical Laboratory	2
						107Mechanical Vibrations	3
				E	E	105bElec Engr Circuits & Mach	3
			18				18

SECOND SEMESTER

OPTION THREE Industrial Engineering

SENIOR YEAR

FIRST SEMESTER				SECOND SEMESTER	
	Crs				Crs
M E 4aThe Engineering Profession	0	M	E	4b The Engineering Profession	0
M E 137 Motion and Time Study	4	M	E	133Tool Design	3
M E 138Production Engineering	3	M	E	139Plant Layout	3
M E 100bMachine Design	3	M	E	113bMechanical Laboratory	2
M E 113aMechanical Laboratory	2	M	E	122a-Seminar	1
M E 129 Elements of Heat Transfer				107 Mechanical Vibrations	3
E E 105aElec Engr Circuits & Mach	3	E	E	105b Elec Engr Circuits & Mach	3
		E	A	102Engineering Administration	_3_
	18				18

^{*}With the approval of the Head of the Department, other subjects may be substituted.

Minutes of the University Faculty, December 12, 1955

Curriculum Leading to the Degree of Bachelor of Science in Metallurgical Engineering

FRESHMAN YEAR

	FRESHM	IAN I	YEAR	
	FIRST SEMESTER		SECOND SEMESTER	
		Crs		Crs
Mat	E la The Engineering Profession	0	Met E lb The Engineering Profession	
	laEnglish Composition	3	Eng lbEnglish Composition	3
	h 17College Algebra	3	Math 19Plane Analytic Geometry	3
Math	h 18Plane Trigonometry	3	Chem 2bGen Chem for Engineers	4
Chem	n 2a Gen Chem for Engineers	4	E D lbDescriptive Geometry	2
ED	laElem Engineering Drawing	2	Met E 27Gen Elem Metallurgy	3
Mili	itary or Air Science	2	Military or Air Science	2
	sical Education	1	Physical Education	1
- 113		18	and the second s	18
		10		20
	CODITOMOS	197 727	E A TO	
	SOPHOMOR	(E II		
	FIRST SEMESTER		SECOND SEMESTER	
		Crs		Crs
Met	E 2a The Engineering Profession	0	Met E 2b The Engineering Profession	n 0
	h 20aDifferential Calculus	4	Chem 22Analytical Chemistry	5
	s 3a General College Physics	3	Math 20bIntegral Calculus	4
		2	Phys 3bGeneral College Physics	3
	s 4aPhysics Laboratory		[10.10] [10.10] [10.10] [10.10] [10.10] [10.10] [10.10] [10.10] [10.10] [10.10] [10.10] [10.10] [10.10] [10.10]	2
	E 33Extractive Metallurgy	5	Phys 4bPhysics Laboratory	
	n-technical Elective	3	*Non-technical Elective	3
Mili	itary or Air Science	2	Military or Air Science	19
		19		19
	JUNIOR	YEA:	R	
	FIRST SEMESTER		SECOND SEMESTER	
		Crs		Crs
Met	E 3a The Engineering Profession	0	Met E 3b The Engineering Profession	n O
	m 147aPhysical Chem for Engrs	4	Chem 147b Physical Chem for Engrs	4
	s 123a-Heat and Thermodynamics	3	Phys 123b Heat and Thermodynamics	3
	101Fund of Elec Machinery	3	Met E 166Minerals Beneficiation	3
	# 10 kg : 10 kg		Met E 142Ferrous Metallography	,
	E 140The Science of Metals	. 3		2
		3		2
Met			HE REPORT IN THE SECOND OF TH)
	and Heat Treatment	3	*Non-technical Elective	1
		19		19
	SENIOR	YEA:	R	
	FIRST SEMESTER		SECOND SEMESTER	
		Crs		Crs
Mot	E 42 The Engineering Profession		Met E Ab-The Engineering Professio	nO
		TO THE LEVEL OF THE		
	E 132Metallurgical Calculations	3	Met E 175bSeminar	
Met	E 175aSeminar	1	*Non-technical Elective	
Met	E 143aPhysics of Metals	3	*Technical Elective	3
	-technical Elective	3	*Technical Elective	3
		3		-
		19		17
	n 51Principles of Economics E 144Non-Ferrous Metallography and Heat Treatment	3 19	and Heat Treatment Met E 60Met Lab and Shop Practice *Non-technical Elective	3 3 19
	SENIOR	YEA	B	
	FIRST SERESTER	•	OTH O A LIGHT BY THE SAME OF THE BEAUTY OF T	Cre
Met	E 4a-The Engineering Profession	0	Met E 4b The Engineering Professio	
AM	3Statics	3	A M 100Strength of Materials	4
Phy	s 155a Fund Atomic & Nuclear Phys	3	Met E 143bPhysics of Metals	3
		TO THE LEVEL OF THE		1
			*Non-technical Elective	3
Met	E 143aPhysics of Metals	3		
Non	-technical Elective	3	*Technical Elective)
*Te	chnical Elective	3		-
		19		17

^{*}All electives selected must have the approval of the Head of the Department.

Curriculum Leading to the Degree of Bachelor of Science in Mining Engineering

Crs

Crs

Crs

4 3 3

Crs

17

FRESHMA	N YF	AR	
FIRST SEMESTER		SECOND SEMESTER	
FIRST SERESTER	Crs		Crs
Min E laThe Engineering Profession Eng laEnglish Composition Math 17College Algebra Math 18Plane Trigonometry Chem 2aGen Chem for Engineers E D laElementary Engr Drawing		Min E 1bThe Engineering Profession Eng 1bEnglish Composition Math 19Plane Analytic Geometry Chem 2bGen Chem for Engineers E D 1bDescriptive Geometry C E 12Plane Surveying	0 3 3 4 2 2
	2	Military or Air Science	2
Military or Air Science Physical Education	1	Physical Education	1
rhysical muddation	18	- Thy Stock - mucon viola	17
SOPHOMORE	YEA	R	
FIRST SEMESTER		SECOND SEMESTER	
	Crs		_
Min E 2a The Engineering Profession			Crs
Math 20aDifferential Calculus		Min E 2b-The Engineering Profession	0
Phys 3a-General College Physics	4	Math 20bIntegral Calculus	4
Phys 4aPhysics Laboratory	3	Phys 3bGeneral College Physics	3
	2	Phys 4bPhysics Laboratory	2
Geol 12a-Elem Geol for Engineers	3	Geol 12b Elem Geol for Engineers	3
Min E 25Elements of Mine Surveying	2	Chem 22Analytical Chemistry	5
*Non-technical Elective	3	Military or Air Science	2
Military or Air Science	2		
	19		19
Orders in Arthur and A			
JUNIOR Y	EAR		
JUNIOR Y		SECOND SEMESTER	
FIRST SEMESTER	EAR Crs		Crs
FIRST SEMESTER Min E 3aThe Engineering Profession			Crs 0
FIRST SEMESTER Min E 3aThe Engineering Profession A M 3Statics	Crs	Min E 3bThe Engineering Profession	0
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining	Crs O	Min E 3bThe Engineering Profession A M 100Strength of Materials	0 4
FIRST SEMESTER Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach	Crs 0	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy	0 4 3
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics	Crs 0 3 3 3	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation	0 4 3 3
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy	Crs 0 3	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer	0 4 3 3
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy	Crs 0 3 3 3	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer Geol 61bMineralogy	0 4 3 3
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics	Crs 0 3 3 3	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer	0 4 3 3
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy *Non-technical Elective	Crs 0 3 3 3 3 3 18	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer Geol 61bMineralogy	0 4 3 3
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy Non-technical Elective SENIOR Y	Crs 0 3 3 3 3 3 18	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer Geol 61bMineralogy *Non-technical Elective	0 4 3 3
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy *Non-technical Elective	Crs 0 3 3 3 3 3 18	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer Geol 61bMineralogy *Non-technical Elective SECOND SEMESTER	0 4 3 3 3 51 3 3 17
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy *Non-technical Elective SENIOR YE FIRST SEMESTER	Crs 0 3 3 3 3 3 18	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer Geol 61bMineralogy *Non-technical Elective SECOND SEMESTER	0 4 3 3 3 17 Crs
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy *Non-technical Elective SENIOR YE FIRST SEMESTER Min E 4aThe Engineering Profession	Crs 0 3 3 3 3 3 18 Crs 0	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer Geol 61bMineralogy *Non-technical Elective SECOND SEMESTER Min E 4bThe Engineering Profession	0 4 3 3 3 17 Crs 0
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy *Non-technical Elective SENIOR YE FIRST SEMESTER Min E 4aThe Engineering Profession C E 171aTheory of Structures	Crs 0 3 3 3 3 3 18	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer Geol 61bMineralogy *Non-technical Elective SECOND SEMESTER Min E 4bThe Engineering Profession C E 81Testing Materials	0 4 3 3 3 17 Crs 0
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy *Non-technical Elective SENIOR YN FIRST SEMESTER Min E 4aThe Engineering Profession C E 171aTheory of Structures Min E 130Mineral Industries Adm.	Crs 0 3 3 3 3 3 18 Crs 0	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer Geol 61bMineralogy *Non-technical Elective SECOND SEMESTER Min E 4bThe Engineering Profession C E 81Testing Materials C E 120Hydraulics	0 4 3 3 3 17 Crs 0 1 2
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy *Non-technical Elective SENIOR YN FIRST SEMESTER Min E 4aThe Engineering Profession C E 171aTheory of Structures Min E 130Mineral Industries Adm. Min E 145Mining Methods	Crs 0 3 3 3 3 3 18 Crs 0 3 3 3 3	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer Geol 61bMineralogy *Non-technical Elective SECOND SEMESTER Min E 4bThe Engineering Profession C E 81Testing Materials C E 120Hydraulics C E 123Hydraulics Laboratory	0 4 3 3 3 17 Crs 0 1 2
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy *Non-technical Elective SENIOR YN FIRST SEMESTER Min E 4aThe Engineering Profession C E 171aTheory of Structures Min E 130Mineral Industries Adm. Min E 145Mining Methods Min E 137Mine Plant & Machinery	Crs 0 3 3 3 3 18 Crs 0 3 3 3 3 3	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer Geol 61bMineralogy *Non-technical Elective SECOND SEMESTER Min E 4bThe Engineering Profession C E 81Testing Materials C E 120Hydraulics C E 123Hydraulics Laboratory M E 134Elem of Engr Thermodynamics	0 4 3 3 3 17 Crs 0 1 2
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy *Non-technical Elective SENIOR YI FIRST SEMESTER Min E 4aThe Engineering Profession C E 171aTheory of Structures Min E 130Mineral Industries Adm. Min E 145Mining Methods Min E 137Mine Plant & Machinery Min E 175aSeminar	Crs 0 3 3 3 3 18 Crs 0 3 3 3 3 1	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer Geol 61bMineralogy *Non-technical Elective SECOND SEMESTER Min E 4bThe Engineering Profession C E 81Testing Materials C E 120Hydraulics C E 123Hydraulics Laboratory M E 134Elem of Engr Thermodynamics Min E 132Mine Rescue Training &	0 4 3 3 3 17 Crs 0 1 2
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy *Non-technical Elective SENIOR YI FIRST SEMESTER Min E 4aThe Engineering Profession C E 171aTheory of Structures Min E 130Mineral Industries Adm. Min E 145Mining Methods Min E 137Mine Plant & Machinery Min E 175aSeminar *Non-technical Elective	Crs 0 3 3 3 3 18 Crs 0 3 3 3 3 1 3	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer Geol 61bMineralogy *Non-technical Elective SECOND SEMESTER Min E 4bThe Engineering Profession C E 81Testing Materials C E 120Hydraulics C E 123Hydraulics Laboratory M E 134Elem of Engr Thermodynamics Min E 132Mine Rescue Training & First Aid	0 4 3 3 3 3 17 Crs 0 1 2 1 3
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy *Non-technical Elective SENIOR YI FIRST SEMESTER Min E 4aThe Engineering Profession C E 171aTheory of Structures Min E 130Mineral Industries Adm. Min E 145Mining Methods Min E 137Mine Plant & Machinery Min E 175aSeminar	Crs 0 3 3 3 3 18 Crs 0 3 3 3 3 1	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer Geol 61bMineralogy *Non-technical Elective SECOND SEMESTER Min E 4bThe Engineering Profession C E 81Testing Materials C E 120Hydraulics C E 123Hydraulics Laboratory M E 134Elem of Engr Thermodynamics Min E 132Mine Rescue Training & First Aid Min E 136Mine Ventilation	0 4 3 3 3 3 17 Crs 0 1 2 1 3
Min E 3aThe Engineering Profession A M 3Statics Min E 126Elements of Mining E E 101Fundamentals of Elec Mach Econ 51Principles of Economics Geol 61aMineralogy *Non-technical Elective SENIOR YI FIRST SEMESTER Min E 4aThe Engineering Profession C E 171aTheory of Structures Min E 130Mineral Industries Adm. Min E 145Mining Methods Min E 137Mine Plant & Machinery Min E 175aSeminar *Non-technical Elective	Crs 0 3 3 3 3 18 Crs 0 3 3 3 3 1 3	Min E 3bThe Engineering Profession A M 100Strength of Materials Met E 27General Elem Metallurgy Met E 166Minerals Beneficiation E E 103Elec Lab for Mining Engineer Geol 61bMineralogy *Non-technical Elective SECOND SEMESTER Min E 4bThe Engineering Profession C E 81Testing Materials C E 120Hydraulics C E 123Hydraulics Laboratory M E 134Elem of Engr Thermodynamics Min E 132Mine Rescue Training & First Aid	0 4 3 3 3 3 17 Crs 0 1 2 1 3

^{*}All electives selected must have the approval of the Head of the Department.

*Technical Elective

Dean Spivey presented recommendations from the Graduate Council that graduate credit be approved for certain courses. The University Faculty approved the recommendations from the Graduate Council.

I. The Graduate Council recommends approval of graduate credit for the following course, previously approved by the University Faculty for undergraduate credit:

Art 165c. Advanced Painting. (3) Amyx or Adams

II. The Graduate Council recommends approval of the following strictly graduate courses:

Animal Industry 260. Physiology of Reproduction. (3) R. H. Dutt Physiological processes of reproduction in farm animals, gonodal functions; endocrine relationships; fertility; and factors affecting reproductive efficiency.

Prerequisites: A. I. 100, or A. I. 120, or A. I. 140 and A. P. 101.

Anthropology 500-1, 2, 3. Thesis. (0)

Modern Foreign Languages 295. Seminar--Main Currents of Romance

and German Literatures.

(3) Hegeman, Ryland and Server

A survey course which will attempt to give the student a comprehensive picture of the literary contributions that have been made through French, German, German, and Spanish cultures. Prerequisite:

A reading knowledge of one of the languages involved.

There was some discussion of absences before or after holidays and a motion was made that where a holiday falls on Monday, Friday as well as Saturday be considered as the day before a holiday. The Faculty voted to refer the motion to the Rules Committee for study and recommendation.

President Donovan wished the members of the Faculty a happy Christmas Season following which the Faculty adjourned.

Robert L. Mills Secretary