## LAWRENCE INSTITUTE of TECHNOLOGY

## CAMPUS






 hate
＋he


## ivtroy wh

 $10 \times x+5$4
at
at


－
Ther

52

蚛









I he 1!fil) I. Beosk places in voun hamels at sur ei ol the educational and sexial artisities whids oremeal during the tivents-cighth ye:n of evistence for lationce listilute ol I ex linologi.
The laculs and adminisnation. wonking hand in-hamd. have phe prace ont stidents lon gradHition. This is the culmination of liveir college lilc:
I.injene I ceh sudents ralize that just is thens and practice alle insepraiable, (s) also ate in-
 elopmene. Is a result thes enter into artivilics whidh benclit themsties and ilne selimol. Hecir
arcomplisliments anc lie wonk ol man! hands. and liey are icconded for sou in this earbook. IVe conglatulale the class of J!ote. J hes mote inte a dybamic futue with it scuse of reyponsibilit and a knowledge of the last appolmurties anaiting them. We 1hiank themi Ion thei) prallicipation atmf rontlibutions to the x lionol. |xoils intellealually and sori.alls. Nas lheit interes amel
 Hesel flate

I he lume is uow in thei hamds.


## IN MEMORIAM

> So teach us to number our days, that we may apply our hearts unto wisdom.
> Psalm 90

Professor Harold C. Boothroyd, Chemistry Department Chairman, was with Lawrence Institute of Technology since its founding in 1932. The above verse represents his thirty-five years of teaching.

Upon graduation from Cornell University in 1921 with a Bachelor of Science degree in Chemistry, he taught at the University of Detroit. Opportunity enabled him to join the staff of a newly created educational institution-Lawrence Institute of Technology in 1932.

His devotion to the school, his kindness and understanding, were felt by all who came in contact with him. He gave freely and conscientiously of his time and efforts. There are a great many people who have benefited from his friendliness and warmth as well as from his technical instruction.

It is with deep respect and sincere affection that we offer these thoughts.





L. ๆ. J. . ••
. . . Jo provide education within the economic reach of the vast middle class of people and at the same time furnish an unquestionable quality of education.

E. GEORGE LAWRENCE


JAMES W. HOBSON
Vice-President
... Jo the present enrollment of nearly three thousand opportunities for serving, befriending, and guiding, have been our privilege and purpose.


Students are often helped in understanding the varied courses offered.

MORDICA M. RYAN Dean


GENEVIEVE G. DOOLEY
Registrar



Mr. Ryan explains the curriculum best suited for the student.


CLAUDE A. BREAM
Auditor

HAROLD B. VAN BUSSUM
Personnel Director



MICHAEL L. MITCHELL
Comptroller

DONALD G. RIDER Director of Student Activities

. . Jo assist the student by advice and guidance with difficulties of any nature, and to promote a better student-teacher relationship.


WILLIAM C. BURKE Director of On-Campus Facilities


MAX B. COAN Director of
Student Counseling


Counsellors are always ready to discuss any students academic problem.

WILLIAM D. BIGART


EDWARD E. WOOD

 Secretary to President


LAURENE STEVENS Secretary to Dean. Day


JUDITH ERICKSON Secretary to Dean, Night


Jo the administration and clerical services required in any educational system, many are needed who indirectly aid the ultimate graduate.





F:IRT. II. PEIIII:RIX
Depatment Head

Architecture is an art. It is the art of sculpturing space into solids and voids, using as its setting nature and the human being. The sculpturing media: concrete, steel, wood, brick, and other materials, are the means by which the architect expresses himself. We must also recognize the creative architect as a poet and interpreter of life. He sees the practice of architecture not purely as a business, but religiously as basic to the welfare and culture of humanity. He should not be limited by the mechanical functionalism of modern society. He should not conform bit seek to improve, for an architect without individuality adds little to the world in which we live. Man is not made for architecture, architecture is made for man.


GEORGE B. ZONARS


DORIS SMIITH


ARCHITECTURAL ENGINEERING


DII IRI R ISHOR 4irlilerlmul (:lıl)


FI)IIH MOCRID(:)
1.-Burok

Tich Neus
A) hivectual (\%ut)

INMES II: SMHIH Alpha C:anma l'psilon Tiens.
Ciorres. Sec. Architectural Chul

Tiens.


In small architectural design classes students work more closely with ihe instructor. Mr. Zomars, a graduate of Cranbrook, is having one of the many interesting critique with the senior class.


VIICHIEI J. II:II.SH
Arcintectural (:Iuh)


ROBFR I 1. WIII. 1.V1)
firhilectual (:Inh)

|M1:S W: Wlil.ot (.IIB) Architectural (:/irl)
Firncing Terom

11511.1 (. / 16. 0

Imatent Conuril
I.-liont: I.1. ©.

R/in De-lin Plis
Pledgemaster
mhiterimal (.Inh, (iler (:lnb)


31

A department to function properly necels a capable faculty and a competent dean. Pat Flaherty, a senior architectural student. diseusses his future plans with the Dean of Architecture. Earl Pellerin.

Architectural seniors, Pete /ervos, Tino Zago, and Chuck Gorman are using the architectural club) tion. tion.



Io understand and appreciate good design. stulents must first master the elements and prinei ples of basic design. Miss Dolores Smith. a well known painter and architectural model maker. is discussing the constituents of good design with Edith Mogrilge and Tom Wallace

An architect must have a workable knowledge of the related arts: water colors. pastels, sculpturing noxlel making. interior (lesign, landscaping. Bol) Siest, a junior, is putting to work his artistic thility.

Mr. Wright, a noted water-colorist, demonstrates the techmiques of water color. colored pencil. pastel, and the cesentials of good design to his students.


One of the best ways to learn architectural design is to be confronted with an actual problem. As a typical example the senior class has undertaken to work out a preliminary design of a Southfield Civic Center. This involves field studies, statistical reports, study models, meetings with the mayor and council of Southfield. Terry Measel, Tino Zago, Pat Flaherty, and Chuck Gorman, four of the seven students in the senior design class, are discussing their civic center.


A helpful hand is offered in the final stages of a design problem. Cooperation and helpful attitude among students is a major factor in the high quality of work.


DR.JOSEPH GABRYS
Department Head

The (ivil theincering Depatment has always strived to introdere atudents to the mans vations phases of civil enginecoing. I lewe are such courses as highwat engineeting, selfe design, surveying. and concrete labonaton to meer the studems need for understanding the municipal ispe of problems the mas face. Such course is shuthatal drawing. structiral sted design. reinforced contrete design. and staticalls indereminate shmermer are ollered to give the student new is well as basic ideas conceming the rapidly growing consthuction induats of todas. It is hoped that mone students will become interested in civil engincering in the future. becanse of the growing demand for civil engineers.



## CIVIL

ENGINEERING



Bob Shmina shows Tom Fluent, Terry Neasel and Tino $/$ ago the finer points of the transit.


WILLIAN V. SEIFERT
Alpha Ganma lupsilon
R.IIMOND F. PRIN.I

Civil Club

SFNIORS N゙OI PHOIO(GR.IPHEI)
ROBFRI A. SHIINI
IH.JIDELS N. WO\%NI.JK


IIORREI.I. I. II(I) (1.1)
EU(:ENE PERI.NIAN
L. Book

Ass't. Exl. 60
M.S.P.E.

Rec.Sec, (6)
Civil Club
Pres. '60

Dave Smith. Don Ross and (iene Perlman Hse soil testing equipment. The testing of soils is of primic importance in all phases of tivil engineering.

Dr. (alons disensses a mew enterete compression tester with Senions Bob Shmina and Iom Flient.

Iom Filuent. Bob Shmina and Fal Saller weigls a specimen for soil analssis. The eivil engincer is constantly confronted with testing equipurnt, and it is of necessity to use. record. and evaluate this data.

JF:RRY ISRI(:I. WFRNF:R
Sindent Council
M S.P.E.
(iind (:lul)

VOEL SMIIH
M.S.P.E.

Phi Kappa I psilon



ELWYN D. HANCOCK Defartment Head

It is the objective of the Electical Enginecring Depariment in present at grou, of well ro:inded courses covering the broad fied of this branch of engineering. Courses dealing with power, clectronics and communication are equally stressed. In the laboratorv. the student is provided with a lirst hand practical knowledge of the operation of dyameters, motors, generators, tramsormers. threephase equipment, ausiliary equipment. and methods of meter calibration.

Professor Hancock and his stall strive of present the courses in such a mamer that the student will be prepared. upon graduation. to follow the brand of clectrical enginecring he so deoses. and specialize as lie desires. Io atcomplish this, the student is educated from the best theoretieal and practicat standpoint. The results hate producel engineces of high caliber and a tribute to latirence Iechspeputation.




## ELECTRICAL ENGINEERING




Elements of A.C. circuits are being presented by Professor Beard.
J. Bocberitz. J. Janicki, R. Colenso, and R. (handler conduct an experiment in the 1).(: lal).


MAIRIC: K.I I\%M.N
Student Council
A.S.T.I:-
M.S.P.E:
S.A.E.
L.-Book Bus. Mgr:

Tech Nezes
Mech. Eing. Club,
FDWIN A. KOIST
(:ER.AID KOTLIER
Phi Kappa lpsilon
Mech. Ling. (ilub
1)AVID C. KRYM

Alpha Gamma upsile Corves. Sec.



NALTER G. GROSBY
Phi Kappa Upsilon

JOHN G. DAI.I S.A.E.


WILLIAM F. DOLUNT


CODA M. EDWARDS S.A.E.
M.E. Club
11.1... (. FIEGE

Student Council
Jr. Class Treas.
Sr. Class Treas. S.A.E:

Phi Kafpat l'pi shi (:lut

While Professor Beard supervises. students R. Addy and J. Janicki set up a demonstration in the radio comminications lab.

While the class looks on, 1 . Gimbel, R. Rase.anil (; Selied!-o bower demonsulate the dial..tteristics of an clectron tuise.


RAYMOND LARSEN
Alpha Gamma Upsilon President 58
L.Book

ROGER D. McCLELLAND
AII.AN J. MCLELL.AN
HERBERT C.. PLC.K


During the junior sear. EE students carr be fonnd spending many hours performing experiments on A.C: machines and circuits.

Duming their senion teat, students reap the lemefis of Professe Hancock' instruction on clentrital macline design.

AVII) P. SWART\%.

Vice-Pres. Night 60
M.S.P.E.
S.A.E.
D.AVII) V. WIISON S.A.F:
(.ER.M.1) W: WI I II Phi Kapfa l'psilo r.lec (imb)



Three of the participants of the General Flectric tour inspect a lighting display.


JOHN WOJDAN
S.A.E.
S.P.E:

GORDON G. ZEEGERS


On an ammal field trip to the Gencral Flec tric plant at Nela Park in (ileveland. Ohio. students are shown many interesting and informative displavs.

SENIORS NOI PHOIO(GR.IPHEI)
CHARLES T. EUOLA
ROBERT E. FURMAGA
FRANK GARRITANO
SAMUEL C. GIBSON
WILLIAM T. McL.AUGHLIN
WILLIAM H. MOIR
ROGER G. REASO
GEORGE H. RECHLING:
JAMES R. RITZEMA
RICHARD L. SMITH



INDUSTRIAL ENGINEERING



LESTER W. MALINOWSKI
Student Council
Pres. ' 60
Class Pres.
Class Vice-Pres.
Tech News
S.A.E.

Kappa Sigma Kappa Secretary

DAVID A. MOORE
Student Council Judicial Chair. '57
Soph Class Sec.-Treas. '56
Sr. Class Vice-Pres. 56
M.S.P.E.

Phi Kappa Upsilon
Pres. (Delta) ' 55



JOHN W. FOUCHEY A.S.T.E.


CHESTER GIELDOWSKI


LE ROY C. GOGOLIN

ALVIN W. ALEXANDROWWIC:\% ROBERT I. CHESNEY HAYGAS HAROIAN WILLIAM J. O'BRIEN

To plan a new facilits reguires knowlerlge of production control, matcrials hambling, industrial psschology, salesmamship. and a basic knowledge of plant lavoit. With this backgromind. the semiors review plant layout from flow charts to improve plant lavout.


Timing the operation of a kinot and bolt hand assembly with stop watehes indicates the importance of reducing time on the insignificant mannfacturing processes. Other techinigues in work sampling, predetermincel time data. must lxe sumfied which reguire statistical amd psychoslogical lackground.



DR. EDWIN O. GRAEFFE
Department Head

These are the graduates of the Industrial Nanagement College. They have studied diligently and are learned in the principles of management. Prime among their studies have been the planning and control of man, moncy, and machincs. Note these faces well for you will meet them again in the industry of the nation, in the fields of edication and finance, and-in private enterprises of their own. God gave them minds, Lawrence Institute of Technology gave them guidance, and they gave their devotion. Fo the faculty and students of the Industrial Management College, this chapter in history is devoted.



INDUSTRIAL MANAGEMENT





BRUC:E N. LOWFERY
S.A.M.
S.A.E.
(ilee Club
I.AWRENCE T. MALEK Alpha Gamma Upsilon
Varsity Club

ROGER MESKO
S.A.M.

Alpha Gamma Upsilon Pres., Vice-Pres.

ONI I. LITWINOWIC: . I .




Problems in persomal lite and work affect the altimele of the worker. Amatsing problems and solving them are a part of this seriologe class. Mr. Forneilus ath the clav in volving trial cisce.


CHARLES N. OTTO
S.A.M.
S.A.E.

Phi Kappa Upsilon Tech News Clee Club

D. RICHARD RUSAS Jr. Class Sec. 58 S.A.M.

Alpha Gamma Upsilon


DANIEL SIWULA Varsity Club


JOHN L. SMITH


HANS G. ERNEMAN
Department Head

The purpese of the medianical department is to give the student the ability to solve various probleme which may arise in his carcer by stressing (1) a clear backgrouns! of scientific theory. and (2) practical demonstration of theors closely connected to various applications.
The first two years of a M.I:. major give him the basic fundamentals for advanced subjects. He then begins to specialize by taking courses such as mechanisms. themodynamics, machine design, gas timbinc analysis, stress analysis, and machine analysis.
At the end of lour years at Lawrence Tedh, the mechanical engincering student has acquired the necessary background in theory to cnable him to put his knowledge to work for his future employer.


IRVING. J. LEVINSON

## MECHANICAL ENGINEERING



## ICHARD C. GETOOR

S.A.E.

RUDOLPH GOLLA Student Council Rho Della Phi

JAMES C. GRAHAM
S.A.E.
A.S.T.E.

EDIDY J. HAJJAR

$$
S . A . E
$$

Aljha Ciamma l'psilo


Arthur toga


Mr. Levinson is shown placing a test specimen in the new testing
machine acquired by the mechanical department.
This machine is one of the largest of its kind in Michigan, and has
a number of distinct features. One of the biggest features is its 400,000
pound load capacity; another is that the stress-strain curve is auto-
pound load capacity; another is that the stresses
matically drawn as the specimen is being tested.
The actual operation of the machine is red
and is measured very accurately by the el
Without a doubt this unique tester will
I lawrence Tech for a long time to come.
Not Art Hogan

Clark w. Ewing



Mr. Erneman, assisted bs Ton Butler. Chris Madsen, Frank Karasinski. Fil Caseardo. and Ted Hidian, is lowering a
 simmates the bosoancy of a dip, and is a basic experiment in fluid mechanics.

Alpha Gamma Upsilon

TRUMAN L. NEW M.S.P.E.

HENRY G. NIEMI
Student Council
Rho Delta Phi

DAVID H. PARKA Phi Kappa Upsilon
I.AWRENCE G. PECK
S.AE.

Alpha Gamma Upsil





Mr. Fineman is discussing a flow nozze, which determines the flow sate of a fluil. with Ted Hajjar and Frank Karasinski.


Mr. Chambers is discussing the control panel for the dinamometer with William Flower, Curtis Hay, Bob Smith, Dave Gaden, and : Ilen. Whese The control panel measures the fuel-air ratio and the whateric efficience of internal combusion engines.



GEORGE L. BAASO
WIILIIAM CECELSKI
GERALD GANCER
JAMES L. GRANGER
JACK (:RII.IMAN
HOWARD J. HIIDENBRANI

## MATHEMATICS

The Mathematics Department at Lawrence Institute of Technology has a program designed to give the engineering student the theory necessary to formulate engincering problems, and the cducational tools necessary to apply the theory to practical applications in the various divisions of engincering.


HENRY W. NACE
Department Head


ROY W. SCHENKEI.

Mr. Jositas puts his students to work as thes practice the difficulties encountered on previous homework.

Mr. Selienkel holds mani dass discussions in orter to get across the theory of mathomaties.



Mr. Natce and lis staff are alwats willim spent a few moments explaining the theor minhematics to the students whose gues ge fintlice than the class room deor.

Distormme like this sometimes happen. stmkents study light "I' umtil the last mon befonc an : vain. onls to find that when (ompleted the eren. the material in question differeni.



JOHN MACROPOI.
Department Head

## PHYSICS

Many of the students who are following technical programs find Physics is one of the most challenging, but rewarding, subjects offered to them. Engincering Plysics, Modern Physics and Nuclear Engincering are three courses which are offered to the students before graduation. Each one of these is one year long and is intended to furnish the student with a well rounded back ground in this ever growing field.





HERBERT (; WILI.IAMS
Department Head

## ENGLISH

The English Department at Lawrence Institute of Techmology is designed to cover the needs of the graduates int the various fields of specialization and, in addition, to offer the stimulation of thought in the ways of life, as reflected in the great literatures.


TENOBIA BARILEII



WILSON DAUGHERTY


CARL FER NEIIUS
Ideas are always casy to come up with, but when the student is asked to put them down on paper, he finds that only long hours and hard work are the answer.

Although the linglish Department's main purpose is the teaching the fundamentals of grammar, it also strives to give the student a well rounded lackground in letter writing, technical report writing, and history. Mr. Fernclius explains in his letter writing course that using onc of the proper letter forms is the basic fundamentals of a resourceful letter.


## ENGINEERING DRAWING

A competent engincer uses three languages - verbal, mathematical and graphical. By use of any or all he communicates his thoughts to others. It is the purpose of the engincering graphics depatment to prepare engincering stadents in this area. The knowledge of graphical expiession is equally importamt whether the engineer engages in the diafting fine tions or supervises them.

KENNF:TH A. SNOBLIN Department Head


Ir. Snoblin is always ready with a helping hand hencer one of his students runs into a problem bat concerns drafting.

I.OREN M. KNOWLES Department Head


JOSI:PH F:. ITKKEN

## CHEMISTRY

Although the Chemistry program at Lawrence Institute is condensed, it proviles the student with it broad, usable knowledge of the nature of matter, the laws of chemistry, and the inter-relationslips of engineering substances, processes, and theories.


Mr. Kinowles. using models and shetelies. es plains the theory of the atomin and its com pinemts is a gromp of new students.

Dactor Takken shows a group of freshmen the ond workings of a chemical equation.





TYPICAL POSITIONS | ENGINEERING | RESEARCH |
| :--- | ---: |
| CHIEF ENGINEER | DIRECTOR OF RESEARCH | assistant Chief engineer SENIOR ENGINEER PROCESS ENGINEER design engineer JUNIOR ENGINEER ENGINEER-IN-TRAINING

DEPARTMENT HEAD
RESEARCH ASSOCIATE
RESEARCH ENGINEER
PHYSICIST
CHEMIST
MATHEMATICIAN


TYPICAL POSITIONS

| COLLEGE | SECONDARY |
| :--- | :--- |
| DEAN | SCIENCE DEPARTMENT HEAD <br> DEPARTMENT HEAD |
| SCIENCE TEACHER |  |

PROFESSOR
ASSOCIATE PROFESSOR
ASSISTANT PROFESSOR
INSTRUCTOR
SCIENCE TEACHER

4-


## TECHNICAL INSTITUTE

The Engineering Technician is American Industry's answer to the need for specialized engineering personnel. He is the man most sought after for specialized engineering work in industry today.

The Technical Institutes have curricula designed to train these valuable engineering technicians.

The Engineering Technician must have a working knowledge of the problems that confront industry.

Through actual experience they develop reasoning ability, judgement, and self-confidence so that they can apply the knowledge they have acquired to practical problems and produce satisfactory answers.

Courses in mechanics, physics, electricity, mathematics, technical drawing, and English form the educational background for the engineering technician. These courses closely parallel engineering college cours-


## M ${ }^{2}$. ARTHUR D. HART

DIRECTOR of THE
TECHNICAL INSTITUTE DIVISION

Mr. Hart received his B.S.E.E. degree from L.I.T. in 1937.

## ASSOCIATE IN

 ENGINEERINGA specialized degree is awarded the student satisfactorily completing the program of his choice.



JOEL W. BAILEY


ROBERT M. GERDS


WILLIAM H. HALL


Mr. Noetzel answering Krupinski's question of a possible problem in the construction of this project.

## layouts.



Class participation is a familiar phase of lectures.


LARRY W. PICKELL


LEOBARDO V. RUBIO


BRUCEIL SMITH


ARTHUR C. ZIEMANN


Informal sessions before and after classes are popular among students. This is also a familiar site after an exam.

## BUILDING CONSTRUCTION

SENIORS NOT PHOTOGRAPHED
JOHN R. CROGHAN
ROBERT A. HAWLEY
ROBERT E. JARRARD
ROGER D. McCLELLAND

Building construction technology is concerned with the design, supervision and construction of industrial, commercial, municipal, government and residential buildings.


JOHN ANTOS


ROBERT J. BELHORN


RALPH C. CLEMENT


Mr. Toth looks on during a test in the lab. Labs such as this are vital to the learning Electrical Technician.


WILLIAM E. DEAN
JOHN L. FRYE, JR.
ROBERT W. GARRISON
JOHN HAMILL
WILLIAM P. HARMAL



FR.ANK I.. HIBBERD


CHARLES HORN


VACYS JOMANTAS


DONALD S. NAPPEI


Many hours are spent in the lab learning the practical application of electricity and electronics.

ELECTRICAL TECHNOLOGY

SENIORS NOT PHOTOGRAPHED
DAV'II) \. FOLEY
ROBERI'S. MAZUREK
BRUCE B. ROBFRTS
BERNARD F. YANDURA

Electricity serves almost everyone in some wav. Electricity is the most important ingredient in automation. It lights our homes, offices and factories. It operates our appliances and machinery.



MARION R. P.AVLAK


DIAMOND ROSE


CHESTER J. SAIVLE



CHARLES SOUDERS, JR.


ROBERT E. STONER


CLIFFORD J. STOREY. JR.


MARVIN L. SIRZYZEWSKI, MARVIN L. TRYI

How can you be watching Soupy Sales on that thing? He's not on. Anyway that's not a television set.


81



CHARLES S. BELLMORE Sigma Kappa Psi A.S.T.E.


EZELL. BURGESS
Sigma Kappa Psi

JACK W. CHETTLEBURGH


Mr. Gil Herman illustrates methods and eauipment used for material handl ing to the Seniors of Class of February '60.

NORMAN C. MONKS
Sigma Kappa Psi
Student Council

DONALD R. MONROE
A.S.T.E.

L-Book Staff '60


WILLIAM J. PIKULSKI ATE

WESLEY J. SQUIRE


WILLIAM IFRREAUI. 7 Sigma Kappa Psi A.S.T.E.

M. Buck reviews an accounting test problem with the Industrial Supervision June Class of ' 60 . This is one of the administrative courses offered to supplement the engineering courses.

## INDUSTRIAL SUPERVISION

Potential Directors, Managers and Freeloaders pursuing their studies venemently, and preparing for a Board of Directors meeting.


The Industrial Supervision Technology curriculum offers advantage of a combination of engineering and administrat subjects, giving the student a broader education. This broadn of learning is becoming a necessary asset to climb the ladder success in the current and coming world.


DAVID ADAMS


MYLES F. ARMOUR


RICHARD BACH


In all engineering fields drawings of one type or another are the common language. Here two students discuss a drawing assignment.


LEA F. BROWN JR. Senior Class Sec.-Treas.


ROBERT BROWN


HENRY J. BUHLINGER A.S.T.E.


GARY E. BULLOCK Sigma Kappa Psi Vice-President, '60

CLIFTON M. BU Sigma Kappa $P$ A.S.T.E.
A.S.T.E. 1st Vice Chairman

Tech News


Mr. B. Carlen holding a class discussion on a machine design problem.

## MECHANICAL TECHNOLOG

Mechanical Technology covers the design, production, installation, sales, and operation of machines and tools of all types. Mechanical Engineering Technicians, with training emphasized on drafting and design, are in constant demand by industry.


AROLD N. FRANTZ

F. S. GEGGLE


LYNN F. HANNERT
Sigma Kappa Psi
Treasurer, ' 60 A.S.T.E.

Instructor. Mr. B. Carlen, discusses with students some ideas to include in their plant layout problem.



DUANE N. IHRKE A.S.T.E.

CARL A. KREMM A.S.T.E.

ROGER KUKKOLA A.S.T.E.


BERNARD LANIVICH

HARRY J. LUND
Vice-Pres. Senior Cla
Tau Iota Honor Soc Student Council Tre
Sigma Kappa Psi
A.S.T.E. Chairman,

Mechanical students, Bol Rancillio, Del Metcalf and Al Stever, are preparing a speci men for a test on the tensile machine. one of the many types of machines available for students.

DELMER J. METCALF
Senior Class Pres.
Sigma Kappa Psi
A.S.T.E. Treas.

Student Council
Chair. Founders Day
Election Comm.

OWEN B. MINCH A.S.T.E.

STEPHEN G. MITCHELL
Sigma Kappa Psi
A.S.T.E.



HARD C. MOUCH


STEVEN J. NAGY
Sigma Kappa Psi A.S.T.E.


WILLIAM A. REPPEN
Sigma Kappa Psi Pres., '60
Sigma Kappa Psi Treas., '5
Classes from elements of drawing to jig \& fixture resign give students the ability to express engineering ideas through drawings. A.S.T.E.



JOHN H. SCHEICH


WALTER A. STEVER Sigma Kappa Psi


RONALD WELLBALM A.S.T.E.


MARVIN WILBER A.S.T.E.


JAMES P. WII A.S.T.E.

A final check out of gages and equipment by Walt Pearson, Clarence Huemiller, Bob Brown, Ed Gehart and Karl Krem before starting with a hydraulic problem.


ROBERT L. BEINKLEY
JAMES D. CAMPBELL
RALPH E. DROVEDAHL
MELVIN E. ERNST
DONALD K. GALLOP
DOUGLAS I. JOHNS
JAMES T. KEEGAN

TERRENCE E. McDONALD
RAY L. PITZER
JOHN L. POWELI.
WILLIAM G. RECTOR

onstructing sneet metal parts aras the Refrigeration and Air Conditioning Technician to better understand flow velocities when computing duct work.


Mr. Keegan is explaining some of the many problems and corrections found in residential heating and venti-
 lating.


Informal classes make the late hours a little easier for both the students and the instructors.

## REFRIGERATION AND AIR CONDITIONING



The transfer of heat from one fluid to another is the basic principle in refrigeration, air conditioning, heating and ventilating.



## STUDENT COUNCIL <br> EXECUTIVE COMMITTEE


"The purpose of the Student Council is to provide a group that is representative of the student body and of the various student organizations in the school." For the first time in the history of the Student Council, this passage from its Constitution became a reality. The three council olficers elected at the annual election were from the three schools on campus: President, Les Malinowski, from Night School; Vice-President, Dan (raw; from Day School; and Treasurer, Hary Lund, from the Technical Institute. The business meetings were changed from the first and third Thursday of each month to the first Wednesday and the third Thursday to facilitate participation by members from the Technical Institute.

A seat on the Council is authorizt ? for all classes, clubs, fraternities, and approved student organizations having twenty or more members.

In addition to its legislative, executive, and judicial duties, the Council also controls Lawrence Tech's campus publications, regulates social ac-
tivities, selects candidates for the Lambda Iota Tau and Tau lota Honor Societies, and awards activity Keys to deserving members of the various organizations.

This year the Council sponsored the Annual Christmas Party, the Three Blood Drives and the Homecoming Dance. Its special project was for the library. The funds for this project were derived from the Christmas Party Cake Walk, Parking fines, and the Homecoming Dance.

Every member of the administration, faculty, and student body should be proud of the Student Council. Each endeavor has been for more harmony and understanding between the Administration and the student body.

During a lengthy discussion at a council meeting, which follows strict parliamentary procedure, James Boeberitz brings up a point of order.


Bea Kuzminski, Social Committee Chairwoman, gives her report on future social functions of the Council, the fraternities, and the date of the publications banquet.


## STANDING COMMITTEES


L. to R., Chuck Loomis, Chairman Gerald Lembas, and Roger Shtogrin.

This committee was originated in the spring of 1958 and ever since its influence in the forming and promoting of activities has labeled it an asset to the Student Council.

These committee members work with Mr. Ridler, Director of Student Activities, in promoting an activities program which we hope will meet the enthusiasm displayed by our eager students.

## ACTIVITIES AWARDS

L. to R., Roger Shtogrin, and seated, is Chairman Larry Sundgren.

The Activity Awards Committee was organized by the Student Council to conceive and deliver its annual awards, which are made at the Student Council Annual Dinner in the spring.

Awards are given to the Student Council officers, Student Council committee members, class officers, the Tech News and L-Book staffs, and others the Student Council may authorize.

Activity awards are also made to the most active student in Day School, Night School, and the Technical Institute.

## BLOOD BANK

Standing 1. to r., Chuck Loomis and Al Kovalsky. Seated is Chairman Jack Hall.

As we all know, Lawrence Tech has an excellent blood bank, however, no blood bank can continue to operate indefinitely by virtue of its own momentum.

At Lawrence Tech we have supplied the force needed to keep our blood bank steadily on the move. The force behind our blood bank committee is comprised of one man from each of the three divisions of our school, an alumni representative and the chairman.

The continuation of the enthusiasm and spirit displayed by the student body and the faculty members is the hope of all of those concerned.

## ELECTION

L. to R., Tom Arnold, Chairman Bob Formella, Gil Noakes, and Del Metcalf.

The Election Committee has undergone a change due to recent passage of by-laws. Whereas formerly there were three chairmen, one for day, one for night, and one for T.I., there is now only one chairman with three members, one member from day, one from night, and one from T.I.

A President, Vice-President, and SecretaryTreasurer were elected from each class. These officers planned the various social functions of the year for their class and represented their class on the Student Council.

The class elections for the officers of the Student Council were held in the spring.

## FOUNDER'S DAY

I.. to R.. Del Metcalf, Chairman Al Kovalsky, and Carl Bouvier.

It is the responsibility of the Founder's Day committee to plan and organize the activities on this day. This type of exposition requires an enormous amount of time, planning and procuring equipment to have a successful Founder's Day. Therefore it has been decided to hold this type of Founder's Day once every three years. It will be this year's committees responsibility to keep records of events, items of interest and things accomplished during this school year in order to give the next chairman something to help plan a successful Founder's Day.

## FINANCIAL

L. to R.. Bill MacNeil, Gerald Lembas. Chairman Harry Lund, Bob Formella, and Albert Yee.

It is the job of the Financial Committee to evaluate and adjust all annual budgets submitted by the publications and the various committees of the Council. From these figures the Annual Student Council Budget set up.

L. to R., Frank Malinowski, Chairman Chuck Loomis, Larry Sundgren, Austin Zago and David Hoyle.

The Interfraternity Council was recently reorganized by the Student Council Representatives of all of the fraternities. The I.F.C. is a "Natural" organization because it provides the means by which the fraternities are able to coordinate their efforts in the interests of their common beliefs.

## HONOR SOCIETIES

L. to R., David Hoyle, Bob Formella, Chairman Albert Yee, and Bill MacNeil.

In 1934, just two years after he founded our school President Lawrence organized the Lambda Iota Tau Honor Society to give recognition and encouragement to students of high scholastic standings who also participate in extra-curricular activities on campus. To those who fulfill the rigid requirements specified in the By-Laws of our Constitution, the Lambda Iota Tau Key is awarded.

Last year it was on the recommendation of the Committee that the Technical Institute honor society, Tau Iota, was formed. The Committee was also instrumental in revising the admission requirements to conform more closely to national standards.

## JUDICIAL

Dick Kowalski and Chairman Sidney Rubin.

The Judicial Board of the council consists of a Chairman, the faculty representative to the Student Council, and a member of the council appointed by the President.

This Committee shall embrace the interpretations of the Student Council Constitution; has the power to subpoena witnesses and documents in cases involving Council Law.

The Judicial Committee can enforce its power of subpoena by revoking the right to vote or hold any school office to any student not honoring the subpoena.



## PARKING

L. to R., Roger Shtogrin, Chairman Daniel Craw, and Sidney Rubin. Missing, Ted Purkiss.

The students of Lawrence Tech have the advantage of being in one of the few schools which furnish parking for all students directly on campus.

Even though this is a great advantage, certain problems are bound to arise. These problems are usually caused by the students and affect the students directly. Because the students are the ones involved, it is logical that the students should be the ones to solve the situations.

This has led the Student Council to create a Parking Committee which has within it the Traffic Court of Appeals.

## PUBLICITY

L. to R.. Fred Long, Ray Crenshaw, Ed Mijak, and Chairman Rick Chandler.

The Publicity Committee was organized to inform you and those who know you about the functions, students, and activities of L.I.T.

## SOCIAL

Standing 1. to r., David Hoyle, Chuck Loomis, and Frank Malinowski. Seated 1. to r., John Banfield, Chairwoman Bea Kuzminski, and Richard Moxley.

The Student Council Social Committee was esfablished to coordinate the school social calendar. All events sponsored by any organization on campus must be cleared through this committee.

This committee has also been delegated authority to complete arrangements for the Student Council banquets.

## BLOOD BANK



Donors waiting to give blood.


It's the best thing I've ever done and I could relax while doing it.

The Lawrence Tech Blood Bank became a reality because Administration, Faculty, and Students planned and worked together. It could never have been born if the need were not present and each individual had not realized his and her responsibility.

The success of the Blood Bank is a lasting monument to the sincerity and earnestness of all personnel at Lawrence Tech.

For years emergencies of the type requiring blood donors have been our constant companions. Members of the Student Council began work on the far reaching project during the summer of 1957. From these initial plans of one blood drive for the whole school have evolved three drives, each equal to the one originally planned, to suit the needs and desires of the students.

The Student Council is proud of this organization and the work which made it possible. It has served both Lawrence Tech and society in general. The honest endeavor and joint enterprise which have personified this activity from the beginning have welded all departments and groups into one commom aim. The school spirit, cooperation between administration and students, and sense of common belonging have never been stronger.


## GLEE CLUB



BACK ROW, L to R: Douglas Ross. Charles Ward, Rutten, George F. Grohs. Tim Owens. Arthur Fisch Steve DeMay, Jim Raptis, Charles Davis, Tom Spanos. FRONT ROW, L to R: Mr. and Mrs. Clayton Schlot beck, Director and Accompanist, John Allmand, Pete $Z$ vos, Don Wurm, Austin Zago, Nick Fakaros, Tom Arnc

This year the Glee Club performed for many school and outside functions. Above the Glee Club sang Christmas Carols at the Annual Christmas Party. Below they perform at the Homecoming festivities.


## ANNUAL CHRISTMAS PARTY



This year's Student Council Christmas Party was coordinated to be the best. Over seven hundred persons attended the holiday event, more than ever before in the history of our Christmas Parties. The decorations, activities, and group participation were at their Yuletide best.

Long will the laughs and joys of the Christmas Party ring in the hearts of all those present on December 5th. Friendship, love, togetherness were they keynotes which made this year's party the greatest yet.

The children of Southfield which were present aided the friendship, because we felt that we were sharing a little bit of our Christmas with those which had less and this created a common bond between many. The bond was of course to forget minor disagreements to show the kids a good time.
dainty Miss receives an assist from Professor H. Williams, lead of the English Department, who sponsored a highly accessful cake walk.
"Hark the Herald Angels Sing . .." began a medley of Yuletide arias by the spirited crowd under the direction of talented Dr. Edwin Graeffe.


Pastel angels and delicate clouds were suspended in the cafeteria to create a heavenly atmosphere for those taking advantage of free refreshments. A tall, stately Christmas tree highlighted a ribboned area in which the cake walk was held. Several festive cakes and baked goods, as well as fruit baskets, were prizes for appreciative winners.

Drum majors, dangling ornaments, and another Christmas tree beckoned all to visit Santa Claus in the Student Lounge. The Glee Club assisted by Mr. and Mrs. Slaughterbeck and the visitors (young and old alike) led by Dr. Graeffe sent heavenly strains echoing throughout L.I.T.

Holly-decked corridors led guests to rooms of entertainment which featured a magician, puppets, cartoons, and the film, "My Friend Flicka." A huge Christmas tree and colorful wreath provided a welcome setting to those entering the main lobby.

"Gee, Santa, this Christmas I want . . ." was the start of
hundreds of ardent desires which Santa patiently recorded hundreds of ardent desires which Santa patiently recorded for his special night.

Officer Walter Wilson proved to a mammoth audience that safety can be fun. Magic and audience participation were used in his act to keynote the importance of safety to everyone.


## SENIOR CLASS OFFICERS



Senior Class officers Donald Schmill, Sec.-Treas.; James Boeberitz. Pres.; and Carl Bouvier, Vice-Pres.; go over receipts of the Senior Dinner Dance.

Mr. Webster states that senior means "noting or pertaining to the highest class or last year of the course."

For some the last year seems to be the hardest to attain but the men who have made it leave behind them an impressive list of activities.

## DAY SCHOOL

This year's senior class was one of the first to throw a financially successful Frosh Fling and J-Prom.

The men graduating this year have held high positions on the Student Council: vice-president, recording secretary, parliamentarian, publicity chairman, homecoming chairman, and a total of eight men serving the student body as representatives. Four members of the Senior Class have served the L-Book staff-one being the assistant editor.

## CLASS OFFICERS OF 1960


L. to R., Joseph Regan, Sec.-Treas.; Floyd White, Pres.; Maurice Vermeulen, Vice-Pres.

The editor of the Tech News is also a senior and has seven seniors writing for the News.

Three members of the class have been elected to Lambda Iota Tau, and six to Who's Who in American Universities and Colleges.

The seniors topped off their year by re-establishing the Senior Dinner Dance which was held at the Capistrano Restaurant.

As these men walk the last few steps across the stage to receive their diplomas they hope that their leadership and activity will lead the underclassmen to a stronger and closer knit student body at Lawrence Institute of Technology.

## NIGHT SCHOOL

## TECHNICAL INSTITUTE SENIOR CLASS OFFICERS


L. to R., Robert Brown, Sec.-Treas.; Delmer Metcalf, Pres.; Harry Lund, Vice-Pres.

## TECHNICAL INSTITUTE

The T.I. class officers of 1960, President; Del J. Metcalf; Vice-President, Harry Lund; and Secre-tary-Treasurer, Robert Brown, set their sights high and achieved their goals. In all of the T.I. sponsored activities, you will find one of these three men actively participating on one committee or another. A major responsibility was the active part they played on the Student Council. Harry Lund was elected by the school Student Body to the Office of Treasurer for the year 195960. This was an achievement never before accomplished by any T.I. student. Harry also served on the Finance Committee, Tau Iota Honor Society, and Blood Bank Committee.
Del Metcalf, in addition to being a member of the Student Council, was appointed Chairman of the Founder's Day Committee along with actively participating as T.I. Election Committee Representative.

## CLASS OFFICERS OF 1961


L. to R., Micheal Murphy, Sec.-Treas.; Richard Kowalske, Pres.; Victor Rado, Vice-Pres.


## CLASS OFFICERS OF 1962

## JUNIOR CLASS OFFICERS


L. to R., Roger Shtogrin, Vice-Pres.; Jerald Lembas, Pres.;

Rae Carder, Sec.-Treas.

## DAY SCHOOL

For the Junior Class of 1961, this was a truly memorable year. In addition to active participation in the various school functions, the class, its officers, and J-Prom committee eagerly began organizing and promoting the biggest social event of our school year: the J-Prom.

This year's prom was held on May 7, 1960, in the Coral Room of the Fort Shelby Hotel, and featured the fabulous Dave Martin Orchestra. The evening was highlighted by the presentation of the "Most Obnoxious Junior Award," given to the junior who had the most popular "obnoxious" personality.

The 1960 J-Prom will long be remembered as one of the most outstanding social activities at Lawrence Tech in many a year. The success of this annual event is largely due to hard work and appropriate planning. To all who participated we say a profound, Thank You.


J-Prom Committee

## Standing L. to K

Jerry Stangis, Jerry Pas, Robert Garafolo, John Nuese. Chuck Loomis, Carl Binkley, Don Staniewics, Harr Campion.

Seated L. to R.
Rae Carder, Ray Crenshaw, Edward Mijak, Roger Shtogrin.
Gerald Lembas, Beatrice Kuzminski.

## SOPHOMORE CLASS OFFICERS


L. to R., Ralph Modad, Vice-Pres.; Thomas Arnold, Pres.;

Walt Kraimer, Sec.-Treas.

## DAY SCHOOL

This year, as is the tradition at Lawrence Tech, the Sophomore Class presented the annual "Frosh Fling," which was held at the United Dairy Workers Hall. This event, which marked the end of Freshman "Hell Week," was not only a large social and financial success, but it was also the beginning of College life for many freshmen. It also provided a chance for them to see exactly how our social functions are run. The success of this event was brought about through the foresight and planning of the Sophomore Class under the guidance of the Frosh Fling Committee.

The Sophomore Class again took action when the Homecoming Game and Dance were presented, by donating their time and services to these events by selling the programs and refreshments.


The frosh Fling, which was enjoyed by all in attendance. is the culminating event of hell week.


## CLASS OFFICERS OF 1963


I.. to R., Malcolm Evens, Pres.; Ralph Forbes, Vice-Pres.

During the last year a great amount of progress has been made in Night School participation in student activities. The Class of '63, as well as all of the other Night School classes, have supported school sponsored programs and have participated actively in the Student Council.

The Class of ' 63 has many members of which it is


Melba, the beautiful blonde of the freshman class, draws the winning ticket at the Soph Swing. This is an annual dance put on by the freshman class to honor the sophomore class.

Which way did he go?
He went that way, I think.

There are hardly any winners at the annual tug-of-war contest between the sophomores and freshmen, because most of the participants wind up in the creek



In the past few years, the freshmen have buried a sophomore in effigy.


I.ESTER MAIINOWSKI


GEOORGE RECKLING


GEORGE LILES


WILLIAM MORE


MAURICE VERMEULEN


ALBERT YEE


DAVE HOYLE

## LAMBDA IOTA TAU

Distinguishable recognition is girch th students with exvellent atademic records combined with execetional interes and contribution to sudent attivitio.

Lambda Iota Iau realize, that consint ant improsement is a necesity for ans denamic organization. Theretore, thein improvement is directed toward the standards set be that of a national honon socicts.

On Mat of 1959, a big step in this dirce tion wist taken by raising the requirements of six terms with a ? . (10) arerage to a nine term period, and using the total ol fourteen activits points instead of a set total of points in each term.

Congratulations to Lambda Iota Tau and the new members, who have given personal attention to the ideals of this Society.


FDW:IRD BI RKF


WILIIAM M.AC: NEII.


JOHN MC MANN


ROBERT KEII.Y


JOHN B.INFIELD

TAU IOTA

Tint lota is the honor axictl epprecmt ing the lichmieal Invitute with the vame objective as I.ambeda lota liu.

The intention of forming the lan lona Honer societs of Lawrence Institute of Iechnologe wis to fultill the need tom recognition of studemts in the Techaical. Institute who hate evectled. not onle in high academic standings. but abo deroting conviderable time and interes stimulating the fame of qualified inem. and representing the student bods.

Fau lota was chateded and approwed bs the student (omencil on Mas. 1959. and has accepted si qualified men atter complete invertigation br the Honom so. (iet) Committes.

Comgratulations to the lechmical lnsti. tute and espectially to these men whe hase been honored as heginning mem bers in liau lota.

## ARCHITECTURAL CLUB


L. to R., Don Wurm, Vice-Pres.; Hershel Laster, Treas.; Patrick Flaherty, Pres.; Bea Kuzminski, Rec. Sec. Missing, Dave Klumb, Corres. Sec.

The Architectural Club had its beginning in 1932, then being called the Cliff Dwellers. It was originally organized to enable the members to stimulate and further develop a wide scope of interest in architecture through extra-curricular activities.

The club agenda is set up to enable the students to broaden their outlooks, judgments and accomplishments in architecture by exposing its members to various speakers, field trips, and group discussions. From these activities it is hoped the students will develop an interest to remain alert to what is happening in their profession, not only
when students but in later years after graduation.
In 1948, the club became a Student Branch of the American Institute of Architects, which enabled the members to benefit from the professional contacts with the Detroit Chapter of the A.I.A.

The field trips are arranged so as to allow the club members the opportunity to view famous works and structures first hand. Some of the places visited in the past are Taliesin North, Wisconsin; Chicago; Toledo; Concordia in Fort Wayne, Indiana; and Ann Arbor.

## CIVIL CLUB


L. to R., Donald Ross, Vice-Pres.; Robert Mcader, Treas.;

Eugene Perlman, Pres.; David Smith, Sec.

The original Civil Club was formed in 1955 to promote student interest in civil engineering. The objectives of the club encourage a development of professional conscientiousness, present an opportunity for students to meet and work together, and furnish these men a friendly contact with the engineering profession.

The club has toured various industrial plants and construction sites. Lectures are presented by
prominent speakers. Appropriate films demonstrate civil engineering in all phases. These films and lectures provide both the club members and the student body with an interesting background.

The Civil Club worked closely with the Archi tectural Club in erecting the flagpole which stands near the school entrance. The club also aids in maintaining order in the Civil Engineering Laboratory.

nt Row L. to R. METCALFE, L. HANNERT, M. MUSSELMANN, A. WILLIAMS.

Back Row L. to R.
R. GLATZ, P. STANLEY, L. LETTNER, H. BUHLINGER, W. TERRAULT, R. REPPIN, J. McMANN, R. KUKKOLA, R. WELLBAUM, D. WURM, T. MURPHY, R. BANFIELD.

## AMERICAN SOCIETY OF TOOL AND

## OFFICER INSTALLATION

As Mr. Blythe, Faculty Advisor, and Mr. H. E. Conrad, Executive Secretary, look on, Mr. C. M. Smillie, Nat'l Treasurer, congratulates chapter chairman Harry Lund. Other officers installed are Del Metcalfe, Treasurer; Gary Bullock, 1st Vice Chairman; Al Williams, 2nd Vice Chairman; and Mert Musselman, Secretary.



Chapter officers finalize the year's program and prepare an outline for the coming fall season.

## MANUFACTURING ENGINEERS

FISHER BODY TOUR



The American Society of Tool and Manufacturing Engineers was recently reorganized and is, now among the largest groups on the campus. This society is designed to expand both the theoretical knowledge and practical applications of the future tool and manufacturing engineer.

Each member has the opportunity to attend and participate in, not only the student chapter's activities, but also in all functions presented by the national chapters and their affiliates.

For the monthly meeting program a guest speaker, prominent in the tool industry, is featured; a "coffee speaker" who presents a view of current employment trends, and usually a technical film is also available.

Field trips are arranged to include well known industries in the Detroit area. Since last September tours have been conducted through Fisher Body Division, GMC, Commercial Steel Treating Corp., Ford Motor Co., and Chrysler Corp.

The student member receives a year's subscription to the Tool Engineer, the societies national publication, and also a membership certificate which is suitable for framing. These "extras" are all included in the student's small membership fee.

Individual help is provided by ASTME through its Annual Scholarships for engineering students who are members of the school chapter. If the student is qualified he may receive full tuition to further his chosen profession as a tool or production engineer. These scholarships are available to all students of Lawrence Tech.

Today, with a membership of well over 40,000 , ASTME is one of the world's largest and most progressive technical societies. Among its members are representatives from nine Canadian chapters and 32 other foreign countries.

Of supreme interest to all engineering and management students is the wealth of technical reports gathered from all chapters which are available at reduced cost. Also, the society has the Tool Engineers Handbook, compiled by more than 250 engineering experts, the Die Destign Handbook, and a recent publication, Tooling for Metal Powder Parts.

The main event of this year is the international tool show being held in Detroit April 21st thru 28th. This show will feature the most up-to-date methods and machines available to industry.
ASTME membership opens the door to many opportunities enriching your professional scope. Society programs enable you to stay up-to-date on scientific progress in a fast moving world. They provide a wide scope of activity for meeting other tool engineers, exchanging ideas on new products. and methods, and for gaining new technical and scientific knowledge pertinent to future education and on-the-job thinking.

## MICHIGAN SOCIETY OF PROFESSIONAL ENGINEERS



Standing l. to r., Prof. Erneman, Fac. Adv.; Eugene Perlman, Sec. Seated 1. to r., Maurice Katzman, Pres.; Frank Mazeiko, Vice-Pres. Missing, Phil Rizzo Treas.; George Ellery, S.C. Rep.

Our advancing civilization is increasingly dependent on the Engineering Profession for its comfort, safety, health and well being. The engineer of today must be adequately prepared to practice his profession not only with technical proficiency but also with high moral and ethical standards.

Student Chapters of the Michigan Society of Professional Engineers are established to help engineering students to enrich their college life by beginning those professional contacts and help them increase their educational competence and associations which, continued through life, are so valuable to the practicing engineer.

The chapter is also a good medium for exercising principles of personal and public relations. Chapter members may conduct chapter activities, hold office, secure outside speakers and extend hospitality while they are on campus, visit engineering works under construction, make reports to the Society, and read publications of the Society. All of these and many other activities contribute to mental development and growth, and the forming of judgments. Activities also stimulate early professional consciousness while the student is still pre-occupied with techniques.

The purpose of the chapter, then, is to help the student prepare himself for entry into the profession and society.

## CIRCLE-K



Standing 1. to r., Ray Crenshaw, S.C. Rep.; Dave Paterson, Sec.-Treas.; Mr. Coan, Fac. Adv. Seated 1. to r., Jim O'branovic, Pres.; Ed Mijak, Vice-Pres.

The Lawrence Institute of Technology Chapter of Circle-K International came into existence in the Spring of 1959, when it became officially recognized by the Student Council. By December, 1959, it was granted membership in the International Council of Circle-K Clubs, which has many chapters throughout the United States and the Dominion of Canada.

Among the activities which the L.I.T. Chapter of Circle-K has undertaken are the bringing of underprivileged children in the City of Southfield to the annual Christmas Party, and the promotion of all of the social functions held at L.I.T. in the past year, as well as having a few social events of its own.

The objects of Circle-K are (1) to emphasize the advantages of the American way of life, (2) to provide an opportunity for leadership training in service, (3) to serve on the campus and in the community, (4) to cooperate with the administrative officers of the college, (5) to encourage participation in group activities, (6) to promote good fellowship and high scholarship, (7) to develop aggressive citizenship and the spirit of service for improvement of all human relationships, (8) to afford useful training in the social graces and personality development, and (9) to encourage and promote high ideals for the college, student, and its community.

## SOCIETY OF AUTOMOTIVE ENGINEERS


L. to R., John Proctor, Sec.- Ireas.; Art Badger, Chm.; Dick

Fryc. Vice-Chm.; Mr. Snoblin. Fac. Adv.

The Lawrence Institute of Technology Student Branch of the Society of Automotive Engineers received its charter in 1947 and is one of the largest professional societies in the school. Total enrollment is 109 students representing each of the engineering schools for both day and night sessions-this places the group in sixth place across the nation and second highest in the Detroit area.

The S.A.E. is the technical society of those engaged in research and development, design, pro-
duction, operation and maintenance of passenger cars, trucks, busses, aircraft, missiles, farm, industrial and construction machinery, their component parts and fuels and lubricants.

Membership in the student branch acquaints the prospective engineer with many of the facets of his profession through lectures, films and field trips and attempts to guide him into his life's work.


The Ford Nuclear reactor at the University of Michigan created immense interest in members of the Society of Automotive Engineers.


During one of their field trips the members of S.A.M. toured The Detroit Edison River Rouge Plant, where they inspected one of the four 60 -foot long primary steam turbines used to generate electricity.

Members of S.A.M. are explained the operation of this coal crusher. A 100 horsepower electric motor is used to turn the crusher, which reduces two-inch coal to a fine granual.



Preliminary plans of the yearbook were frequently discussed during the early part of the school year by Gene Perlman, Assistant Editor; Don Wurm, Editor-in-Chief; and Mr. Wilson Daugherty, Faculty Advisor. Plans for the layout, contracting the publisher and photographer, deadlines for copy and pictures, organization, sales procedure, were among the earliest plans.

After the Editor-in-Chief and the Assistant Editor presented the general layout and design of the yearbook to the different groups of the section editors, a number of meetings followed with these groups to retain continuity. Bea Kuzminski submitted her layout to coincide with the general design of the yearbook as Gene Perlman; Hershel Laster, Engineering College Editor; Jack Banfield, Technical Institute Editor; and Don Wurm collaborated on following the original procedures.



Section editors then meet with their staff to plan the future; to fit within the deadlines of the copy, pictures, and pasteups; follow yearbook policies set up by the Editor-in-Chief; Assistant Editor; and Faculty Advisor. Don Monroe, suggested a plan of action to Delmer Metcaf, Mechanical Technology Section Editor, and Jack Banfield.

Printed copy returned from the publishers and final pictures from the photographers, Austin Zago, Architectural Engineering Section Editor cutting copy; and Dave Frayer, Mechanical Engineering Section Editor, pasting; start the tedious process of pasteups as Larry Sundgren, Electrical Engineering Section Editor, types additional copy and corrections. Gene Perlman pointed out to another possible arrangement.

During the period that copy was written and the pictures taken, Pete Zervos, Division Page Coordinator, submits possible fraternity division page to Fritz Grohs, Fraternity Section Editor.

The index, for which copy was kept up to date by Nick Fakaros, was compiled from the copy, senior activity records, and from the various section editors. Ray Crenshaw, Senior Picture Editor, whose consideration was to schedule senior portrait sittings. mailing information to seniors, filing senior activity records and pictures into their respective departments.

Concentration on sports activity pictures, arranging pictures, and writing copy of same, was undertaking of Jerry Lembas, Sports Editor. Arrangements of layout, pictures, and copy for the administration was carried through by Dave Klumb. He also arranged and filed pictures of the faculty into their departments, and also, worked with the section editors to supply them with the needed faculty pictures. Clint Wellis, Industrial Management Section Editor, followed the general layout, scheduled department activity pictures, wrote the copy for these and Senior pictures and directed the pasteups of his section. This was also the responsibility of each of the section editors.

Sale methods were discussed by the salesman so as to make available a copy of the L-Book to any student who wanted it. Sales of the yearbook were handled by Emerald Herrington.



No matter how well a paper is organized or how well the stories are written it still must be printed, distributed, books kept on the expenditures of the paper.

To accomplish this John Avey, far left, is the chief money counter, his official title is the business manager of the school publications.

Next to him is Mr. K. Snoblin the faculty advisor of the paper. It is to him that the staff turns if they have a problem which they are not able to answer

Fred Hoffman and Walter Kraimer handle the distribution of the paper in the school and also mail many copies all over the world. Also Fred assists John in his different jobs.

One of the main duties of the business staff is to secure ads for the paper to defray part of the cost of printing; this is handled through the business manager, John Avey.

To Publish the Tech News takes the combined effort of many people. Editor-in-chief Rick Chandler, center, has the job of organizing all the different factions of the paper, giving out the different news story assignments, editing and writing the heads for the material turned in to him, and to lay out and publish the Tech News.

To assist him in his job are night assistant editor Jack Hall, far left; and Sidney Rubin, day assistant editor.

On these three men rests the responsibility of forming the editorial policy of the paper. After discussing many different topics they must decide on the editors that will appear in the Tech News. These views, although written by three people,-must represent the student body to as great an extent as possible. Also with these three men rest the duty of deciding what material will appear in the News and where it shall be placed.

It is the hope of the Tech News staff that its publication will bring credit to the students that it represents and to the many other readers outside the school. The News is sent to many alumni, schools, and individuals throughout the world.



One of the main parts of any paper are the pictures and drawings that it carries. Bruce Karvonen has given his talents to the News in drawing cartoons that have appeared this past year.

A picture can take the place of : thousand words if taken correctly, so it has been said. But this can only be achieved with hard work. Fred Brown spends a great deal of time studying pictures that he has taken to decide which show the best view of the action that is being depicted.

Without the artistic abilities of these two students the News would soon become a very dry eight pages with nothing but the printed word.

Day School, Night School, and the Technical Institute often meet in the Tech News office just before their deadlines for the paper. At the far end is the celebrated columnist, Joseph Dulvick, who writes the T.I. After Dark column.

It is here that the Technical Institute has its chances to express their views to the school in the question and answer section of his column.

Next in line is Barney Mosley who tells the biography of an instructor each month. This is a new addition to the paper and has been welcomed by many of the readers.

Anyone who is interested in sports has read "Around the Rim," the creation of Jim Obranovic. In order to have the copy ready to keep the student body up on sports news has meant many trips with the team and many late hours so as to have the copy ready for the presses.

While working on the paper students find that by combining their efforts on different stories the work becomes easier and in most cases better. Ray Crenshaw, far left, discusses his story with Bob Formella, center, and Ed Burke. This year, Ray has been the Assistant to the Editor; in this capacity he has worked on every division of the paper.
Bob Formella has, for the past three years, written the "Nite Life" column so that the night engineering section of the school can have their voice to the other students in the school. This year as the Chairman of the Election Committee, Bob has written a number of articles for the News concerning the different activities of this committee.

Ed Burke added to the Tech News a series of articles which were planned to provide the readers with a higher plain of reading matter than is usually found in college newspapers. Basically he has tried to deal with current social problems that occur in and outside of the school. Even though Ed graduated in January, he continued his series up to the end of the season.
All of the News staff needs ideas to work with before they can begin to write their respective stories; and as stated above one of the main methods of obtaining these ideas is by talking to other staff members in meetings such as shown.



## OARD OF DIRECTORS 1959-1960

KOCHANSKI (ME 43), J. POPOVICH (ME 40), A. RUTKOSKI (ME 48) KOSTY (IE 53), E. SCHRODER (AE 43), K. HOLM (ME 51),

## ALUMNI OFFICERS

Left to right: J. LIDKEA (ME 58), Secretary; C. COWAN (ME 40), President; R. ABT (CE 55), Vice President: W JAMES (CE 58), Student Council Rep.; R. EXLER (ME 58), Treasurer; G PECK (ME 58-IE 59), Blood Bank Chairman.

Missing: D. MALONEY (TI 58), Corre sponding Secretary

## ANNUAL DINNER DANCE

The Annual Dinner Dance is the highlight of the Alumni social calendar. At this time the Alumni get together and renew old friendships.


## ALUMNI ASSOCIATION

The Nummi Isociation wats founded in 1935 and inconporated as a non-profit orgamiation in I955. The purpose of the Isortiation as set forth in the Constitution is as follows:

To promote the general wellare of Lantence Institution of Technology.

To further the altancement of the college as an celucational institution.

To encourage ative commercial and social relationships betweell members of the Numini Association.

Io establish a mumally benclicial relationship between Latrence Institute and its . Dlumni.


GRANT-IN-AID STUDENT LOAN PROGRAM
Hurst Wulf presenting the check to James Hobson, Vice President of Lawrence Tech., which marked the establishment of the Grant-in-Aid Student Loan Program. Hurst Wolf, Louis Klei, and Peter Camilletti did the initial work on formulating this program. The Grant-in-Aid Program was established to give financial assistance to L.I.T. students during their senior year.

Left to right: C. COWAN (ME 40), J. HOBSON, (IE 49), L. KLEI (ArE 50), H. WULF (ME 41), P. CAMILLETTI (ME 43).

## ANNUAL DINNER MEETING

Annual Dinner Meeting held in June at which the election results are announced and officers installed for the coming year.





Coach George Verdonckt


Captain Clayton Pethers

1959-1960 Basketball Squad
Back row: Don Ridler (Athletic director); Clayton Pethers; Gene Lawson; Fred Tinsley; Fred Wasen; George Verdonckt (Coach) Middle row: Curtis Hondzinski (Ass't. student mgr.); Dick Carlson; Jim Morrissey; Bill Maier, Lou Haase; Dan Siwula (Student mgr.). Bottom row: John Conway; John Bradley; Henry Podeszwa; Ron Nosek; Ron Keen.


## BASKETBALL

## SEASONS RESULTS

| Kalamazoo College | 61 | L.I.T. 42 |
| :--- | ---: | ---: |
| Indiana Central | 92 | 89 |
| University of Buffalo | 99 | 73 |
| U. of Western Ontario | 75 | 73 |
| University of Toronto | 90 | 91 |
| Detroit Tech | 92 | 105 |
| Otterbein College | 88 | 104 |
| University of Akron | 111 | 66 |
| U. of Western Ontario | 61 | 68 |
| Olivet College | 59 | 64 |
| Ohio Wesleyan University | 91 | 82 |
| Bluffton College | 84 | 68 |
| Alma College | 77 | 98 |

John Bradley keeps D.I.T. busy with his tricky dribbling. John wa high scorer for the season with 565 points.




Adding a little poise, Cap Pethers shows D.I.T how it's done as Tech wins 80 to 73 .

Hank Podeszwa's shot is gone as Tech scores 2 more points.

Dick Carlson and Cap Pethers watch as Lou Haase and an Indiana Central player scramble for the ball.


## HOMECOMING



One of the great activities brought back to Lawrence Tech, was the celebrating of homecoming. This festivity honoring the basketball team, began with a rally and a bonfire on the L.I.T. campus, followed by a motorcade to Hackett Field House.
The exciting and victorious game over Detroit Institute of Technology, was the teams contribution to motivate and inspire school spirit.
Other highlights of the game featured the crowning of the Queen, Colette Guzik, and the introduction of her court. Also during half time, A.G.U.'s Distinguishable Player Award was presented to John Bradley for his outstanding sportsmanship and abilities.
Following the game was a dance held at the nearby United Dairy Workers Hall. The crowd danced to the music of Frank Boeberitz and his orchestra. During the intermission the Tech Glee Club sang some old favorites and along with the crowd they added the final touch by singing the L.I.T. Victory song.


COURT

BERWYN DOUGGAN

MARY McDANIEL

## PAT GUIBORD

SUE YEDLEY
A.G.U.'s Distinguishable Player Award is presented by Colette Guzike to Joim Bradiey. Johas Welis icqucsenting Alpha Gamma Upsilon looks on.

QUEEN

COLLETE GUZIK


## TENNIS

BOB SPENCE

VERN OSTERLAND

## BILL PENCE

Of the activities in the school's athletic program, the tennis team is following through in L.I.T. fashion. Although just a few years at L.I.T., the tennis team has the spirit and potential that a winning team must have. It has been successful in many tennis tournaments at Ferris Institute and Central Michigan College.



## VARSITY

## TEAM ONE

JOHN LEY (Capt.)

CLARK EWING

MORTON FRIEDMAN

PHIL HOROWITZ

In the past three years, the Varsity Bowling team has come to be one of the top teams in its league. Competing with teams from Eastern Michigan, Detroit Engineering Institute, Highland Park Junior College, Electronics Institute, and Detroit Technical Institute, both of the Lawrence Tech teams have finished within the top four positions. In the first half of the 1960 season De-

DON POLENS



## BOWLING

troit Institute of Technology, who dropped out of league competition in the last half of the season, finished in first place with Lawrence Tech Team Onc in second place, while Lawrence Tech Team Two finished in fourth. Individual high game and high three game series were won by Frank Karasinski of Team Two, and the team high game and high three game series were won by Team One.

## TEAM TWO

RAY ROSE (Capt.)

JOHN CAMPBELL

HANK WEBER

GEORGE RECKLING

FRANK KARASINSKI



## BOWLING

troit Institute of Technology, who dropped out of league competition in the last half of the season, finished in first place with Lawrence Tech Team Onc in second place, while Lawrence Tech Team Two finished in fourth. Individual high game and high three game series were won by Frank Karasinski of Team Two, and the team high game and high three game series were won by Tcam One.

## TEAM TWO

RAY ROSE (Capt.)

JOHN CAMPBELL

HANK WEBER

GEORGE RECKLING

FRANK KARASINSKI


## INTRAMURAL BOWLING



Winners of the first place trophy for the season was team Ten; Fred Randall, Dave Daily, Greg Cowelchuck, and Jim Zrimec.


High game for the season with a 280 , was Ray Rose who also succeeded in rolling the highest series of 660 .

Bob Pass was runner up for high series with a 646 .

In the last four years Intramural Bowling has become a very popular student activity with fourteen teams participating in the 1960 season.



The league bowls from October to May at the Star Lanes Bowling Alley. The season is ended with a big dinner and the awarding of trophies to the League's winners.

He went for Seagrams Seven Crown!



ROGER MESKO
President


JOHN WELLS
Vice-President

FIRST ROW: P. Kris-Comesponding Secretary; G. Depolo-Reconding Secretary, I., Malek-Pledgemaster. (; Nelangnlin-Sergeant-at-Arms-R. Chapie-Treasurer, R. Mesko-President. J. Wells-Vice-President. I.. Sumd-gren-Sudent Council. F. Long-Nembership Secretary.

SE(\%)ND R OW: 1). Berturfi. W: Quigley. N. Petruml, M. Rilellecii. (: Wellis 1. Prosser. F. Kiefner R. Chandler.
1HIR1) R(OW: 1). Wum. 1). Norvison. 1). Rusas, B. Michalic. I. Ilamilton. 1.. Sheskaitis, 1). Wenderski. I. (oppe, R. Iarsen. P. Rirckson.


## ALPHA GAMMA UPSILON



GEOFFRY DE POLO
Recording Secretary



## PLEDGING

Pledging is a tral and instruction period. During this period, a pledge receives guidance from his big brother and the pledge master, as emphasis is placed toward him on becoming a man who is able to carry responsibility, who has self initiative and pride. The pledges learn to run their own meetings for the purpose of applying their instruction of parliamentary procedure, to work together and to organize the
 pledge group.

## SCHOOL AND COMMUNITY SERVICE

Serving the Community and the School in many worthy actions, such as the clothing drive for the needy children of Southfield, selling Goodfellows newspapers, and painting the school sign, better relations between these organizations are acquired. This is also an opportunity for pledges to accomplish constructive actions instead of hazing.


## MAIN SOCIAL FUNCTION

The Annual Winter Waltz is Alpha Gamma Upsilon's main school function at which the attendance is close to 500 people. The people who attend enjoy dancing and various refreshments, and have a ball. Together with this dance AGU enjoys many other socials, such as house parties, stags, tobogganing, skiing, swimming. . . . Alpha Gamm's also support other school functions, such as Kappa Phi Sigma's Moonshine Mingle.



DAN CRAW President
R. Ament. B. Wilson. 1). Polens. J. Chamberlin, 1). Hoyle.

THIRD ROU: W: Hitchrock. I. Awgerilli. I. Averv, K. Hewe. T. Armold. R. Noore:


FIRSI ROW: G. Ament-Corresponding Secretars. J. Bataglia-Recording Secretars. 1). (iraw-Presilem. W: Burke-Facults. W: Surbrook-VicePresident. F. Aremia-Treasurer, R. Molotky-Sergeaut-at-Arms.

SFe:ON1) ROWः B. Karronen-Ciuard. W. Kraimer-Historian, J. Owens.


## KAPPA PHI SIGMA



ED AREMIA
Treasurer



DAN CRAW
Student Council Vice-Pres. Parking Comm. Chairman Tech News Staff Who's Who


DAVE HOYLE Lambda Iota Tau
Student Council Rec. Sec.
Who's Who
I.F.C.

Tech News


BILL SURBROOK S.A.M.Vice-Pres. Student Council

Many students have the fallacious idea that a college education is achieved strictly through text books and classroom lectures. But, in order to build a well balanced education, they should participate in some extra-curricular activities.

Our campus is generously endowed with activities which are diversified enough to be of interest to all students such as: the student council, the two student publications, varsity

Unless the student takes full advantages of hese activities which are open to him, he is missing the most interesting element of college life, according to the above students.

Why are these students so interested in extracurricular activities, and who benefits from their active participation in the social outlets of college life? The obvious answers are that they become active to fill out their college education and that they are the ones who benefit rom their interest in college social life as well as academic life.

These students are materially rewarded with pins, keys, and certificates for their contributions toward campus organizations. Occa-
sionally they are accepted and entered in the register of Who's Who Among Students in American Universities and Colleges, as three of the above have. But, the greatest reward that any student leader receives is when someone personally thanks him for a job well done. But it also goes much deeper than this. They get a great personal satisfaction from not only being associated with a particular group or groups, but in assuming an active part in the planning and carrying out of the group ideas.

The organization and its members benefit when a real student leader is one of its members. The school benefits from the knowledge that competent students are participating in the extra-curricular activities. Every sudent council, the L-Book and the Tech News Staff.

Kappa Phi Sigma is justly proud of its fine array of members who are not only active within the fraternity, but are student leaders throughout the school as well When any of our brothers receives recognition in connection with another activity KPS reaps benefits from his prominence. This is one of the many from sons that Kappa Phi Sigma is highly rated by many students and members of the faculty.


SID RUBIN
Tech New's Managing Editor Student Council

Iudicial Comm. Chairman Parking Committee

## S.A.M.



JOHN AVEY
Who's Who Publications Manager S.A.M. Pres.

Student Council


TOM ARNOLD Soph. Class President Student Council Election Committee Homecoming Dance Comm. Tech News
S.A.M.


At the end of each pledge season, the new members are honored with a dinner-dance. This one was held at the Wakeek Tea Room in W'yandotte.


It wasn't all hayrides, hot dogs, and dancing as some KPS men serve liquid refreshments at the "Moonshine Mingle."


Three members on the left consult two pledges piior to their final pledge exam.

SOCIAL FUNCTIONs



KPS has an annual convention each summer The one last year was held at Gerry and Kay Ament's cottage on Lake St. Clair.


KPS is proud of its tradition of supporting other fraternity and school functions. Here is part of the many Kappa Phis who attended the Winter Waltz.


FIRST R ()W: (. Kinsel-Pledgemaster, D). Van Blois-Treasurer, K. Sand-berg-Secretanv. (: I.oomis-President. (;. Lembas-Vice-President, G. Lar-son-Faculıs. I.. Malinowski.

SE(: )NI) R()Wi: A. Oddo. J. Ross. W. Klaft, I., Stys. W. Lunski, E. Cas-


GERALD LEMBAS
Vice-President
cardet. J. Doki, F. Karasinski.
THIRI) ROW: (. Walls, G. /.chncer, F. Randall-Sergeant-at-Arms, R. Bedore. 1). Bielawski. E. Kabit.


## KAPPA SIGMA KAPPA



KEN SANDBERG
Secretary


DAVID VAN BLOIS Treasurer


LESTER W. MALINOWSKI Student Council Pres. Member of Judicial Comm. Soph. Class. Pres. (Night) Junior Class Vice-Pres. Tech News Staff Sec., Kappa Sigma Kappa Member of S.A.E.


CHARLES K. LOOMIS Student Council Victory Dance Comm. Activity Awards Comm Ir. Prom Comm. Architectural Club L-Book Staff Acting Chairman I.F.C.




GARY ZEHNDER
Delegate to Planning Comm. for 1960 Internal. Convention of KSK Victory Dance Comm. Frosh Fling Comm. Hell Week Comm. Chairman Advertising Comm

Almost any extra-curricular activity, such as ; class officer, or membership on a committee of the Student Council, has a corresponding position or office in a fraternity. The experiposition and sense of responsibility gained by participation in these activities will make the individual an excellent fraternity member. Participation in school activities by the newer members of a fraternity provides exceptional training for the time when they will hold positions of responsibility in their fraternity.

As a group, a fraternity gains many benefits rom having as its officers men who are active in school affairs. These men, by virtue of their experience in other activities, are able to
exercise mature judgmen in making decisions effecting their fraternity. Fraternity of ficers who are active in other areas are in a position to serve the best interests of their fraternity when dealing with other student organizations or the student government.

The benefits of active participation will also become apparent when the student graduates and enters a position in industry or the engineering profession. Young men who, by the experience gained in school activitues are preown initiativept responsibilitles a rapidly than the average graduate.


GERALD A. LEMBAS Student Council Freshman Class Vice-Pres. '58 Junior Class President '60 Frosh Fling Comm.

## L-Book Staff



KEN SANDBERG Kappa Sigma Kappa Secretary
Pledgemaster
Membership Comm. Civil Club

## PLEDGING

Kappa Sigma Kappa's oldest pledging tradition is "Operation Skitski." It is held one night during the last two weeks of pledging. At "Skitski" the pledges must entertain the members by means of skits and impersonations, and they must also perform various special services for the members. "Skitski" enables the pledges to meet the alumni members who cannot attend the regular pledge meetings.


DINNER DANCE

Throughout the year, Kappa Sigma Kappa has social functions for its members. Some of these functions are drag parties, stag parties, the pledge mixers. the Formal Banquet, picnics. and the I.F.C. softball league. The brothers of Kappa Sigma Kappa also attend the other school social functions as a group, which increases their enjoyment of these functions.

MAIN SOCIAL FUNCTION

Kappa Sigma Kappa presents its, annual "Millionaire's Party" each Fall. This function is open to the entire student body. The last "Millionaire's Party," which was held on November 14, 1959, was the most successful in our history. It was attended by more than two-hundred and fifty couples.



IIRSI ROW: S. Ibrahim-Corresponding Secretary, B. Formella-VicePresident. (. I.iles-Recording Secretary. A. Vee-Treasurcr, R. MoxleyChaplain.

SECOND ROW: A. Wisniewski, W. Weishaar, D. Brooks. R. Darbyshire, R. Kaphgngst.

THIRD ROW: F. Mazeiko. I. Murphy, L. Kumin. N. Smith. F. Ciampa.


## PHI KAPPA UPSILON (Alpha)






NORMAN TOMBONI
President


JAMES BOEBERITZ
Vice-President

FIRST R OW: B. Prutow-Master of Rituals, F. Malinowski-Warden, R. Hewsm-Secretary. N. Tomboni-Presilent. R. Schenkel-Facule, E Gracffe-Faculty, F.. Jositas-Faculty, J. Boclecrit/-Vice-Presielent, C. Bon-ver-(:haplain, I). Schmill-Treasurer.

SECONi) Roll: B. Pence. J. I cee. C. Aralijo. B. Pass, C. Comman, C. Otto,
J. Neuse. (, L. camon, R. Lipinski. J. Plas, R. Fiurmaga, W. Croshy-Recorling Secretary.

THIRD ROW: T. Mason, I., Measel, R. Rose, J. Janicki, B. Schlaff, A. Fiegchen, R. Shtogrin, (: Davis, J. Stangis, R. Restrick, T. Rusimowski. V. Osterlund. V. Andragna.


## PHI KAPPA UPSILON (Delta)




CARL BOUVIER Phi Kappa Upsilon Chaplain, Housing Corp. Senior Vice-Pres. Student Council Tech News Staff M.S.P.E.

Homecoming Committee


JOHN JANICKI Social Comm. Chairman Electronic Club Society of Auto. Engrs. M.S.P.E.

Dinner Dance Committee L-Book Writer


ROGER SHTOGRIN Junior Class Pres. Student Council
Tech News Staff
Pub. Committee Chairman

Phi Kappa Upsilon Fraternity, the oldest fraternity on campus was founded in August, 1932. The late Pussel E. Lawrence organized it to endow the friendship between the original was organized under national charter, the nucleus being at Lawrence Tech.

The promotion of faith, honesty, and love of fellow man is the most important function of the Fraternity. Through this many accomplishments have come about

The long awaited dream of every Fraternity a home - was purchased in the early spring of 1959. It is located at 21000 Nine Mile Road. of 1959. It is located at 21000 Nine Mile Road. ing the home for the men who would soon be residing there.

Once again the men of Phi Kappa Upsilon were at the Michigan State Fair selling reduring the local blood bank drive.

Our annual New Years Eve party was a great success and a pleasant time was had by all who attended.

Along with the New Year came new enthusasm and initiative, Attention was centered on raising funds for scholarships and home improvements. The alumni's effort helped achieve these goals by the raffeling of a 1960 Ford Falcon.

Continuously increasing membership in the Student Council, class offices, and clubs on campus helps to maintain the honor and prestige of the Phi Kappa Upsilon Fraternity.


WILLIAM PRUTOW Phi Kappa Upsilon Master of Rituals Architectural Club


WALT CROSBY Corresponding Sec. Supreme Council Rep. Dinner Dance Comm. Electronic Club


RICHARD LIPINISKI Phi Kappa Upsilon New Year's Eve Dance Chairman


Members showing the true spirit of Founder's Day.


Brother Carl Bouvier painting the peak of the Fraternity house - the human weather vane.


Annual Michigan State Fair stand and some of the working members.


Brother John Janicki explaining to the Chaplain, Brother Carl Bouvier and his congregation, the evils of drinking.


GEORGE GROHS
President


JACK BASTO
Vice-President

RST ROW: B. Radford-Plerlgemaster. J. Basto-Vice-President, E. Han-ek-Faculty, (; (irohs-President. F: Plizga-Chaplain, D. Frayer-Correonding Secretary. A. Zago-Student Council.
(CON1) ROW: R. Kinsey, I). (irden. M. Hartenberger. J. Pershon. J.

Richl. R. Maeder, J. Miller. I. (;aiy, J. Nieme, R. Fiye.
Thiri) Rell: F. Salter. 1). Smith. P. Homin. J. Eivangelista. J. Scherllebower. R. Noet/old. W. McHale, H. Peters. P. Scullion. 1). Rass.




WILLIAM REPPEN
President


GARY BULLOCK
Vice-President

FIRST ROW: L. Ponziani-Honorary Nember, A. Blvthe-Faculty, D. Metcalf-Sergeant-at-Arms, J. McNann-Recording Secretary. W. ReppenPresident, C. Bullock-Vice-President. I.. Hannert-Treasurer, J. BanfieldCorresponding Secretary, (. Hecman-Honowary Nember.

SECOND ROW: P. Standley, R. Lipmyer, H. Lund. W. Terreault, A.

Williams, A. Dimartino. N. Monks, R. Owens. W. Stever, R. Heinrich. E. Burgess. E. Holden.

THIRI) ROW: B. Willis. I. Lentner. S. Nagy, R. Kwitt. A. Butterworth. S. Nitchell. R. Truchan. W. Nacneill. R. Willbaum. (. Bcllmore, (: Burleson.


## SIGMA KAPPA PSI



LYNN HANNERT
Treasurer



JOHN BANFIELD
Recording Secretary


HARRY LUND
Student Cousicil Treas.
A.S.T.E. Chairman Vice-Chairman Class Vice-Pres. '58-'60 Blood Bank Coordinator


DEL METCALF Sigma Kappa Psi Sergeant-at-Arms Senior Class Pres. '58-'60 A.S.T.E.Treas.

Election Committee
Chairman Founder's Day Comm

al Williams
A.S.T.E.

Vice-Chairman Student Council

Most of us admire those who can make something useful of their lives; and the fact that a man is in college is proof in itself that he has the desire for a full and useful life.

Studies of personality made by scientists in recent years show that men who have had the greatest opportunity for fellowship and companionship develop the best and most pleasing personalities. There is a definite and direct relationship between personality and sociability. The outward impression created so an individual's personality is the prime byctor in how well he will integrate and develop with his fellow man will integrate and develop with his fellow man

Members of clubs, fraternal orders and group organizations usually rate very high in personality because they have had the opportunity to develop their best traits through close and friendly active relationships with others haying similar aims and interests.

Most people will agree that personality is
worth cultivating and one of the best ways of doing this is through active participation in the various school activities which always abound in the progressive school. This attitude of fellowship manifests itself in 'Esprit de Corps' or school spirit, which expands itself even to those students who normally might be somewhat reserved toward outward displays of enthusiasm. This mutual association of persons interested in intellectual advancement and expanded human relations is an oufstanding way in which to develop self con fidence and leadership qualities, as well as a more personable attitude toward education and humanity.

Academic ability alone is of little worth with out the support of the more aesthetic qualities of personal and humanitarian considerations. The man who develons his character and personality to the fullest will advance at a more steady and leisurely pace than the man who is foremost in his academic capabilities who is foremost in his academic capabilities alone.


JOHN BANFIELD Sigma Kappa Psi Recording Secretary Class Vice-Pres. '61 L-Book Asst. Editor A.S.T.E.


PHIL STANDLEY
Class of ' 61 Secretary-Treasurer 4等 3頻


WILLIAM MACNEILL Sigma Kappa Psi Tech Neus Reporter Senior Class Pres. '60-'61 A.S.T.E.


We of Sigma Kappa Psi feel that one of our obligations is to provide a social atmosphere to the members and their wives. We feel that this atmosphere not only stimulates old friendships, but also transmits a feeling of "belonging" to the newer members.


Their wives meet.


The Arthur Murray's of Sigma Kappa Psi.


Secre


What in the world's going

One-half of the pictures were taken at a Christmas party held in the Rainbow Room of the Veterans Memorial Building. The remaining pictures were taken at our Valentine dance, "Cupids Caper," our first attempt at sponsoring a dance, and which we hope to make an annual event.


School chums meet.


Everyone joins

The smiling faces you see in the pictures above proves we have met this obligation with a high degree of success.



Today's graduates are entering an exciting new era where they will live better electrically in every way ... at home, at work, or at play.
For example, if you choose marriage, you can enjoy an all-electric home. Included will be electric heat, built-in electric range and refrigerator and a host of time-saving, economical electric appliances. They will be the ultimate in modern living comfort and convenience.
Or, if you go into business, efficient electrically operated machines will assist you in getting the job done swiftly and easily-again an illustration of the versatility and dependability of electricity.
Or, if you go on to college, perhaps you will become one of the scientists or technicians who help further mold the all-electric world of the future.
No matter which path you may choose, electricity will be there to lighten your load, brighten your way ... help you live better... electrically.

## Congratulations

## KELSEY-HAYES WHEEL COMPANY

## $\mathcal{B e s t ~}^{\text {Wishes to }}$ All the Graduates

COMMEHCIAL<br>STEEL TREATING COHPDRATION<br>Metal Treating Specialists



| Merlo Steam <br> Equipment <br> FACTORY REPRESENTATIVE \& DISTRIBUTOR INDUSTRIAL STEAM, AIR, \& WATER SPECIALTIES | "You get the most from" <br> Fine Dairy Products <br> FOREMOST DAIRIES, INC. |
| :---: | :---: |
| WOLVERINE BOLT CO. 9685 GRINNELL <br> WA. 1-3040 | NAVARRE DIE \& TOOL CO. <br> TOOLS - DIES |
| The Wayne Way <br> GOOD PRODUCTS PLUS GOOD SERVICE <br> Metal Working Lubricants <br> Rust Preventives <br> Paste Solders <br> Chemical Specialties <br> Wayne Chemical Products <br> Company <br> Established 1899 <br> Copeland Street \& M. C. R. R. <br> Detroit 17, Michigan | Congratulations LIT <br> from <br> City Towel Service Co. <br> 1286 14th Street <br> Detroit, Michigan |
| Congratalations L. I. T. <br> GENUINE PARTS <br> A SUPIPLY, IVC. <br> "You Are Entitled To The Hest" <br> Automotive - Paints - Supplies <br> 14.5.5 Fort Street IDU 31200 <br> Lincoln Parlh, Michigane | Congratulations L. I. T. <br> AUBURN HEIGHTS MGF. COMPANY <br> Pontiac, Michigan |



United Air Lines pilots review flight plan calculated by Bendix G-15 Computer at UAL's Operating Base, Denver, Colorado.

## BENDIX COMPUTERS . . . AND HOW TO FIGURE YOUR FUTURE AS A PROFESSIONAL ENGINEER

Jet air line speeds bring new complications to the problems the airline captain must solve. Helping him to prepare and follow his Flight Plan are two important Bendix ${ }^{(8)}$ contributions: (1) The Bendix G-15 Computer, which makes pre-flight salculations of wind, weather, fuel, and load in seconds; and (2) airborne Bendix Doppler Radar, which gives the pilot instant, constant navigation data that previously required continual manual calculation.
Similar Bendix scientific and engineering advances are geared to the entire modern industrial complex. Opportunities for the engineering graduate are nearly limitless.

## BENDIX HAS 24 DIVISIONS, 4 SUBSIDI-

ARIES-Coast to coast, Bendix activities are decentralized-and, at the same time, generally adjacent to the industries they serve. There is great latitude in choice of work area for the young engineer.

SIZE AND STABILITY - In terms of
corporate size, Bendix ranks in the top 60 industrial firms (dollar sales) in the United States. In fiscal 1959, Bendix sales totalled more than $\$ 680,000,000$. An investment in future sales was the $\$ 120,000,000$ in engineering expenditures.

## DIVERSE PRODUCTION AND RESEARCH

- The graduate engineer has a chance to specialize with Bendix. He can probe electronics, nuclear physics, heat transfer, ultrasonics, aerodynamics, power metallurgy and a long list of other challenging fields. Or, he can aim for broader areas of mathematics, research, administration, and management.

CHANCE TO LEAD - Bendix is a diversified engineering-researchmanufacturing firm. Bendix

products include: Talos and Eagle guided missiles; Doppler radar systems for aircraft navigation; numerical control systems for machine tools; power steering and power brakes for automotive vehicles; nuclear devices; flight control systems for aircraft; satellite controls. More important to you, as an engineering graduate, are the vast numbers of new projects now being planned - projects to which you can contribute your knowledge and ingenuity.
BENDIX IS SYNONYMOUS WITH ENGI-NEERING-At Bendix, you can join an engineering staff of more than 12,000 people $-5,000$ of them graduate engineers.
Bendix offers you a chance to exercise your engineering degree in a real engineering capacity. See your placement director or write to Director of University and Scientific Relations, Bendix Aviation Corporation, 1108 Fisher Building; Detroit 2, Michigan.

## Congratulations

## W. BIDDLE WALKER CO.

## Industrial Contractors

## 4375 SECOND

DUnkirk 2-1500

## ECORSE, MICHIGAN

## DETROIT HOIST \& MACHINE CO.

Established 1905

8222 Morrow St., Detroit 11, Michigan TR 5-8344

Manufacturers of Air and Electric Hoists and Traveling Cranes for practically every kind of material handling problem.

Ask for illustrated Bulletin 795.

## Saratoga General Hospital

15000 Gratiot
Detroit
LA. 6-5100

## KEUFFEL \& ESSER COMPANY

EST 1867

Drafting, Reproduction; Surveying Equipment and Materials

Slide Rules
Measuring Tapes

5535 Woodward Ave. Detroit, Mich.

## Detroit Stamping Company

Established 1915

MANUFACTURERS OF
Pressed Metal Parts and Products
Medium Size and Smaller Stampings "DE-STA-CO" Toggle Clamps Arbor Spacers, Shims, Packaged Shim Stock

350 MIDLAND AVENUE
Highland Park Station
DETROIT 3. MICHIGAN

TOwnsend 8-5080

Best Wishes

Thompson

## Ramo-Wooldridge Inc.

Factories in Cleveland, Detroit and Los Angeles Subsidiaries -
Thompson Aircraft Products Co., Euclid, Ohio
Toledo Steel Products Co., Toledo, Ohio
Thompson Products, Ltd., St. Catherines, Ont.

## SCHIIRRER COISTRICOTION CO.

## BUILDING CONTRACTOR

Pontiac - Michigan


Do such dream-jobs actually exist?
Frankly, we can't say how many such opportunities exist. But they do exist at Pioneer. Here are a few of the outstanding benefits we offer:

1. Excellent starting income. Substantial merit increases.
2. Creative design and research work.
3. Diversification of creative duties; travel.
4. Company-sponsored executive development programs.
5. A youthfu! and understanding management.
6. Company-sponsored athletic and recreational programs.
7. Other liberal benefits.
8. Air-conditioned offices, engineered lighting, parking area, etc.
9. Nationally famous staff.

Before you make that vital first-job decision, give serious thought to what you want your engineering career to be. Perhaps you prefer the limitations of a specialized career. If not, drop in at Pioneer for a pleasant chat. We'll be glad to explore the possibilities with you. And you'll be pleasantly surprised to discover many Lawrence Tech alumni, too.

# CALLING SENIOR MEN 

Like to get in on the ground floor and stay there? Sorry, we can't help you. But we do have lots of room for first-rate seniors who want to get places fast in the communications industry. Seniors with a flair for science, engineering, business, accounting, management and personnel work.

You can find out how you fit into this business ì just one interview. See your Placement Counselor now and arrange a visit with our representatives-they visit the campus regularly. Or call our College Placement Office in Detroit-WO odward 1-1235.

Michigan Bell Telephone Company

Congratulations . . . L. I. T. !
from
DETROIT MOID ENGINEERING CO.

Originators and Manufacturers of Standard Mold Bases for Plastic Molding \& Die Casting

MR. FRANK MARRA
TW 1-1300

## MICHIGAN DRILLING $C$.

Soil Testing and Soil Analysis
Diamond Drilling in Bed Rock and in Reinforced Concrete

14555 Wyoming WE 3-8717 Detroit, Mich. Mr. Neumaier

## Congratulations

## from

## S. \& $\mathcal{H}$. $\mathcal{G}_{\text {reed }} S_{\text {tamps }}$

## Continued $S_{\text {uccess to }} \mathcal{L} . \mathcal{G} . \mathcal{T}$.

Congratulations $O_{n}$ The
Growth of Lawrence Tech

FULLER MFG. $\mathbf{C O}$.
$\mathcal{M}_{\text {memorial }} \mathcal{H}_{\text {spital }}$
Of Warren
23700 Van $D_{y k e}$ Warren, Michigan

Transmissions<br>Heavy Duty Forgings

Prouty Street Kalamazoo, Michigan

# THE STANDARD TUBE CO. 

## "GTANDARD'"

ROUND, SQUARE AND SPECIAL SHAPE

Welded and Butted Steel Tubing<br>Fabricated Tubular Parts<br>Upset Tubes and Forgings<br>Stainless Steel Tubing

Detroit 39, Mich.


## ADVANCE STAMPING COMPANY

## SMALL STAMPING SPECIALISTS

12025 Dixie

Detroit 39, Michigan

## Congratulations to

Lawrence Tech on past achievements and best wishes for future success

ECLIPSE COLINTERBORE CO.

MANUFACTURERS OF FINE END CUTTING TOOLS

1600 Bonner Avenue
Detroit 20, Michigan

## AJAX STEEL \&

 FORGE CO.FORGINGS

| Congratulations L. 9. J. <br> THOMPSON CAIN MEAT CO. <br> Established 1898 1515 Winder WO 12762 Detroit, Michigan | Congratulations L. I. T. <br> GARDELLA FOODS 2036 Howard Street Detroit, Michigan |
| :---: | :---: |
| CADMET CORP. <br> Precision Castings <br> Lost Wax Process <br> JE 9-2220 <br> 20801 Ryan Road Detroit 34, Michigan | Continued Success To L. I. T. <br> M. DEN BRAVEN <br> 9080 Alpine WE 37494 <br> Detroit, Michigan |
| HOUDAILLE INDUSTRIES <br> 2660 E. Grand Blvd. <br> Detroit, Michigan | Best Wishes to ‥ I. J. <br> ROTH, WADKINS \& WISE, INC. GENERAL CONTRACTORS 7750 Greenfield LU 46000 Dearborn, Michigan |
| Congratulations to L. I. T. <br> SEIFFERLEIN ELECTRIC REPAIR <br> WE HEPAIIE A HEWIND ELECTRIC MOTORS <br> 142 Hubbard HO 84263 Mt. Clements, Michigan | Congratulations $\mathcal{L}$. I. $\mathcal{J}$. <br> $\mathcal{B}^{\prime}$ rown's Creamery Company <br> 538 W. 7 Mile Road Detroit, $^{\text {Michigan }}$ |




VIBRATORY FEEDER for light, fragile or highly finished parts.


ROTARY FEEDER for high production feeding.


ROTARY HIGH SHELL FEEDER for maximum holding capacity.


## Shuffle and deal parts for automatic assembly with



It takes fast, automatic feeding to satisfy the appetites of today's automatic assembly machines. And nowhere can you duplicate the range of equipment, the specialized experience in selective feeders offered by Detroit Power Screwdriver Company.

The most complete line in industry, DPS parts feeders include rotary, vibratory and elevator types. They handle any product from the tiniest of screws to assembly components the size of your fist . . range in holding area from eighty cubic inches to 20 cubic feet.

DPS will welcome an invitation to analyze your assembly operations. If lagging production can be traced to inefficient feeding, the problem is as good as answered. Write for catalog on selective feeders.


DETROIT POWER SCREWDRIVER COMPANY

## STUDENTS

Many members of your alumni, as ontstanding American citizens, have set high standards in a profession which has done so much to make this country of ours a world leader.

We need more and more engineers like that who can think straight and act vigorously to keep America the land of opportmity.

Yon gentlemen have the equipment for that leadership. We are depending on YOU.

## NATIONAL HROACH <br> A MACHINE CD.

## 5600 St. Jean Detroit, Michigan

Congratulations $\mathcal{L}$. I. T.

## CHASO TOOL CORP. NORTH BRANCH MICHIGAN

Congratulations L. I. T.

AUTD - FID CORPDRATIDN

Manufacturers of Heating Accessories

KE $\mathbf{7 3 8 0 0}$

12085 Dixie Detroit 39, Michigan

## HOLLET

## CIRBIRETOR

## (il.

DETROIT, MICHIGAN

| W. T. ANDREW CO. <br> PLUMBING SUPPLIES <br> 15815 Hamilton Ave. <br> Highland Park, 3, Mich. <br> TUlsa 3-2000 | INTERNATIONAL CONVEYOR <br> \& WASHER CORP. <br> DETROIT, MICHIGAN |
| :---: | :---: |
| STEEL SCAFFOLDS <br> and <br> STEEL BLEACHERS <br> FOR SALE or RENT <br> Saiway Steel Scaffolds, Inc. <br> TEmple 3-0420 | Continued Success To L. I. T. <br> Multifastner Corp. <br> 12688 Arnold <br> Detroit, Michigan |
| Continued Success to L. 9. I. <br> NATIONAL CRANE \& CONVEYOR COMPANY <br> All Types of Steel Fabrication - Installers of Overhead and Floor Type Conveyors <br> 4129 Wabash TE 38899 Detroit 8, Michigan | Congratulations $\mathcal{L} . \mathcal{I} . \mathfrak{J}$. <br> Charteraft Studios <br> Sales $\mathcal{P r e s e n t a t i o n ~}$ Charts $\mathcal{R}_{\text {eproduction }}$ $\mathcal{L}_{\text {ettering }}$ <br> $C_{\text {reative }} \mathcal{L}_{\text {ayouts and }} \mathcal{D e s i g n s}$ Silk Screen Process $^{\mathcal{L}_{\text {ayouts }}}$ $P_{o s t e r s}$ and $D_{\text {isplay }} \mathcal{L}_{\text {ettering }}$ 4484 Cass $\quad$ JE 15755 |
| Congratulations to L. I. T. <br> McARTHUR COLTON, DENTIST <br> Michigan and Griswold over Kinsel's <br> Monday thru Saturday WO 21779 | Continued Success To L.I.T. <br> SOCLETY OF ST. VINCENTS <br> DE PAUL <br> CLOTHES BUREAU <br> 400 Macomb <br> WO 1-2839 |

Success

## Jo The Graduates

$\mathcal{F}_{\text {rom }}$

## LAMIIT-IIISS \&TOOLS

INCORPORATED


8817 LYNDON AVENUE • DE'TROIT 38, MICHIGAN WEbster 3-5000

Manufacturers of Machines for Testing Physical Properties of Metals, Including:

standard and special testing machines

# DARIN \& ARMSTRONG Inc. 

## GENERAL CONTRACTORS

## $204 \mathbb{1}$ Fenkell

Detroit,
Michigan

COMPLIMENTS OF

# WOLVERINE TUBE 

Division of
CALUMET \& HECLA, INC.

1411 Central
Detroit 9, Michigan

Continued Success To L I T. HOVIS SCREW LOCK COMPANY

8100 E. Nine Mile Warren, Micbigan

Congratulations L. I. T. UNITED BRASS MFG. INC. Manuiacturers of Forged Valves and Fittings
35030 Goddard Road Romulus, Michigan WH 10700

Congratulations L. Y. J.
Welduction Corporation
$W_{\text {anufacturesers of Induction }}$
Heating \& Automatic
A.R.C. Wodting Cquipment 19400 W. 8 Wile KÉ 80800 $D_{\text {deroit 41, Mishigan }}$

Continued Success To L I. T.

## 

 tu TH. I. ©. Tnmir salw代 Eunitarring 2llomin Sherumud

## notiling Changed

## BUT THE NAME

when Snyder Tool \& Engineering Company became

## SNYDER CORPORATION

We continue to create the

## FINEST PRODUCTION MACHINES

and our record is tops with people
whose products you know and use.
Maybe we can help you, too. Write

# Snyder Corporation 

Specialists in cost-cutting machines

3400 East Lafayette, Detroit 7, Michigan

## CHAPPER IRON WORKS, INC.

12801 St. Aubin
Detroit, Mich.

Best Wishes
PERFECTION PATTERN \& MFG. CO. DETROIT, MICHIGAN

Continued Success to L. I. T.
TORRENCE OIL
COMPANY
2205 Holland
Birmingham, Michigan

Congratulations L. I. T.

## NEILSON CHEMICAL COMPANY

2300 Gainsboro Detroit Michigan

Congratulations To Lawrence Tech

## JANISE MORTGAGE COMPANY

> Mortgages - Real Estate Insurance 16777 James Couzens
A. J. DUPUIS COMPANY

Engineers \& Contractors
1812 Ford Bldg. WO 23844
Detroit 26, Michigan

## FACULTY AND ADMINISTRATION

Baker, Charles ..... 49
Baker, Janette ..... 25
Bartlett, Zenobia ..... 68
Beard, Donald ..... 39, 40, 41
Bigart, William ..... 23, 52
Blythe, A. ..... 120, 176
Boothroyd, Harold ..... 12, 13
Bream, Claude .....  .22
Brewer, Betty ..... 25
Brown, Mable ..... 25
Buck, Cleophus ..... 49, 51, 83, 126
Burke, William ..... 23, 156.85, 86
Chambers, Clarence G., Jr. ..... 57, 61, 62, 63
Coan, Max ..... 23, 123
Dale, Margaret ..... 25
Daniels, Charles ..... 49, 53
Daugherty, Wilson ..... 69, 129
Dick, Dorothy ..... 25
Dooley, Genevieve ..... 21
Erickson, Judith ..... 24
Erneman, Hans
,
,
Fernelius, Carl ..... 54, 69
Gabrys, Dr. ..... 34, 37
Graeffe, Dr. Edwin ..... $48,50,102,103,168$
Hancock, Elwyn .38, 42, 172
Hart, Arthur ..... 75
Herman, Gil ..... 82
Hobson, James W. ..... 20
Jositas, Edmund ..... 64, 168
Keegan, M. ..... 91
Kanonles, Loren ..... 71
Laabs, Joan ..... 25
Landuyt, Mary ..... 25
Larkins, Delores ..... 25
Larson, G ..... 160
Lawrence, George E. ..... 19
Lee, Modelle ..... 25
Leibson, M. ..... $46,47,48,49$
Levinson, Irving ..... 57, 58, 59
Macropol, John ..... 66
McNair, Grace ..... 25
Mitchell, Michael ..... 22
Monohon, Paul ..... 35
Nace, Henry ..... 64, 65
Noetzel ..... 76
Pellerin, Earl ..... 28, 31
Preston, Jeanne ..... 24
Renner, Marie ..... 25
Ridler, Donald ..... 22, 96, 140
Riffle, Margaret ..... 25
Rogers, Marion ..... 25
Ryan, Mordica M ..... 21
Schenkel, Roy ..... 64, 168
Sheppard, June ..... 25
Smith, Doris ..... 29, 32
Snoblin, Kenneth ..... 70, 123, 132
St. Angelo, Lilian ..... 25
Stevens, Laurene ..... 24
Takken, Joseph ..... 71
Tewes, Mildred ..... 25
Toth, Steve ..... 78
Van Bussum, Harold ..... 22
Waeiss, Gloria ..... 25
Williams, Herbert ..... 68, 102
Wood, Edward ..... 23
Wright, Maxwell ..... 29, 32
Wunderly, Helen ..... 25
Zonars, George ..... 28, 30

## STUDENT

Abke, A. 58, 62, 63
Adams, D. ..... 84
Adams, $L$. ..... 82
Addy, R. ..... 41
Aittama, A. ..... 46
Alexandrowicz, A ..... 47
Allmand, J ..... 101
Allmen, $\mathbf{C}$ ..... 58
Alton, B. ..... 63
Ament, $G$. ..... 0, 126, 156, 157
Ament, R. ..... 156
Andragna, V . ..... 168
Angerilli, $L$. ..... 156
Angerilli, $\mathbf{R}$. ..... 90
Anson, R ..... 112
Antos, J. ..... 78
Araujo, C. ..... 168
Aremia, E. ..... 156, 157
Armour, M. ..... 84
Arnold, T. $97,101,110,134,156,158$
Ashor, E. ..... 30
Avey, J. ..... 50, 126, 132, 156, 158
Baaso, G. ..... 63
Bach, R. ..... 84
Badger, A ..... 124, 134
Bailey, J. ..... 76
Banfield, J. $99,117,120,129,130,176,177,178$
Bankes, B. ..... 55
Basto, J. ..... 172
Bates, C. ..... 82
Battagia, J ..... 156, 157
Bedore, B. ..... 160
Beinkley, R. ..... 89
Belhorn, R ..... 78
Bellmore, C. ..... 82, 176
Bellezza, L ..... 55
Bellezza, P. ..... 55
Bertuzzi, D. ..... 152
Bicknell, J. ..... 90
Bielawski, D ..... 160
Binkley, C. ..... 109
Boeberitz, J. 40, 95, 104, 134, 168
Boorn, R. .....  58
Borchanian, J ..... 84
Bosworth, R ..... 58
Bouvier, C. $97,104,134,168,170,171$
Bradley, J. ..... $141,142,144$
Brady, J. ..... 46
Britz, E. ..... 84
Brooks, D. ..... 46, 164
Brown, F. ..... 135
Brown, J. ..... 50
Brown, $L$. ..... 85
Brown, R. ..... 85, 89, 106
Buhlinger, H . ..... 85, 120
Bullock, G. ..... 85, 120, 176
Burgess, E. ..... 82, 176
Burke, E ..... 50, 117, 135, 154
Burleson, C. ..... 85, 176
Butler, T. ..... 60
Butterworth, A. ..... 176
Campbell, Jas. ..... 89
Campbell, John ..... 147
Campion, H ..... 109
Carlson, D. ..... 140, 143
Carder, R ..... 108, 109
Cascardo, E. ..... $.58,60,160$
Cecelski, W. ..... 63
Chaloult, N. ..... 40
Chamberlin, J. ..... 51, 156
Champa, F. ..... 164
Chandler, R. ..... 40, 99, 133, 152, 154
Chapie, R. ..... 152, 153
Chesney, R. ..... 47
Chettleburgh, J. ..... 82
Chmura, B. ..... 78
Clement, R. ..... 78
Coleson, R . ..... 40
Conway, J. ..... 140
Cope, L. ..... 51, 152
Cordts, J. ..... 78
Cotter, J ..... 51
Cowelchuck, G. ..... 148
Crane, J ..... 40
Craw, D. ..... 51, 94, 99, 134, 156, 158
Crenshaw, R ..... $.99,109,123,130,135$
Croghan, J. ..... 77
Crosby, W. ..... 41, 168, 170
Cullen, G. .....  51
Daily, D ..... 148
Daly, J. .....  41
Darbyshire, R. ..... 164
Davis, C. ..... 101, 168
Dean, W .....  .78
DeMay, S . ..... 101
DePolo, G. ..... 152, 153
Dietrich, R. ..... 46
Diggs, L. ..... 50
DiMartino, A. ..... 176
Dolunt, W. ..... 41
Downes, M. ..... 30
Drabik, R. ..... 50
Drovedahl, R. ..... 89
Dufrin, W ..... 82
Dulvick, J. ..... 135
Dunlop, R. ..... 59
Dyki, J. ..... 160
Edelheit, M ..... 50, 152
Edwards, C. ..... 41, 59
Ellery, G. ..... 122
Embury, $\mathbf{B}$. .....  50
Erickson, P. ..... 152
Ernst, M. .....  89
Evangelista, J. ..... 172
Evans, M. ..... 113
Evola, C. ..... 43
Ewing, C. ..... $.59,61,146$
Fakaros, N. ..... 50, 101, 130
Farrell, W. ..... 55
Fiegehan, A. ..... 41, 168
Fischer, A. ..... 101
Flaherty, P. ..... 30, 31, 33, 118
Flower, W. ..... 59, 62, 63
Fluent, $T$. ..... 36, 37
Foley, D. ..... 79
Foran, J. ..... 51
Forbes, R. ..... 113
Formella, B $97,98,116,135,164,166$
Fortune, D. ..... 173
Fouchey, J. ..... 47
Franklin, $K$. ..... 51
Gaden, D. ..... 59, 62, 63
Gallagher, D. ..... 51
Gallop, D ..... 89
Gancer, $G$. ..... 63
Garafolo, R. ..... 109
Garrison, R. ..... 78
Garritano, F ..... 43
Gary, L. ..... 172
Gauthier, B. ..... 36
Geggle, F. ..... 86
Gehart, E. ..... 86, 89
Gensley, L. ..... 40
Genther, J. ..... 51
Gerds, R. ..... 76
Getoor, R. ..... 58
Giacomazza, $\mathbf{S}$ ..... 51
Gibson, $\mathbf{S}$ ..... 43
Gleldowski, C. ..... 47
Giesy, B ..... 32
Gillespei, W. ..... 52
Gimbel, D ..... 41
Glatz, R ..... 120
Gogolin, $L$. ..... 47
Golla, R. ..... 58, 173
Gorman, C. ..... 31, 33, 168
Graham, J ..... 58
Granger, $\mathbf{J}$. ..... 63
Grden, D. ..... 172
Grellman, J ..... 63
Grohs, G $101,130,172,174,175$
Gunther, J ..... 55
Gyger, R ..... 58
Haase, $L$. ..... 140, 143
Hajjar, T. ..... 58, 60, 62
Hall, J. ..... 96, 133
Hall, W. ..... 76
Haloogian, H. ..... 82
Hamill, J. ..... 78
Hamilton, L. ..... 152
Hammond, $\mathbf{P}$ ..... 31
Hancock, E. ..... 172
Hannert, $L$. ..... $86,120,176,177$
Harmala, W ..... 78
Harper, J. ..... 59
Haroian, H ..... 47
Hartenberger, M ..... 172
Hawley, $\mathbf{R}$ ..... 77
Hay, $\mathbf{C}$. ..... 59, 62, 63
Heeman, $\mathbf{G}$ ..... 176
Heffner, $A$ ..... 52
Heidmous, $L$ ..... 52
Heinrich, R. ..... 176
Hennen, W ..... 52
Henze, $\mathbf{K}$. ..... 156
Herrington, E. ..... 130
Hewson, R. ..... 52,168
Hibberd, $F$. ..... 79
Hicks, $\mathbf{R}$. ..... 52
Hietala, W ..... 46
Hildenbrand, H . ..... 63
Hitchock, W ..... 156
Hogan, A. ..... 59
Hoffman, $\mathbf{F}$ ..... 132
Holden, E ..... 176
Hondzinski, C. ..... 140
Horn, C. ..... 79
Horn, $\mathbf{P}$. ..... 172
Hoyle, D. ..... $53,94,98,99,116,134,156,158$
Huemiller, $C$ ..... 86, 89
Ibrahim, $\mathbf{S}$. ..... 164, 165
Ihrke, D. ..... 87
Janicki, J ..... $40,41,168,170,171$
Janssens, ..... 59
Johns, D. ..... 89
Johnson, F. ..... 79
Jomantas, V ..... 79
Jarrard, R. ..... 77
Kaphgngst, R. ..... 164
Karasinski, F. ..... 59, 60, 62, 147, 160
Karvonen, $\mathbf{B}$. ..... 135, 156
Katzman, M. ..... 40, 122
Keegan, ..... 89
Keen, R. ..... 140
Kelly, R. ..... 117
Kiefner, $\mathbf{F}$. ..... 152
Kinsel, $\mathbf{G}$ ..... 160
Kinsey, R ..... 172
Klaft, W ..... 160
Klinger, W ..... 107
Klumb, D ..... 18, 130, 149
Knudsen, K. ..... 60
Koist, E ..... 40
Kotlier, G. ..... 40
Kotowske, A ..... 53
Kovalski, A ..... 96, 97, 107
Kowalski, D. ..... 98, 107
Kraimer, W. ..... $110,132,156$
Kramer, D. ..... 60
Kremm, C. ..... 87, 89
Kris, P. ..... 152
Kropinski, G ..... 76
Krym, D ..... 40
Kubit, E. ..... 160
Kukkola, R. ..... 87, 120
Kunin, L ..... 164
Kusz, D. ..... 53
Kuzminski, B. ..... $95,99,109,118,129$
Kwitt, R. ..... 176
Lanivich, B ..... 87
Larsen, R. ..... 41, 152
Laster, H. ..... 118, 129
Lawson, G. ..... 140
Leamon, G. ..... 53, 168
Lee, J. ..... 168
Leduc, $L$ ..... 90
Lefty, V. ..... 60
Lembas, G. $96,97,108,109,130,134,162$
Lentner, L . ..... 176
Lentz, G. ..... 53
Lester, $L$ ..... 55
Lettner, L. ..... 120
Ley, J. ..... 146
Liles, $\mathbf{G}$ ..... 116, 164, 165
Lipinski, R. ..... 168, 170
Lipmyer, R ..... 120, 176
Litwinowicz, R ..... 52
Long, $F$ ..... 99, 152
Loomis, C ..... 96, 98, 99, 109, 160, 162
Lowery, B.52
Lund, H . ..... 87, 94, 97, 106, 117, 120, 176, 178
Lunski, W. ..... 160
Maris ..... 87
Markwick, J. ..... 61
Martin, W. ..... 61, 87
Mason, T. ..... 168
Mazeiko, F. ..... 36, 120, 164
Mazurek, R ..... 79
McClelland ..... 41
McDonald, M. ..... 37
McDonald, T. ..... 89
McHale, W. ..... 172
McLaughlin, G ..... 152
McLaughlin, W. ..... 43
McLellan, A ..... 41, 61
McMann, J. ..... $17,120,176,177$
Meader, R . ..... 119
Measel, T. ..... 33, 36, 168
Mesko, R. ..... 52, 152
Metcalf, D. ..... $87,97,106,120,130,176,178$
Michalic, B. ..... 152
Michalik, $R$ ..... 53
Mijak, E. ..... 99, 109, 123
Miller, J. ..... 172
Miller, Jas ..... 90
Milligan, G. ..... 82
Minch, O. ..... 87
Mitchell, S. ..... 87, 176
Modad, R. ..... 110
Mogridge, E ..... 30, 32
Moir, W. ..... 43
Molotky, R. ..... 53, 156
Monks, N. ..... 82, 176
Monroe, D. ..... 82, 130
Montgomery, F. ..... 87
Moore, D. ..... 46
Moore, R ..... 156
More, W. ..... 61, 116
Morrison, D. ..... 60, 61, 152
Morrissey, J. ..... 140
Mosley, B. ..... 135
Mouch, R . ..... 88, 91
Moxley, R. ..... 99, 164, 166
Muhleck, W.
107, 164, 166
Murphy, M
Murphy, T
90
Musselmann, M ..... 88, 120
Nagy, S . ..... 88, 176
Napper, D. ..... 79
Neuse, J. ..... 109, 168
New, T. ..... 60
Nichols, D ..... 94
Nichols, G ..... 53
Nieme, J ..... 172, 175
Nieme, H. ..... 60
Noakes, G. ..... 97
Noetzild, R. ..... 172, 175
Nogy, J ..... 53
Noetzold, R ..... 172, 175
Nowak, N. ..... 54
Nuese, J. ..... 109
Obranovic, J. ..... 123, 135
O'Brien, W. ..... 47
Oddo, A. ..... 160
O'Keefe, D ..... 80
Osen, W. ..... 88
Osterland, V. ..... 145, 168
Otto, C. ..... 55, 168
Owens. J. ..... 101, 156
Owens, R
88, 176
88, 176
Pallazzi. R ..... 55
Paris, W. ..... 88
Parka, D. ..... 60
Parker, G. ..... 46
Parker, J. ..... 161
Pas, J. ..... 109
Pass, $B$. ..... 148, 168
Paterson, D. ..... 123
Pavlak, M. ..... 80
Pearson, W. ..... 88, 89
Peck, H. ..... 41
Peck, L. ..... 60
Pence, B. ..... 145, 168
Penny, R. ..... 55
Perlman, E. ..... $37,119,122,129,130$
Pershon, J. ..... 172
Persson, B. ..... 61
Peters, H . ..... 172
Peterson, J. ..... 55
Pethers, C. ..... 140, 142, 143
Petit, T. ..... 41
Petruno, M. ..... 152
Pickell, L. ..... 77
Pikulski, W. ..... 83
Pillard, C. ..... 88
Pitzer, R. ..... 89
Plante, E. ..... 47
Plas, J. ..... 168
Plizga, F ..... 172
Podeszwa, H. ..... 140, 142, 143
Polens, D. ..... 146,156
Ponziani, L. ..... 176
Popravsky, W. ..... 42
Powell, J. ..... 89
Pozolo, K. ..... 61
Prena, R. ..... 36
Proctor, J. ..... 124
Prosser, J. ..... 152
Prutow, W. ..... 168, 170
Purkiss, T. ..... 99, 112, 134
Quigley, W. ..... 152
Radford, B. ..... 172
Rado, V. ..... 107
Raffler, D. ..... 61
Rancillo, $R$ ..... 87, 88
Randall, F. ..... 148, 160
Raptis, J. ..... 101
Reason, R. ..... 43
Rechling, G. ..... $43,116,147$
Rector, W. ..... 89
Regan, J. ..... 61, 105
Reppen, W. ..... 88, 120, 176
Restrick, R. ..... 168
Rice, W. .....  .61
Riehl, J. ..... 42, 172
Ritzema, J. .....  43
Rizzo, P. ..... 122
Roberts, B. ..... 79
Roll, $\mathbf{G}$. ..... 62
Rose, D. ..... 80
Rose, R . ..... 41, 42, 147, 148, 168
Ross, Don
Ross, Doug ..... 101
Sandberg, K ..... 160, 161, 162
Sawle, C. ..... 80
Schedlbower, G. ..... $41,42,172,174,175$
Scheich, J ..... 89
Schlaff, B
Schlaff, B ..... 168 ..... 168
Schmill, D ..... $104,134,168,169$
Schuster, J ..... 91
Scullion, P . ..... 172, 175
Seewald, G. ..... 47 ..... 47
Seifert, W. ..... 36
Sekora, M. ..... 91
Sheskaitis, I ..... 152 ..... 152
Shima, R ..... 36, 37
Shtogrin, R. $96,99,108,109,134,168,170$
Simmons, D ..... 174
Siwula, D ..... 55, 140
Skiba, R ..... 62
Slack, W ..... 62
Smelewski, K. ..... 80
Smith, B. ..... 77
Smith, C. ..... 174
Smith, Dav. ..... 37, 119
Smith, Don ..... 172
Smith, Jas ..... 30
Smith, John ..... 55
Smith, N ..... 37, 164
Smith, R. L. ..... 43
Smith, R. W. ..... 61, 62, 63
Sobiechowski, R. ..... 54
Sokolowski, J. ..... 63
Souders, C ..... 81
Spanos, T ..... 101
Spence, B. ..... 145
Spinelli, M ..... 54
Squire, W. ..... 83
Stachelek, T. ..... 43
Stangis, J. ..... 109, 168
Stancato, F ..... 43
Staniewics, D ..... 109
Stanley, P. ..... 120, 176, 178
Stever, W ..... 87, 89, 176
Stoner, R ..... 81
Storey, C. ..... 81
Story, J. ..... 112
Strzyzewski, M .....  .81 ..... 160 ..... 160
Stys, L.
Stys, L.
Sundgren, L. ..... $96,98,130,152,153,154$
Surbrook, W. ..... $.54,126,156,158$
Swartz, D ..... 42
Takavitz, F ..... 63
Terreault, W ..... 83, 120, 176
Tinsley, $\mathbf{F}$. ..... 140
Tomboni, N ..... 168
Tracy, J ..... 61, 62
Travis, D. ..... 47
Truchan, R ..... 176
Tryban, C ..... 81
Udvardy, J ..... 81
Unger, R . ..... 55
Urbanek, H ..... 62
VanBlois, D ..... 160, 161
Van Steelandt, A ..... 62
Vartabedian, A ..... 55
Verdonckt, G. ..... 140
Vermeulen, M. ..... $42,105,116$
Wallace, T ..... 32
Walls, G ..... 160
Walsh, M ..... 31
Ward, C. ..... 101
Ward, W. ..... 81
Wasen, $\mathbf{F}$. ..... 140
Wassermann, R .....  .63
Weber, H . ..... 147
Wellbaum, R. ..... 89, 120
Wellis, C. ..... 130, 152
Wells, J. ..... 152, 154
Wenderski, D. ..... 152
Werner, J. ..... 37
Weslosky, J ..... 42
Whalen, D. ..... 81
White, F ..... $62,105,164,166$
Wieland, R ..... 31
Wilber, M. ..... 89
Wiley, J ..... 89
Willbaum, R. ..... 176
Williams, A ..... 83, 120, 176, 178
Williams, J. ..... 55
Williamson, L ..... 81
Willis, B ..... 83, 176
Willoughby, J. ..... 31
Wilson, B. ..... 156
Wilson, D ..... 42
Wisner, R . ..... 63
Wisniewski, A ..... 164
Wittla, G ..... 42
Wojdan, J ..... 43
Woodhull, I. ..... 63
Wozniak, T. ..... 37
Wupper, K. ..... 55
Wurm, D. ..... $101,118,120,129,152,154$
Yandura, B. ..... 79
Yee, A. $.97,98,116,134,164,165,166$
81
81
Yek, H ..... 81
Zadorozny, A. ..... 55
Zago, A. ..... $31,33,36,98,101,130,172,174,175$
Zeegers, G ..... 43
Zehnder, G. ..... 160, 162
Zervos, P. ..... 31, 101, 130
Ziemann, A. ..... 77
Zrimec, J. ..... 148

