

[Return to Main Menu](#)

Kent State University

Click on the program name within the degree requirements to go to the course descriptions.

COLLEGE OF TECHNOLOGY . . . . .	.356	2+2 Concentration for Associate's Degree Graduates . . . . .	.367
Aeronautics . . . . .	.357	General Option . . . . .	.367
Aeronautical Studies Concentration . . . . .	.358	Computer Design and Animation Option . . . . .	.368
Aeronautical Systems Engineering Technology		Computer Technology Option . . . . .	.369
Concentration . . . . .	.359	Electrical/Electronics Option . . . . .	.370
Aviation Management Concentration . . . . .	.360	Manufacturing/Mechanical/Systems Option . . . . .	.371
Flight Technology Concentration . . . . .	.361	Plastics Manufacturing Option . . . . .	.372
Industrial Technology . . . . .	.362	2+2 Concentration for Associate's Degree Graduates . . . . .	.373
Electronics Concentration . . . . .	.362	Industrial Technology Option . . . . .	.373
Manufacturing Systems Concentration . . . . .	.363	Management Technology Option . . . . .	.374
Technology . . . . .	.364	Minors . . . . .	.375
Technology Education Licensure . . . . .	.365	Electronic Technology . . . . .	.375
Technology . . . . .	.366	Flight Technology . . . . .	.375
Construction Management . . . . .	.366	Technology . . . . .	.376



THE COLLEGE OF TECHNOLOGY
Academic Advising Offices:

119 Van Deusen Hall
330-672-2892
<http://www.kent.edu/tech>
cotinfo@kent.edu

COLLEGE OF TECHNOLOGY

Statistics indicate that at the start of the 21st century, employment opportunities will be the greatest in high-technology fields. Kent State University's College of Technology, part of Kent State's eight-campus network, offers nationally accredited technology-based programs that provide students with the skills needed to compete in today's job market.

More than 25 programs are offered at the certificate, associate, bachelor's and master's degree levels throughout Kent's eight-campus network. With a talented faculty and flexible schedules that include evening, weekend, distance learning and Web-based classes, the College of Technology has a program to match students' needs and interests. Academic programs are divided into three areas: aeronautics, applied business technologies and applied science and technology.

On the Kent Campus, the College of Technology offers four-year programs in aeronautics, industrial technology, technology education teacher preparation, construction management and technology. At Kent State's seven Regional Campuses, the college offers the following two-year degrees: Associate of Applied Business, Associate of Applied Science and the Associate of Technical Studies. Programs in these areas include technology, computer technology, business technology, industrial technology, engineering technology and environmental technology. These programs are described under Regional Campuses.

Many of the credits earned in the associate degree programs can be applied toward the "2+2" program for a B.S. in technology or industrial technology. These programs are described under "2+2" Concentration for Associate Degree Graduates.

Note: To receive a baccalaureate degree from the College of Technology, students must, in addition to other requirements, satisfy the 36-hour minimum stipulated in the Liberal Education Requirements (see Pages 85-87).

Cooperative Education

Cooperative education permits students with technical jobs to capture learning experiences at their place of employment for credit in their college curriculum. Qualified students work with their assigned faculty mentor to define the nature and technical scope of the learning involved. In most cases the faculty mentor will visit the place of employment and discuss the task with the student's supervisor. At the conclusion of the effort, a report is required to summarize the work completed and the knowledge acquired.

Cooperative Education is available to College of Technology majors of sophomore rank or above with a 2.25 or better overall GPA. Students working full time can earn 2 credit hours a semester; 1 credit may be earned for half-time work. This course is repeatable to a maximum of 6 credits; however, some programs limit use of co-op credits to fulfill graduation requirements.

B.S. in Aeronautics

The programs offered under the Bachelor of Science in Aeronautics consist of four separate areas of study: aeronautical studies, aeronautical systems engineering technology, aviation management and flight technology. All four programs lead to a Bachelor of Science in Aeronautics. The Bachelor of Science in Aeronautics is accredited by the Aviation Accreditation Board International (AABI).

Requirements for Admission for High School Students into the Aeronautics Programs

While Kent State University is an open admissions university that offers admission to all students who are graduates of accredited high schools, admission to the aeronautics programs is limited and highly selective. Only students who have earned a 2.25 high school cumulative GPA are considered for admission. Students must complete one semester with a 2.50 cumulative GPA prior to admission into the aeronautical systems engineering technology, aviation management or flight technology concentrations and prior to commencing flight training courses.

New students applying to the B.S. in aeronautics program who have not yet completed one semester with a 2.50 cumulative GPA are admitted directly into the aeronautical studies concentration.

Requirements for Admission for Transfer Students

Only transfer students with minimum 2.25 GPA are considered for admission. This GPA is based upon a minimum 24 semester hours of college-level work. (Students with fewer than 24 semester credit hours are considered with the high school student pool.)

Requirements for Admission from Another Program

Students already enrolled at Kent State University who desire to change majors to the aeronautics programs must apply on the appropriate form to the Student Services Office, College of Technology. Minimum 2.25 GPA is required to change majors to the aeronautics program. All applications must include official transcripts showing all previously completed coursework.

Flight Course Completion

Students must complete all flight courses within one academic year after course enrollment. This requirement is subject to waiver by the director of aeronautics, chief instructor or assistant chief

instructor. In the absence of an authorized waiver, students who fail to complete any flight course within one academic year after course enrollment will receive a failing grade (F) and a refund of any unused flight fees, less the usual administrative fee of \$300.

Comprehensive Exit Exam

All students must successfully complete the comprehensive exit exam requirement prior to graduation with the B.S. in aeronautics. Exit exam requirements are to be satisfied by all graduation candidates no later than the eighth week of the semester of intended graduation. The exit exams shall be offered during the fourth and eighth weeks of the fall and spring semesters. Students who fail will be allowed to retake the exit exams.

Aeronautical Studies Concentration

The aeronautical studies concentration prepares students for entry-level technological positions in aviation and related areas. The program is focused on a fundamental foundation of aeronautically related subjects, but at the same time provides a significant number of course electives that allow students to explore other areas of interest or earn a minor in a particular area of study. Students who successfully complete all degree requirements for this program are awarded a Bachelor of Science in Aeronautics with a concentration in aeronautical studies.

I. General College or University Requirements	1
US 10097 First Year Colloquium	1
II. Liberal Education Requirements	39
<i>A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.</i>	
Composition	
ENG 11011 College Writing I	3
21011 College Writing II	3
Mathematics and Critical Reasoning	
MATH 11010 Algebra for Calculus	3
11012 Intuitive Calculus	3
Humanities and Fine Arts	9
<i>Minimum one course from humanities category and minimum one course from fine arts category.</i>	
Social Sciences	
ECON 22060 Principles of Microeconomics	3
GEOG* 17063 World Geography	3
Basic Sciences	
PHY 13011 College Physics I	3
13012 College Physics II	3
Additional LER Courses	
COMM 15000 Introduction to Human Communication	3
ECON 22061 Principles of Macroeconomics	3

Diversity Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. The global-focus course is fulfilled in this concentration with LER social sciences GEOG 17063. A complete list of diversity courses is on Pages 89-91.

III. Writing-Intensive Requirement	
<i>Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this major is fulfilled with TECH 45030 or 45791. A complete list of writing-intensive courses is on Pages 93-95.</i>	
IV. Major Requirements	.49
Technology Courses	
TECH 10001 Information Technology	3
13580 Engineering Graphics I	3
20002 Materials and Processes	3
21021 Survey of Electricity and Electronics	4
33033 Hydraulics and Pneumatics	3
Aeronautics Core	
TECH 15000 Introduction to Aeronautics	3
15740 Elements of Flight Theory	5
25250 Elements of Aviation Weather	3
35340 Airport Management	3
35341 Air Transportation Systems	3
35342 Air Traffic Control	3
45130 Physiology and Human Factors	3
45150 Applied Flight Dynamics I	3
45250 Aviation Law and Safety	3
45291 Aerospace Senior Seminar	1
** 45791 Aviation Security and Policy Seminar	3
V. Additional Major Requirements	.5
ENG 20002 Introduction to Technical Writing	3
MATH 11022 Trigonometry	2
VI. Related Courses	.15
TECH 35020 Aircraft Propulsion Systems	3
35040 Aircraft Systems I	3
35150 Aircraft Structures	3
** 45030 Aircraft Systems II	3
45350 Avionics	3
VII. Non-Major Requirements	.15
General electives	15
TOTAL	124

*Course fulfills diversity requirement.

**Course fulfills writing-intensive requirement.

Students are advised to complete all lower-division math, basic science and technology courses before registering for upper-division technology courses.

Minimum 39 upper-division hours within the 124 total semester hours are required.

Minimum 2.00 GPA overall and minimum 2.25 GPA in the major are required.

The courses chosen to fulfill the curriculum must satisfy the university diversity requirements.

Aeronautical Systems Engineering Technology Concentration

The aeronautical systems engineering technology concentration prepares students to enter the field of aeronautical engineering as technologists with educational experience in the practical application of theoretical principles. The program includes advanced mathematics and physics courses to complement engineering-related courses in aeronautics technology. Students entering this program should have an extensive background in high school mathematics and science.

- I. **General College or University Requirements**1
 - US 10097 First Year Colloquium1
- II. **Liberal Education Requirements**41

A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.

Composition

- ENG 11011 College Writing I3
- 21011 College Writing II3

Mathematics and Critical Reasoning

- MATH 11010 Algebra for Calculus3
- 12002 Analytic Geometry and Calculus I5

Humanities and Fine Arts9

Minimum one course from humanities category and minimum one course from fine arts category.

Social Sciences

- ECON 22060 Principles of Microeconomics3
- GEOG* 17063 World Geography3

Basic Sciences

- PHY 13011 College Physics I3
- 13012 College Physics II3

Additional LER Courses

- COMM 15000 Introduction to Human Communication3
- ECON 22061 Principles of Macroeconomics3

Diversity Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. The global-focus course is fulfilled in this concentration with LER social sciences GEOG 17063. A complete list of diversity courses is on Pages 89-91.

III. **Writing-Intensive Requirement**

Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this concentration is fulfilled with TECH 45030 or 45791. A complete list of writing-intensive courses is on Pages 93-95.

IV. **Major Requirements**74

Technology Courses

- TECH 10001 Information Technology3
- 13580 Engineering Graphics I3
- 20002 Materials and Processes3
- 21021 Survey of Electricity and Electronics4
- 33033 Hydraulics/Pneumatics3

Aeronautics Core

- TECH 15000 Introduction to Aeronautics3
- 15740 Elements of Flight Theory5
- 25250 Elements of Aviation Weather3
- 35340 Airport Management3
- 35341 Air Transportation Systems3
- 35342 Air Traffic Control3
- 45130 Physiology and Human Factors3
- 45150 Applied Flight Dynamics I3
- 45250 Aviation Law and Safety3
- 45291 Aerospace Senior Seminar1
- ** 45791 Aviation Security and Policy Seminar3

Related Courses

- TECH 35020 Aircraft Propulsion Systems3
- 35040 Aircraft Systems I3
- 35150 Aircraft Structures3
- ** 45030 Aircraft Systems II3
- 45350 Avionics3
- 45121 Advanced Aerospace Propulsion3
- 45151 Applied Flight Dynamics II3
- 45700 Aircraft Design4

V. **Additional Major Requirements**13

- ENG 20002 Introduction to Technical Writing3
- MATH 11022 Trigonometry2
- 12003 Analytic Geometry and Calculus II5
- 22005 Analytic Geometry and Calculus III3

TOTAL 129

*Course fulfills diversity requirement.

**Course fulfills writing-intensive requirement.

Students are advised to complete all lower-division basic science and technology courses before registering for upper-division technology courses.

Minimum 39 upper-division hours within the 129 total semester hours are required.

Minimum 2.00 GPA overall and minimum 2.25 GPA in the major are required.

The courses chosen to fulfill the curriculum must satisfy the university diversity requirements.

Aviation Management Concentration

The aviation management concentration prepares students for entry-level positions in aviation and other aviation-related professional fields. This course of study combines technical and aeronautical courses with courses in management and information systems. Students entering this program should have a technical interest, mathematical proficiency and an ability to develop analytical and communicative capabilities.

I. General College or University Requirements1

US 10097 First Year Colloquium1

II. Liberal Education Requirements39

A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.

Composition

ENG 11011 College Writing I3
21011 College Writing II3

Mathematics and Critical Reasoning

MATH 11010 Algebra for Calculus3
11012 Intuitive Calculus3

Humanities and Fine Arts9

Minimum one course from humanities category and minimum one course from fine arts category.

Social Sciences

ECON 22060 Principles of Microeconomics3
GEOG* 17063 World Geography3

Basic Sciences

PHY 13011 College Physics I3
13012 College Physics II3

Additional LER Courses

COMM 15000 Introduction to Human Communication3
ECON 22061 Principles of Macroeconomics3

Diversity Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. The global-focus course is fulfilled in this concentration with LER social sciences GEOG 17063. A complete list of diversity courses is on Pages 89-91.

III. Writing-Intensive Requirement

Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this

concentration is fulfilled with TECH 45791. A complete list of writing-intensive courses is on Pages 93-95.

IV. Major Requirements73

Technology Courses

TECH 10001 Information Technology3
13580 Engineering Graphics I3
20002 Materials and Processes3
21021 Survey of Electricity and Electronics4
33033 Hydraulics/Pneumatics3

Aeronautics Core

TECH 15000 Introduction to Aeronautics3
15740 Elements of Flight Theory5
25250 Elements of Aviation Weather3
35340 Airport Management3
35341 Air Transportation Systems3
35342 Air Traffic Control3
45130 Physiology and Human Factors3
45150 Applied Flight Dynamics I3
45250 Aviation Law and Safety3
45291 Aerospace Senior Seminar1
** 45791 Aviation Security and Policy Seminar3

Related Courses

M&IS 24056 Fundamentals of Business Statistics3
24060 Systems Analysis I3
24070 Principles of Systems Development3
24163 Principles of Management3
34032 Data and File Technology3
34045 Small Systems Technology3
34053 Data Integration3
34060 Operations Management3

V. Additional Major Requirements5

ENG 20002 Introduction to Technical Writing3
MATH 11022 Trigonometry2

VI. General Electives6

Of the 6 credit hours, 2 credit hours must be upper-division.

TOTAL 124

*Course fulfills diversity requirement.

**Course fulfills writing-intensive requirement.

Students are advised to complete all lower-division math, basic science and technology courses before registering for upper-division technology courses.

Minimum 39 upper-division hours within the 124 total semester hours are required.

Minimum 2.00 GPA overall and minimum 2.25 GPA in the major are required.

Students receive a minor in computer information systems from the College of Business Administration with this option.

The courses chosen to fulfill the curriculum must satisfy the university diversity requirements.

American Assembly of Collegiate Schools of Business accreditation standards prohibit nonbusiness majors from taking more than 25 percent of their degree requirements in business courses. Therefore, no more than 30 semester credit hours may be counted toward stated degree requirements.

Flight Technology Concentration

The flight technology program prepares students for careers in flight operations as a professional pilot. This concentration stresses subjects associated with flight systems, propulsion, structures and electronics. Students entering this program should have a strong desire for excellence in aviation, as well as the flying skills required of a professional pilot. This option is particularly designed for those students who aspire to become professional pilots.

I. General College or University Requirements 1
 US 10097 First Year Colloquium 1

II. Liberal Education Requirements 39
 A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.

Composition
 ENG 11011 College Writing I 3
 21011 College Writing II 3

Mathematics and Critical Reasoning
 MATH 11010 Algebra for Calculus 3
 11012 Intuitive Calculus 3

Humanities and Fine Arts 9
 Minimum one course from humanities category and minimum one course from fine arts category.

Social Sciences
 ECON 22060 Principles of Microeconomics 3
 GEOG* 17063 World Geography 3

Basic Sciences
 PHY 13011 College Physics I 3
 13012 College Physics II 3

Additional LER Courses
 COMM 15000 Introduction to Human Communication 3
 ECON 22061 Principles of Macroeconomics 3

Diversity Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. The global-focus course is fulfilled in this concentration with LER social sciences GEOG 17063. A complete list of diversity courses is on Pages 89-91.

III. Writing-Intensive Requirement

Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this concentration is fulfilled with TECH 45791. A complete list of writing-intensive courses is on Pages 93-95.

IV. Major Requirements 78

Technology Courses

TECH 10001 Information Technology 3

Aeronautics Core

TECH 15000 Introduction to Aeronautics 3
 15740 Elements of Flight Theory 5
 25250 Elements of Aviation Weather 3
 35340 Airport Management 3
 35341 Air Transportation Systems 3
 35342 Air Traffic Control 3
 45130 Physiology and Human Factors 3
 45150 Applied Flight Dynamics I 3
 45250 Aviation Law and Safety 3
 45291 Aerospace Senior Seminar 1
 ** 45791 Aviation Security and Policy Seminar 3

Flight Technology Courses

TECH 15741 Private Pilot Flight 3
 25743 Commercial Pilot Flight I 2
 35644 Instrument Flight Theory 3
 35645 Instrument Pilot Flight 2
 35647 Commercial Pilot Flight II 2
 35746 Commercial Pilot Theory 2
 35747 Commercial Pilot Flight III 2
 45648 Theory of Flight Instruction 2
 45649 Flight Instructor-Airplanes 2
 45653 Multi-Engine Pilot Flight 1
 45710 Turbine Engine Theory and Operation 2
 45711 Turbine Engine Theory and Operation Lab 1
 45720 Crew Resource Management 2
 45721 Crew Resource Management Lab 1
 Choose from the following: 3
 TECH 45350 Avionics (3)
 45730 Applied Transport Category Aircraft Systems (3)
 45740 Flight Management and Electronic Display Systems (3)

Related Courses

TECH 35020 Aircraft Propulsion Systems 3
 35040 Aircraft Systems I 3
 35150 Aircraft Structures 3

45030 Aircraft Systems II	3
V. Additional Major Requirements .....	.5
ENG 20002 Introduction to Technical Writing	3
MATH 11022 Trigonometry	2
VI. General Elective .....	.1
TOTAL	124

*Course fulfills diversity requirement.

**Course fulfills writing-intensive requirement.

Students are advised to complete all lower-division math, basic science and nonflight technology courses before registering for nonflight upper-division technology courses.

Minimum 39 upper-division hours within the 124 total semester hours are required.

Minimum 2.00 GPA overall and minimum 2.25 GPA in the major are required.

The courses chosen to fulfill the curriculum must satisfy the university diversity requirements.

B.S. in Industrial Technology

Industrial technology programs are closely related to the fields of electronic, industrial and manufacturing engineering and prepare students for employment in technical, scientific and managerial positions. Each of the industrial technology concentrations consists of a liberal arts base combined with appropriate studies in the natural sciences, technology and management.

The industrial technology graduate may be employed in various positions, including the following: manufacturing or electronics technologist, technical sales representative, engineering assistant, technical supervisor/manager, computer-aided design (CAD) specialist and entry-level engineer. Graduates may be involved in research and development (R&D) activities while working closely with engineering personnel.

Within the industrial technology major, students may choose either the electronics concentration or the manufacturing systems concentration. Additionally, a "2+2" concentration is available for graduates of associate degree programs. These concentrations are accredited by the National Association of Industrial Technology (NAIT).

Electronics Concentration

I. General College or University Requirements .....	.1
US 10097 First Year Colloquium	1
II. Liberal Education Requirements .....	.50
<i>A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.</i>	
Composition	
ENG 11011 College Writing I	3
21011 College Writing II	3
Mathematics and Critical Reasoning	
MATH 11010 Algebra for Calculus	3
12002 Analytic Geometry and Calculus I	5
Humanities and Fine Arts	
.9	
<i>Minimum one course from humanities category and minimum one course from fine arts category.</i>	
Social Sciences	
<i>Must be selected from two curricular areas.</i>	
ECON 22060 Principles of Microeconomics	3
LER social sciences course	3
Basic Sciences	
CHEM 10060 General Chemistry I	4
10062 General Chemistry I Laboratory	1
PHY 23101 General University Physics I	5
23102 General University Physics II	5
Additional LER Courses	
COMM 15000 Introduction to Human Communication	3
ECON 22061 Principles of Macroeconomics	3
Diversity Requirement	
<i>Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. One course must come from the LER list; the second course may be taken as a second LER, in the major area or in a minor as a general elective. A complete list of diversity courses is on Pages 89-91.</i>	
III. Writing-Intensive Requirement	
<i>Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this concentration may be fulfilled with option M&IS 44150. A complete list of writing-intensive courses is on Pages 93-95.</i>	
IV. Major Requirements .....	.44
Technology Core	
TECH 10001 Information Technology	3
13580 Engineering Graphics I	3
20004 Electrical Circuits I	3
Technology	
TECH 23224 Electrical Circuits II	3
23581 Computer Aided Engineering Graphics	3
33220 Analog Electronics	3

33222	Digital Design and Applications	3
33223	Electronic Communication	3
33225	Industrial Control Systems	3
33580	Engineering Graphics for Electronics	3
43026	Microprocessor Systems	3
43220	Electrical Machinery	3
43221	Control Systems and Robotics	3
43800	Applied Engineering Technology Seminar	2
46330	Visual Basic Programming in Engineering Technology	3
V.	Additional Major Requirements	.16
CS 10061	Introduction to Computer Programming	3
ENG 20002	Introduction to Technical Writing	3
MATH 11022	Trigonometry	2
12003	Analytic Geometry and Calculus II	5
21001	Linear Algebra with Applications	3
VI.	Business	.12
M&IS 24056	Principles of Business Statistics	3
24163	Principles of Management	3
	Choose from the following:	6
M&IS 34060	Operations Management (3)	
34180	Human Resource Management (3)	
* 44150	Total Quality Management (3)	
VII.	General Electives	.4
	TOTAL	127

*Course fulfills writing-intensive requirement.

Students should complete technology core sequence and all required lower-division math and science courses before registering for upper-division technology courses.

Minimum of 39 upper-division hours required.

Minimum 2.00 overall GPA required. Minimum 2.25 GPA required in major and in field of concentration.

The courses chosen to fulfill the curriculum must satisfy university diversity and writing-intensive course requirements.

Manufacturing Systems Concentration

I.	General College or University Requirements	.1
US 10097	First Year Colloquium	1
II.	Liberal Education Requirements	.48
	A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.	
	Composition	
ENG 11011	College Writing I	3

21011	College Writing II	3
	Mathematics and Critical Reasoning	
MATH 11010	Algebra for Calculus	3
12002	Analytic Geometry and Calculus I	5
	Humanities and Fine Arts	.9
	Minimum one course from humanities category and minimum one course from fine arts category.	
	Social Sciences	
	Must be selected from two curricular areas.	
ECON 22060	Principles of Microeconomics	3
	LER social sciences course	3
	Basic Sciences	
CHEM 10050	Fundamentals of Chemistry	3
PHY 23101	General University Physics I	5
23102	General University Physics II	5
	Additional LER Courses	
COMM 15000	Introduction to Human Communication	3
ECON 22061	Principles of Macroeconomics	3
	Diversity Requirement	
	Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. One course must come from the LER list; the second course may be taken as a second LER, in the major area or in a minor as a general elective. A complete list of diversity courses is on Pages 89-91.	
III.	Writing-Intensive Requirement	
	Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this major may be fulfilled with option M&IS 44150 or TECH 31000. A complete list of writing-intensive courses is on Pages 93-95.	
IV.	Technology Core	.13
TECH 10001	Information Technology	3
13580	Engineering Graphics I	3
20002	Materials and Processes	3
21021	Survey of Electricity and Electronics	4
V.	Technology	.38
TECH 23581	Computer-Aided Engineering Graphics	3
31065	Cast Metals	3
33031	Programmable Logic Controllers	3
33033	Hydraulics/Pneumatics	3
33111	Strength of Materials	3
33363	Metallurgy and Material Science	3
34002	Advanced CAD II	3
43080	Industrial and Environmental Safety	3
43550	Computer Aided Manufacturing	3
43580	Computer-Aided Machine Design	3
43700	Computer Integrated Manufacturing	3
43800	Applied Engineering Technology Seminar	2
46330	Visual Basic Programming in Engineering Technology	3

VI. Additional Major Requirements	8
CS 10061 Introduction to Computer Programming	3
ENG 20002 Introduction to Technical Writing	3
MATH 11022 Trigonometry	2
VII. Business	9
ACCT 23020 Introduction to Financial Accounting	3
M&IS 24056 Principles of Business Statistics	3
24163 Principles of Management	3
VIII. Electives	11
Choose from the following:	6
M&IS 34060 Operations Management (3)	
34180 Human Resource Management (3)	
* 44150 Total Quality Management (3)	
Choose from the following:	5
TECH* 31000 Cultural Dynamics of Technology (3)	
31016 Manufacturing Technology (3)	
33056 Cooperative Education (1-6)	
33220 Analog Electronics (3)	
33222 Digital Design and Applications (3)	
33223 Electronic Communication (3)	
TOTAL	128

*Course fulfills writing-intensive requirement.

Students must complete technology core sequence and all required lower-division math and science courses before registering for upper-division technology courses.

Minimum of 39 upper-division hours required.

The courses chosen to fulfill the curriculum must satisfy the university diversity and writing-intensive course requirements.

B.S. in Technology

The Bachelor of Science in Technology provides a liberal education within the technological culture for students contemplating careers in technical-industrial fields. Courses in the major provide breadth of technical experience, while electives may be utilized to increase competencies in one or more areas. This degree program is accredited by NAIT.

I. General College or University Requirements	1
US 10097 First Year Colloquium	1
II. Liberal Education Requirements	40
<i>A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.</i>	
Composition	
ENG 11011 College Writing I	3

21011 College Writing II	3
Mathematics and Critical Reasoning	
MATH 11010 Algebra for Calculus	3
Humanities and Fine Arts	
<i>Minimum one course from humanities category and minimum one course from fine arts category.</i>	

Social Sciences

ECON 22060 Principles of Microeconomics	3
PSYC 11762 General Psychology	3

Basic Sciences

Choose from the following:	10
PHY 13001 General College Physics I (5)	
13002 General College Physics II (5)	
or	
PHY * 12201 Technical Physics I (3)	
* 12202 Technical Physics II (4)	
Basic Science LER courses (3)	

Additional LER Courses

COMM 15000 Introduction to Human Communication	3
Choose from the following:	3
PHIL 11009 Principles of Thinking (3)	
LER course from above categories (3)	

Diversity Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. One course must come from the LER list; the second course may be taken as a second LER, in the major area or in a minor as a general elective. A complete list of diversity courses is on Pages 89-91.

III. Writing-Intensive Requirement

Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this major is fulfilled with TECH 31000 or M&IS 44150. A complete list of writing-intensive courses is on Pages 93-95.

IV. Major Requirements

Technology Core

TECH 10001 Information Technology	3
13580 Engineering Graphics I	3
20001 Energy/Power	3
20002 Materials and Processes	3
21021 Survey of Electricity and Electronics	4

Technology

TECH 11071 Woods Technology I	3
23581 Computer-Aided Engineering Graphics	3
** 31000 Cultural Dynamics of Technology	3
31015 Construction Technology	3
31016 Manufacturing Technology	3
31087 Design for Technology	3
32002 Materials and Processes II	3
43800 Applied Engineering Technology Seminar	2

V. Additional Major Requirements	8
ENG 20002 Introduction to Technical Writing	3
MATH 11022 Trigonometry	2
PSYC 31773 Industrial Psychology	3
VI. Technology Electives	15
VII. General Electives	14
VIII. Business Requirements	6
M&IS 24163 Principles of Management	3
Choose from the following:	3
M&IS 24056 Fundamentals of Business Statistics (3)	
34180 Human Resource Management (3)	
** 44150 Total Quality Management (3)	
TOTAL	123

*PHY 12201 and 12202 are approved as exceptions to the Liberal Education Requirements (LER).

**Course fulfills writing-intensive requirement.

Upper-division technology electives must be chosen with faculty advisor.

Students must complete technology core sequence and all required lower-division math and science courses before registering for upper-division technology courses.

Minimum of 39 upper-division hours required.

Minimum 2.00 overall GPA is required. Minimum 2.25 GPA required in major.

Technology Education Licensure

I. General College or University Requirements	1
US 10097 First Year Colloquium	1
II. Liberal Education Requirements	38
<i>A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.</i>	
Composition	
ENG 11011 College Writing I	3
21011 College Writing II	3
Mathematics and Critical Reasoning	
MATH 11010 Algebra for Calculus	3
Humanities and Fine Arts	
<i>Minimum one course from humanities category and minimum one course from fine arts category.</i>	
Social Sciences	
<i>Must be selected from two curricular areas.</i>	
PSYC 11762 General Psychology	3
LER social sciences course	3

Basic Sciences **8**
Minimum 6 credit hours from courses with a laboratory component.

Additional LER Courses
 COMM 15000 Introduction to Human Communication 3
 Choose from the following: 3
 PHIL 11009 Principles of Thinking (3)
 LER course from above categories (3)

Diversity Requirement
Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. One course must come from the LER. The domestic-focus course is fulfilled in this major with SPED 23000. A complete list of diversity courses is on Pages 89-91.

III. Writing-Intensive Requirement
Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this major is fulfilled with TECH 31000 or 41001. A complete list of writing-intensive courses is on Pages 93-95.

IV. Technology Requirements	40
TECH 10001 Information Technology	3
11071 Woods Technology I	3
13580 Engineering Graphics I	3
20001 Energy/Power	3
20002 Materials and Processes	3
21021 Survey of Electricity and Electronics	4
21046 Graphic Communications Technology I	3
23581 Computer-Aided Engineering Graphics	3
* 31000 Cultural Dynamics of Technology	3
31015 Construction Technology	3
31016 Manufacturing Technology	3
31087 Design for Technology	3
32002 Materials and Processes II	3

V. Additional Major Requirements	8
ENG 20002 Introduction to Technical Writing	3
MATH 11022 Trigonometry	2
PSYC 31773 Industrial Psychology	3
VI. Education Licensure Requirements	39
EDPF 29525 Educational Psychology	3
29535 Education in a Democratic Society	3
HED 42575 Health and Learning: Strategies	3
ITEC 19525 Educational Technology	3
SPED**23000 Introduction to Exceptionalities	3
TECH* 41001 Methods in Technology Education	3
41002 Organization in Technology Education	3
41051 Foundations and Contemporary Theories of Technology Education	3
41052 Technology Education for Elementary School	3
46031 Student Teaching	9
49525 Inquiry into Professional Practice	3

TOTAL	126
--------------	------------

*Course fulfills writing-intensive requirement.

**Course fulfills diversity requirement.

Minimum 2.50 overall GPA and minimum 2.75 GPA in all TECH courses are required for graduation.

B.S. in Technology

Construction Management

I. General College or University Requirements	1
US 10097 First Year Colloquium	1
II. Liberal Education Requirements . . . . .	.40
<i>A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.</i>	
Composition	
ENG 11011 College Writing I	3
21011 College Writing II	3
Mathematics and Critical Reasoning	
MATH 11010 Algebra for Calculus	3
Humanities and Fine Arts	
<i>Minimum one course from humanities category and minimum one course from fine arts category.</i>	
Social Sciences	
<i>Must be selected from two curricular areas.</i>	
PSYC 11762 General Psychology	3
ECON 22060 Principles of Microeconomics	3
Basic Sciences	
PHY 13001 General College Physics I	5
13002 General College Physics II	5
or	
PHY * 12001 Technical Physics I	3
* 12202 Technical Physics II	4
LER basic sciences course	3
Additional LER Courses	
COMM 15000 Introduction to Human Communication	3
MATH 11012 Intuitive Calculus	3
Diversity Requirement	
<i>Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. One course must come from the LER. A complete list of diversity courses is on Pages 89-91.</i>	
III. Writing-Intensive Requirement	
<i>Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this</i>	

major is fulfilled with TECH 31000. A complete list of writing-intensive courses is on Pages 93-95.

IV. Major Requirements . . . . .	.55
Technology Core	
TECH 10001 Information Technology	3
13580 Engineering Graphics I	3
20001 Energy Power	3
20002 Materials and Processes	3
21021 Survey of Electricity and Electronics	4
** 31000 Cultural Dynamics of Technology	3
Technology	
TECH 21071 Construction Materials, Methods and Technology	3
22200 Construction Document Reading	3
23581 Computer Aided Engineering Graphics	3
31015 Construction Technology	3
31023 Construction Surveying	3
31043 Principles of Concrete Construction	3
31044 Construction Occupational Safety and Health	3
32105 Construction Jobsite Management	3
41040 Residential Construction Estimating	3
41041 Commercial Construction Estimating	3
42105 Construction Contracts	3
42107 Construction Scheduling	3
IV. Additional Major Requirements . . . . .	.8
ENG 20002 Introduction to Technical Writing	3
MATH 11022 Trigonometry	2
PSYC 31773 Industrial Psychology	3
VI. Technology Electives . . . . .	.9
VII. General Electives . . . . .	.5
VIII. Business Requirements . . . . .	.6
M&IS 24163 Principles of Management	3
Choose from the following:	3
M&IS 24056 Fundamentals of Business Statistics (3)	
** 44150 Total Quality Management (3)	
TOTAL	124

*PHY 12201 and 12202 are approved as exceptions to the Liberal Education Requirements (LER).

**Course fulfills writing-intensive requirement.

Students must complete technology core sequence and all required lower-division math and science courses before registering for upper-division technology courses.

Minimum of 39 upper-division hours required.

Minimum 2.00 overall GPA is required. Minimum 2.25 GPA required in major.

“2+2” Concentration for Associate Degree Graduates

The “2+2” concentration provides a variety of options for associate degree graduates who wish to advance their careers in technical environments. It allows graduates to apply all, or nearly all, of the coursework completed in their associate degree program toward the Bachelor of Science in Technology. Six options are available. The general option permits graduates from a variety of associate degree backgrounds to formulate a program of advanced study in upper-division technical courses, chosen with a faculty advisor, to gain additional technical depth or breadth. The general electives in this option can be used to earn a minor from another academic unit to complement their major study. The five other options are based on specific associate degrees and offer a more focused Bachelor of Science completion utilizing specific upper-division courses in the area of specialization. These options are accredited by NAIT.

General Option

I. General College or University Requirements 1
 US 10097 First Year Colloquium 1

II. Liberal Education Requirements 38-39
 A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.

Composition
 ENG 11011 College Writing I 3
 21011 College Writing II 3

Mathematics and Critical Reasoning
 Choose from the following: 3-4
 MATH 11010 Algebra for Calculus (3)
 12001 Algebra and Trigonometry (4)

Humanities and Fine Arts 9
 Minimum one course from humanities category and minimum one course from fine arts category.

Social Sciences 6
 Must be selected from two curricular areas.

Basic Sciences
 Choose from the following: 8
 Must include two laboratory courses.

CHEM 10030 Chemistry in Our World (3)
 10050 Fundamentals of Chemistry (3)
 10052 Introduction to Organic Chemistry (2)
 10053 Inorganic and Organic Laboratory (1)
 (corequisite CHEM 10052)
 10054 General and Elementary Organic Chemistry (5)

GEOL 11040 Earth Dynamics (3)
 11041 Earth Dynamics Laboratory (1)
 (pre/corequisite GEOL 11040)

11042 Earth History (3)
 11043 Earth History Laboratory (1)
 (pre/corequisite 11042)

PHY * 12201 Technical Physics I (3)
 * 12202 Technical Physics II (4)
 11660 Physical Science (3)
 13001 General College Physics I (5)
 13002 General College Physics II (5)
 13011 College Physics I (3)
 13012 College Physics II (3)

Additional LER Courses

COMM 15000 Introduction to Human Communication 3
 Choose from the following: 3
 PHIL 11009 Principles of Thinking (3)
 LER course from above categories (3)

Diversity Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. One course must come from the LER list; the second course may be taken as a second LER, in the major area or in a minor as a general elective. A complete list of diversity courses is on Pages 89-91.

III. Writing-Intensive Requirement

Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this major is fulfilled with COMM 35864 or M&IS 44150. A complete list of writing-intensive courses is on Pages 93-95.

IV. Technology Major Requirements 34

Credits from approved associate degree.

V. Additional Major Requirements 5

MATH 11022 Trigonometry 2
 Choose from the following: 3
 ENG 20002 Introduction to Technical Writing (3)
 ITAP 26638 Business Communications (3)

VI. Technology Electives 15

Courses must be upper-division.

VII. General Electives 27-28

Minimum 12 credit hours upper-division. Elective choices must include three courses of management concepts or practice with maximum one from concepts.

Management Concepts

ACCT 23020 Introduction to Financial Accounting (3)
 ACTT 11001 Accounting II - Managerial (4)
 BMRT 21000 Business Law and Ethics I (3)
 COMM 25863 Business and Professional Communication (3)
 35550 Small Group Communication (3)
 ** 35864 Organizational Communication (3)
 ECON 22060 Principles of Microeconomics (3)
 22061 Principles of Macroeconomics (3)
 IERT 22000 Statistical Process Control (4)

ITAP 26638	Business Communications (3)
M&IS 24056	Fundamentals of Business Statistics (3)
PSYC 31773	Industrial Psychology (3)
Management Practice	
ACCT 33063	Cost Control and Analysis for Management (3)
BMRT 11000	Introduction to Business (3)
11009	Introduction to Management Technology (3)
21005	Purchasing and Supply Management (3)
21006	Human Resources Management (3)
21008	Case Studies in Management Technology (3)
21009	Seminar in Management Technology (3)
21011	Fundamentals of Financial Management (3)
IERT 22006	Economic Decision Analysis (3)
M&IS 24163	Principles of Management (3)
34060	Operations Management (3)
34165	Dynamics of Leadership (3)
34180	Human Resource Management (3)
** 44150	Total Quality Management (3)
MFGT 12010	Safety in the Workplace (2)
SOC 42564	Bureaucratic Organizations (3)
TECH 43080	Industrial and Environmental Safety (3)
<hr/>	
TOTAL	
121	

*PHY 12201 and 12202 are approved as an exception to the Liberal Education Requirements (LER).

**Course fulfills writing-intensive requirement.

Graduation from the program requires an approved associate degree. Minimum 2.00 overall GPA required with minimum 2.00 GPA in upper-division TECH courses. Upper-division technology electives must be chosen with faculty advisor. The courses chosen to fulfill the curriculum must satisfy university diversity and writing-intensive course requirements. Minimum 27 credit hours of upper-division coursework required for technology associate degree graduates.

Computer Design and Animation Option

I. General College or University Requirements	1
US 10097 First Year Colloquium	1
II. Liberal Education Requirements	42
<i>A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.</i>	
Composition	
ENG 11011 College Writing I	3
21011 College Writing II	3
Mathematics and Critical Reasoning	
MATH 11010 Algebra for Calculus	3
11012 Intuitive Calculus	3

Humanities and Fine Arts

PHIL * 21001 Introduction to Ethics	3
Humanities or art history LER course	3
Choose from the following:	3
ARTH 22006 Art History I: Ancient and Medieval Art (3)	
22007 Art History II: Renaissance to Modern Art (3)	

Social Sciences

ECON 22060 Principles of Microeconomics	3
SOC * 12050 Introduction to Sociology	3

Basic Sciences

PHY 11030 Seven Ideas that Shook the Universe	3
PHY** 12201 Technical Physics I	3
Basic sciences LER laboratory	3

Additional LER Courses

COMM 15000 Introduction to Human Communication	3
ECON 22061 Principles of Macroeconomics	3

Diversity Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. The domestic-focus course is fulfilled in this major with LER social sciences SOC 12050. The global-focus course is fulfilled with LER humanities PHIL 21001. A complete list of diversity courses is on Pages 89-91.

III. Writing-Intensive Requirement

Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this major is fulfilled with TECH 33056. A complete list of writing-intensive courses is on Pages 93-95.

IV. Major Requirements .34

Credits for Associate of Applied Science in Computer Design and Animation Technology.

V. Technology Courses .28

TECH 33016 PC Network Engineering	3
34000 Computer Animation II	3
34001 Computer Animation III	3
34002 Advanced CAD II	3
34003 Animation Theory	3
34004 Technology of Light, Color, Design and Layout	2
43000 Advanced Animation Development	2
43001 Technology of Media and Film Production	2
43002 Graphics Design Technology	3
43003 Multimedia and Virtual Reality II	2
43004 Unix Scripting With Applications	2

VI. Related Courses .13

ARTF 14000 Drawing I	3
BMRT 11000 Introduction to Business	3
IERT 22006 Economic Decision Analysis	3
TECH***33056 Cooperative Education	2
Choose from the following:	2
COMT 21092 Computer Practicum (2)	

IERT 22095 Special Topics in Productivity Software (2)	
VII. Additional Major Requirements	5
ENG 20002 Introduction to Technical Writing	3
MATH 11022 Trigonometry	2
TOTAL	123

*Course fulfills diversity requirement.

**PHY 12201 is approved as an exception to the Liberal Education Requirements (LER).

***Course fulfills writing-intensive requirement.

Graduation from the program requires an approved associate degree. Minimum of 2.00 overall GPA required for graduation with minimum of 2.00 GPA in upper-division TECH courses. Upper-division technology electives must be chosen with faculty advisor.

Computer Technology Option

I. General College or University Requirements	1
US 10097 First Year Colloquium	1
II. Liberal Education Requirements	38-39
<i>A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.</i>	
Composition	
ENG 11011 College Writing I	3
21011 College Writing II	3
Mathematics and Critical Reasoning	
Choose from the following: 3-4	
MATH 11010 Algebra for Calculus (3)	
12001 Algebra and Trigonometry (4)	
Humanities and Fine Arts 9	
<i>Minimum one course from humanities category and minimum one course from fine arts category.</i>	
Social Sciences 6	
<i>Must be selected from two curricular areas.</i>	
Basic Sciences	
Choose from the following: 8	
<i>Must include two laboratory courses.</i>	
CHEM 10030 Chemistry in Our World (3)	
10050 Fundamentals of Chemistry (3)	
10052 Introduction to Organic Chemistry (2)	
10053 Inorganic and Organic Laboratory (1)	
<i>(corequisite CHEM 10052)</i>	
10054 General and Elementary Organic Chemistry (5)	
GEOL 11040 Earth Dynamics (3)	
11041 Earth Dynamics Laboratory (1)	
<i>(pre/corequisite GEOL 11040)</i>	
11042 Earth History (3)	
11043 Earth History Laboratory (1)	

	<i>(pre/corequisite 11042)</i>
PHY * 12201 Technical Physics I (3)	
* 12202 Technical Physics II (4)	
11660 Physical Science (3)	
13001 General College Physics I (5)	
13002 General College Physics II (5)	
13011 College Physics I (3)	
13012 College Physics II (3)	

Additional LER Courses

COMM 15000 Introduction to Human Communication	3
Choose from the following:	3
PHIL 11009 Principles of Thinking (3)	
LER course from above categories (3)	

Diversity Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. One course must come from the LER list; the second course may be taken as a second LER, in the major area or in a minor as a general elective. A complete list of diversity courses is on Pages 89-91.

III. Writing-Intensive Requirement

Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this major is fulfilled with COMM 35864 or M&IS 44150. A complete list of writing-intensive courses is on Pages 93-95.

IV. Technology Major Requirements 34

Credits from Associate of Applied Business in Computer Technology.

V. Additional Major Requirements 5

MATH 11022 Trigonometry	2
Choose from the following:	3
ENG 20002 Introduction to Technical Writing (3)	
ITAP 26638 Business Communications (3)	

VI. Technology Electives 15

Must be TECH courses numbered 363XX or 463XX.

VII. General Electives 27-28

Minimum 12 credit hours upper-division, including 6 hours selected from any of the following TECH courses:

TECH 363XX or 463XX

Any of the following with COMT faculty permission: TECH 31000, 33056, 36008, 36095, 36401, 36415, 41055, 42100

Elective choices must include three courses from management concepts or practice with a maximum of one course from concepts.

Management Concepts

ACCT 23020 Introduction to Financial Accounting (3)
ACTT 11001 Accounting II - Managerial (4)
BMRT 21000 Business Law and Ethics I (3)

COMM 25863	Business and Professional Communication (3)	
35550	Small Group Communication (3)	
** 35864	Organizational Communication (3)	
ECON 22060	Principles of Microeconomics (3)	
22061	Principles of Macroeconomics (3)	
IERT 22000	Statistical Process Control (4)	
ITAP 26638	Business Communications (3)	
M&IS 24056	Fundamentals of Business Statistics (3)	
PSYC 31773	Industrial Psychology (3)	
Management Practice		
ACCT 33063	Cost Control and Analysis for Management (3)	
BMRT 11000	Introduction to Business (3)	
11009	Introduction to Management Technology (3)	
21005	Purchasing and Supply Management (3)	
21006	Human Resources Management (3)	
21008	Case Studies in Management Technology (3)	
21009	Seminar in Management Technology (3)	
21011	Fundamentals of Financial Management (3)	
IERT 22006	Economic Decision Analysis (3)	
M&IS 24163	Principles of Management (3)	
34060	Operations Management (3)	
34165	Dynamics of Leadership (3)	
34180	Human Resource Management (3)	
** 44150	Total Quality Management (3)	
MFGT 12010	Safety in the Workplace (2)	
SOC 42564	Bureaucratic Organizations (3)	
TECH 43080	Industrial and Environmental Safety (3)	
TOTAL		121

*PHY 12201 and 12202 are approved as exceptions to the Liberal Education Requirements (LER).

**Course fulfills writing-intensive requirement.

Graduation from the program requires an Associate of Applied Business in Computer Technology. Minimum 2.00 overall GPA required with minimum 2.00 GPA in upper-division TECH courses. Upper-division technology electives must be chosen with faculty advisor. The courses chosen to fulfill the curriculum must satisfy university diversity and writing-intensive course requirements.

Electrical/Electronics Option

I.	General College or University Requirements	.1
US 10097	First Year Colloquium	.1
II.	Liberal Education Requirements	.41
A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.		
Composition		

ENG 11011	College Writing I	.3
21011	College Writing II	.3

Mathematics and Critical Reasoning

MATH*12001	Algebra and Trigonometry	.4
------------	--------------------------	----

Humanities and Fine Arts

Minimum one course from humanities category and minimum one course from fine arts category.

PHIL**21001	Introduction to Ethics	.3
Humanities and/or art history LER courses		.6

Social Sciences

Must be selected from two curricular areas.

ECON 22060	Principles of Microeconomics	.3
LER social science course		.3

Basic Sciences

Choose from the following: .10

PHY 13001	General College Physics I (5)	
13002	General College Physics II (5)	

or

PHY***12201	Technical Physics I (3)	
*** 12202	Technical Physics II (4)	

Basic Science LER courses (3)

Additional LER Courses

COMM 15000	Introduction to Human Communication	.3
------------	-------------------------------------	----

Choose from the following: .3

PHIL 11009	Principles of Thinking (3)	
------------	----------------------------	--

LER course from above categories (3)

Diversity Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. The global-focus course is fulfilled with LER humanities PHIL 21001. A complete list of diversity courses is on Pages 89-91.

III. Writing-Intensive Requirement

Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this major is fulfilled with TECH 31000, 33056 or M&IS 44150. A complete list of writing-intensive courses is on Pages 93-95.

IV. Major Requirements .34

Credits for Associate of Applied Science in Electrical/Electronics Engineering Technology.

V. Technology Courses .18

TECH 31020	Automated Manufacturing	.3
33016	PC Network Engineering	.3
33363	Metallurgy and Materials Science	.3

Choose from the following: .3

TECH****31000	Cultural Dynamics of Technology (3)	
**** 33056	Cooperative Education (3)	

Choose from the following: .6

TECH 31032	Power Technology (3)	
33223	Electronic Communication (3)	

43220 Electrical Machinery (3)

VI. Additional Major Requirements6-8

Choose from the following:3

ENG 20002 Introduction to Technical Writing (3)

ITAP 26638 Business Communication (3)

Choose from the following:3-5

MATH 11012 Intuitive Calculus (3)

12002 Analytic Geometry and Calculus I (5)

19002 Technical Mathematics II (4)

VII. General Electives19-21

Minimum 12 credit hours upper-division. Elective choices must include two courses of management practice; course prerequisites must be met.

Management Practice

ACCT 33063 Cost Control and Analysis for Management (3)

BMRT 11000 Introduction to Business (3)

11009 Introduction to Management Technology (3)

21005 Purchasing and Supply Management (3)

21006 Human Resources Management (3)

21008 Case Studies in Management Technology (3)

21009 Seminar in Management Technology (3)

21011 Fundamentals of Financial Management (3)

IERT 22006 Economic Decision Analysis (3)

M&IS 24163 Principles of Management (3)

34060 Operations Management (3)

34165 Dynamics of Leadership (3)

34180 Human Resource Management (3)

**** 44150 Total Quality Management (3)

MFGT 12010 Safety in the Workplace (2)

SOC 42564 Bureaucratic Organizations (3)

TECH 43080 Industrial and Environmental Safety (3)

TOTAL 121

*MATH 11011 and 11022 may be substituted for MATH 12001.

**Course fulfills diversity requirement.

***PHY 12201 and 12202 are approved as an exception to the Liberal Education Requirements (LER).

****Course fulfills writing-intensive requirement.

Graduation from the program requires an approved associate degree. Minimum 2.00 overall GPA required for graduation with minimum 2.00 GPA in upper-division TECH courses. Upper-division technology electives must be chosen with faculty advisor. The courses chosen to fulfill the curriculum must satisfy university diversity requirements.

Manufacturing/Mechanical/Systems Option

I. General College or University Requirements1

US 10097 First Year Colloquium1

II. Liberal Education Requirements41

A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.

Composition

ENG 11011 College Writing I3

21011 College Writing II3

Mathematics and Critical Reasoning

MATH*12001 Algebra and Trigonometry4

Humanities and Fine Arts

Minimum one course from humanities category and minimum one course from fine arts category.

PHIL**21001 Introduction to Ethics3

Humanities and/or art history LER courses6

Social Sciences6

Must be selected from two curricular areas.

Basic Sciences

Choose from the following:10

PHY 13001 General College Physics I (5)

13002 General College Physics II (5)

or

PHY***12201 Technical Physics I (3)

*** 12202 Technical Physics II (4)

Basic Science LER courses (3)

Additional LER Courses

COMM 15000 Introduction to Human Communication3

Choose from the following:3

PHIL 11009 Principles of Thinking (3)

LER course from above categories (3)

Diversity Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. The global-focus course is fulfilled with LER humanities PHIL 21001. A complete list of diversity courses is on Pages 89-91.

III. Writing-Intensive Requirement

Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this major is fulfilled with TECH 31000, 33056 or M&IS 44150. A complete list of writing-intensive courses is on Pages 93-95.

IV. Major Requirements34

Credits from Associate of Applied Science in Manufacturing, Mechanical or Systems/Industrial Engineering Technology.

V. Technology Courses21

Choose from the following:18

TECH 31020 Automated Manufacturing (3)

31032	Power Technology (3)
31065	Cast Metals (3)
32002	Materials and Processes II (3)
33016	PC Network Engineering (3)
33033	Hydraulics and Pneumatics (3)
33363	Metallurgy and Materials Science (3)
34002	Advanced CAD II (3)
43080	Industrial and Environmental Safety (3)
43220	Electrical Machinery (3)
43550	Computer Aided Manufacturing (3)

Choose from the following: 3

TECH***31000 Cultural Dynamics of Technology (3)

**** 33056 Cooperative Education (3)

VI. Additional Major Requirements 6-8

Choose from the following: 3

ENG 20002 Introduction to Technical Writing (3)

ITAP 26638 Business Communication (3)

Choose from the following: 3-5

MATH 11012 Intuitive Calculus (3)

12002 Analytic Geometry and Calculus I (5)

19002 Technical Mathematics II (4)

VII. General Electives 16-18

Minimum 6 credit hours upper-division. Elective choices must include three courses from management concepts or practice with a maximum of one course from concepts.

Management Concepts

ACCT 23020 Introduction to Financial Accounting (3)

ACTT 11001 Accounting II - Managerial (4)

BMRT 21000 Business Law and Ethics I (3)

COMM 25863 Business and Professional Communication (3)

35550 Small Group Communication (3)

35864 Organizational Communication (3)

ECON 22060 Microeconomics (3)

22061 Macroeconomics (3)

IERT 22000 Statistical Process Control (4)

ITAP 26638 Business Communications (3)

M&IS 24056 Fundamentals of Business Statistics (3)

PSYC 31773 Industrial Psychology (3)

Management Practice

ACCT 33063 Cost Control and Analysis for Management (3)

BMRT 11000 Introduction to Business (3)

11009 Introduction to Management Technology (3)

21005 Purchasing and Supply Management (3)

21006 Human Resources Management (3)

21008 Case Studies in Management Technology (3)

21009 Seminar in Management Technology (3)

21011 Fundamentals of Financial Management (3)

IERT 22006 Economic Decision Analysis (3)

M&IS 24163 Principles of Management (3)

34060 Operations Management (3)

34165 Dynamics of Leadership (3)

34180 Human Resource Management (3)

**** 44150 Total Quality Management (3)

MFGT 12010 Safety in the Workplace (2)

SOC 42564 Bureaucratic Organizations (3)

TECH 43080 Industrial and Environmental Safety (3)

TOTAL 121

**MATH 11011 and 11022 may be substituted for MATH 12001.*

***Course fulfills diversity requirement.*

****PHY 12201 and 12202 are approved as an exception to the Liberal Education Requirements (LER).*

*****Course fulfills writing-intensive requirement.*

Graduation from the program requires an approved associate degree. Minimum 2.00 overall GPA required for graduation with minimum 2.00 GPA in upper-division TECH courses. Upper-division technology electives must be chosen with faculty advisor. The courses chosen to fulfill the curriculum must satisfy university diversity requirements.

Plastics Manufacturing Option

I. General College or University Requirements 1

US 10097 First Year Colloquium 1

II. Liberal Education Requirements 14

A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.

Composition

ENG 11011 College Writing I 3

21011 College Writing II 3

Mathematics and Critical Reasoning

MATH*12001 Algebra and Trigonometry 4

Humanities and Fine Arts

Minimum one course from humanities category and minimum one course from fine arts category.

PHIL**21001 Introduction to Ethics 3

Humanities and/or art history LER courses 6

Social Sciences

Must be selected from two curricular areas.

ECON 22060 Principles of Microeconomics 3

LER social sciences course 3

Basic Sciences 9

Must include one laboratory course.

Additional LER Courses

COMM 15000 Introduction to Human Communication 3

Choose from the following: 3

PHIL 11009 Principles of Thinking (3)

LER course from above categories (3)

Diversity Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. The global-focus course is fulfilled with LER humanities PHIL 21001. A complete list of diversity courses is on Pages 89-91.

III. Writing-Intensive Requirement

Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this major is fulfilled with M&IS 44150. A complete list of writing-intensive courses is on Pages 93-95.

IV. Major Requirements34

Credits from Associate of Applied Science in Plastics Manufacturing Engineering Technology.

V. Technology Courses15

- TECH 31020 Automated Manufacturing3
- 31032 Power Technology3
- 32002 Materials and Processes II3
- 33363 Metallurgy and Materials Science3
- 43080 Industrial and Environmental Safety3

VI. Additional Major Requirements6-8

Choose from the following:3

ENG 20002 Introduction to Technical Writing (3)

ITAP 26638 Business Communication (3)

Choose from the following:3-5

MATH 11012 Intuitive Calculus (3)

12002 Analytic Geometry and Calculus I (5)

19002 Technical Mathematics II (4)

VI. General Electives23-25

Minimum 12 credit hours upper-division. Elective choices must include one course of management practice.

Management Practice

ACCT 33063 Cost Control and Analysis for Management (3)

BMRT 11000 Introduction to Business (3)

11009 Introduction to Management Technology (3)

21005 Purchasing and Supply Management (3)

21006 Human Resources Management (3)

21008 Case Studies in Management Technology (3)

21009 Seminar in Management Technology (3)

21011 Fundamentals of Financial Management (3)

IERT 22006 Economic Decision Analysis (3)

M&IS 24163 Principles of Management (3)

34060 Operations Management (3)

34165 Dynamics of Leadership (3)

34180 Human Resource Management (3)

*** 44150 Total Quality Management (3)

MFGT 12010 Safety in the Workplace (2)

SOC 42564 Bureaucratic Organizations (3)

TOTAL 121

*MATH 11011 and 11022 may be substituted for MATH 12001.

**Course fulfills diversity requirement.

***Course fulfills writing-intensive requirement.

Graduation from the program requires an approved associate degree. Minimum 2.00 overall GPA required for graduation with minimum 2.00 GPA in upper-division TECH courses. The courses chosen to fulfill the curriculum must satisfy university diversity and writing-intensive course requirements.

“2+2” Concentration for Associate Degree Graduates

The “2+2” concentration in industrial technology provides a course of study for associate’s degree graduates who desire to complete a Bachelor of Science in Industrial Technology. It allows graduates to apply all or nearly all of the coursework completed in the associate’s degree program toward the B.S. degree, broadens students’ backgrounds and allows the students to gain additional technical and managerial depth. A unique feature of the Kent State University program is its flexibility, including 15 upper-division technical elective hours that the students select in consultation with a College of Technology advisor.

Industrial Technology Option

I. General College or University Requirements1

US 10097 First Year Colloquium1

II. Liberal Education Requirements46

A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.

Composition

ENG 11011 College Writing I3

21011 College Writing II3

Mathematics and Critical Reasoning

MATH* 12001 Algebra and Trigonometry4

* 12002 Analytic Geometry and Calculus I5

Humanities and Fine Arts9

Minimum one course from humanities category and minimum one course from fine arts category.

Social Sciences

Must be selected from two curricular areas.

ECON 22060 Principles of Microeconomics3

LER social sciences course3

Basic Sciences

Choose from the following:10

PHY 13001 General College Physics I (5)

13002 General College Physics II (5)

or

PHY** 12201 Technical Physics I (3)

** 12202 Technical Physics II (4)

Basic Science LER courses (3)

Additional LER Courses

COMM 15000 Introduction to Human Communication 3

ECON 22061 Principles of Macroeconomics 3

Diversity Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. One course must come from the LER list; the second course may be taken as a second LER, in the major area or in a minor as a general elective. A complete list of diversity courses is on Pages 89-91.

III. Writing-Intensive Requirement

Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this major may be fulfilled with option M&IS 44150. A complete list of writing-intensive courses is on Pages 93-95.

IV. Major Requirements 34

Courses accepted by College of Technology as transfer credit.

V. Additional Major Requirements 3

ENG 20002 Introduction to Technical Writing 3

VI. Technical Electives (Upper-Division)* 15**

VII. Business Courses 21

Accounting, economics, finance, management and information systems. Minimum 12 credit hours must be upper-division.

VIII. General Electives 6

Technology electives, business courses and general electives together must include minimum two of the following:

ACCT 33063 Cost Control and Analysis for Management (3)

BMRT 11009 Introduction to Management Technology (3)

21005 Purchasing and Supply Management (3)

21006 Human Resources Management (3)

21008 Case Studies in Management Technology (3)

21009 Seminar in Management Technology (3)

21011 Fundamentals of Financial Management (3)

M&IS 24163 Principles of Management (3)

34060 Operations Management (3)

34165 Dynamics of Leadership (3)

34180 Human Resource Management (3)

**** 44150 Total Quality Management (3)

MFGT 12010 Safety in the Workplace (2)

SOC 42564 Bureaucratic Organizations (3)

TECH 43080 Industrial and Environmental Safety (3)

TOTAL 126

*An equivalent course may be substituted for MATH 12001 or 12002.

**PHY 12201 and 12202 are approved as an exception to the Liberal Education Requirements (LER).

***Technical electives must be chosen in consultation with a faculty advisor.

****Course fulfills writing-intensive requirement.

Minimum of 27 upper-division hours required (with associate's degree).

The courses chosen to fulfill the curriculum must satisfy university diversity and writing-intensive course requirements.

American Assembly of Collegiate Schools of Business accreditation standards prohibit nonbusiness majors from taking more than 25 percent of their degree requirements in business courses. Therefore, no more than 30 semester credit hours may be counted toward stated degree requirements.

Management Technology Option

I. General College or University Requirements 1

US 10097 First Year Colloquium 1

II. Liberal Education Requirements 41-46

A complete list of Liberal Education Requirements (LER) courses is on Pages 85-87.

Composition

ENG 11011 College Writing I 3

21011 College Writing II 3

Mathematics and Critical Reasoning

Choose from the following: 4

MATH* 11011 College Algebra (4)

12001 Algebra and Trigonometry (4)

Choose from the following: 3-5

* 11012 Intuitive Calculus (3)

12002 Analytic Geometry and Calculus I (5)

Humanities and Fine Arts 9

Minimum one course from humanities category and minimum one course from fine arts category.

Social Sciences

ECON 22060 Principles of Microeconomics 3

PSYC 11762 General Psychology 3

Basic Sciences 7-10

Must include one laboratory course. Select from BSCI, CHEM and PHY courses.

Additional LER Courses

COMM 15000 Introduction to Human Communication 3

ECON 22061 Principles of Macroeconomics 3

Diversity Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. One course must come from the LER list; the second course may be taken as a second LER, in the major area or in a minor as a general elective. A complete list of diversity courses is on Pages 89-91.

III. Writing-Intensive Requirement

Students must complete a one-course writing-intensive requirement and earn minimum C (2.0) grade. This requirement in this concentration is fulfilled with TECH 33056. A complete list of writing-intensive courses is on Pages 93-95.

IV. Major Requirements34

ACTT 11000 Accounting I: Financial4
 BMRT 11000 Introduction to Business3
 11009 Introduction to Management Technology3
 21000 Business Law and Ethics I3
 21004 Introduction to Business Statistics3
 21006 Human Resources Management3
 21008 Case Studies in Management Technology3
 21009 Seminar in Management Technology3
 21011 Fundamentals of Financial Management3
 21050 Fundamentals of Marketing Technology3
 21052 Professional Selling Techniques3

V. Technical Requirements18

TECH**20002 Materials and Processes3
 31016 Manufacturing Technology3
 31020 Automated Manufacturing3
 *** 33056 Cooperative Education—
 Professional Development3
 43080 Industrial and Environmental Safety3
 Technology elective (upper division)3

VI. Additional Major Requirements8-10

ENG****20002 Introduction to Technical Writing3
 MATH 11022 Trigonometry2
 Choose from the following:3-5
 MATH 11012 Intuitive Calculus (3)
 12002 Analytical Geometry and Calculus I (5)
 19002 Technical Mathematics II (4)

VII. Business Requirements18

Completion of all prerequisites required.
 ACCT 23021 Introduction to Managerial Accounting3
 COMT 11000 Introduction to Computer Systems3
 FIN 36053 Business Finance3
 M&IS 34060 Operations Management3
 MKTG 35025 Supply Chain Management3
 Business elective (upper division)3

TOTAL 123-130

*Students may substitute MATH 11011 and 11022 for MATH 12001; and substitute MATH 11012 for MATH 12002.

**TECH 20002 is an associate degree requirement and does not apply to this B.S. degree program. It is, however, a prerequisite to TECH 31016. Students may substitute MERT 12004 Manufacturing Processes for TECH 20002 although they should be aware that TECH 13580 Engineering Graphics I should be taken before MERT 12004.

***Course fulfills writing-intensive requirement.

****Students may substitute ITAP 26638 Business Communications for ENG 20002.

MINORS IN THE COLLEGE OF TECHNOLOGY

Electronic Technology Minor

Prerequisite

MATH 12001 Algebra and Trigonometry (4)
or equivalent

Courses

TECH 20004 Electrical Circuits I3
 23224 Electrical Circuits II3
 33220 Analog Electronics3
 33222 Digital Designs and Applications3
 33580 Engineering Graphics for Electronics3
 43026 Microprocessor Systems3

TOTAL 18

Flight Technology Minor

TECH 15740 Elements of Flight Theory5
 15741 Private Pilot Flight3
 25250 Elements of Aviation Weather3
 25743 Commercial Pilot Flight I2
 35644 Instrument Flight Theory3
 35645, Instrument Pilot Flight2
 35647 Commercial Pilot Flight II2
 35746 Commercial Pilot Theory2
 35747 Commercial Pilot Flight III2

TOTAL 24

Minimum 2.0 GPA overall required for minor. Students must also have a 2.0 GPA overall to register for flight courses.

Technology Minor

MATH*12001	Algebra and Trigonometry	4
TECH 10001	Information Technology	3
13580	Engineering Graphics I	3
20001	Energy/Power	3
20002	Materials and Processes	3
21021	Survey of Electricity and Electronics	4
23581	Computer-Aided Engineering Graphics	3
31000	Cultural Dynamics of Technology	3
	Technology electives	2
	TOTAL	28

***If MATH 12001 has been taken previously, these credit hours must be completed as technology electives.*

MINORS IN OTHER COLLEGES/SCHOOLS

In addition to the departmental minors, undergraduate students in the College of Technology can select from a wide range of minors offered by other colleges and schools at Kent State University.

The Arts

The following minors within the College of the Arts are available to all undergraduate students at Kent State University. Please see Pages 126-127 for program requirements.

Art History
Crafts
Dance*
Music*
Studio Art
Theatre

**Auditions are required before acceptance into the dance and music minors.*

Arts and Sciences

The following minors within the College of Arts and Sciences are available to all undergraduate students at Kent State University. Please see Pages 207-230 for program requirements.

African Studies
American Sign Language
American Studies
Ancient, Medieval and Renaissance Studies
Anthropology
Applied Conflict Management
Applied Mathematics
Asian Studies

Biological Sciences
British Studies
Business French
Business German
Business Russian
Business Spanish
Cartography
Chemistry
Classics
Climatology
Comparative Literature
Computer Science
Economics
English
French
Geographic Information Science
Geography
Geology
German
German Studies
Greek
Health Care Ethics
Hellenic Studies
History
Jewish Studies
Justice Studies
Latin
Latin American Studies
Lesbian, Gay, Bisexual and Transgendered Studies
Lithuanian Studies
Mathematics
North Atlantic Security Studies
Pan-African Studies
Paralegal Studies
Philosophy
Physics
Political Science
Pre-Law
Psychology
Religion Studies
Romanian Studies
Russian
Russian Studies
Sociology
Spanish
Urban Studies and Planning
Web Design and Programming
Women's Studies
The Writing Minor

Business Administration

The following minors within the College of Business Administration are available to all undergraduate students at Kent State University. Please see Pages 248-254 for program requirements.

Accounting
Business
Computer Information Systems
Economics
Entrepreneurship
Finance
Human Resource Management
International Business
Management
Marketing
Military Studies

Communication and Information

The following minors within the College of Communication and Information are available to all undergraduate students at Kent State University. Please see Pages 263-265 for program requirements.

Advertising
Communication Studies

Design

Electronic Media
Media Literacy
Photo Illustration
Public Relations
Visual Journalism
Web Design and Programming

Education, Health, and Human Services

The following minors within the College of Education, Health, and Human Services are available to all undergraduate students at Kent State University. Please see Pages 342-345 for program requirements.

Athletic Coaching
Community Health Education
Family, Food and Nutritional Studies
Gerontology
Hospitality Management
Human Sexuality
Recreation and Park Management
Sport Administration
Sports Medicine
Tourism Management