

1984-1985
Livonia MI

National Education Center

Catalog 1984-1985

**National Institute
of Technology Campus**
18000 Newburgh Road
Livonia, MI 48152
(313) 591-3833

NEW PROGRAM

18 month program started

21 month

on 4/15/85.

TABLE OF CONTENTS

About National Education Centers	2
Educational Philosophy	3
Summary of Accreditation Criteria and Standards	3
Admission Requirements	3
Enrollment Procedures	4
Personal Interview	
Enrolling for Training	
Acceptance by the School	
Rules and Regulations	5, 6, 7, 8
Personal Property	
Weather Emergencies	
Personal Conduct	
Dress Code	
Classroom Size	
Measure of Course Duration	
Changes to Courses, Schedules, Etc.	
Attendance (Modular System)	
Attendance (Quarter System)	
Tardiness	
Leave of Absence	
Required Study Time	
Grading Standards	
Make-up Work	
Program Transfers	
Transfers of Credit	
Credit for Previous Training	
Student Progress Counseling	
Withdrawals	
Dismissal Procedures	
Exit Interviews	
Allied Health	
Veteran Students	
Financial Aid and Tuition Assistance	9
Voluntary Pre-Payment Plan	10
Privacy Act	10
Student Services	11
Housing Assistance	
Car Pooling	
Student Employment	
Tutoring	
Field Trips	
Special Lectures	
Graduate Placement Assistance	12

Facilities, Calendar, Tuition & Fees; Refund Policy; School Policies; Program Descriptions (Length, Objectives, Scope & Sequence, Degrees, Diplomas and Certificates Offered, Equipment, Class Size)...See Addendum.

About National Education Centers

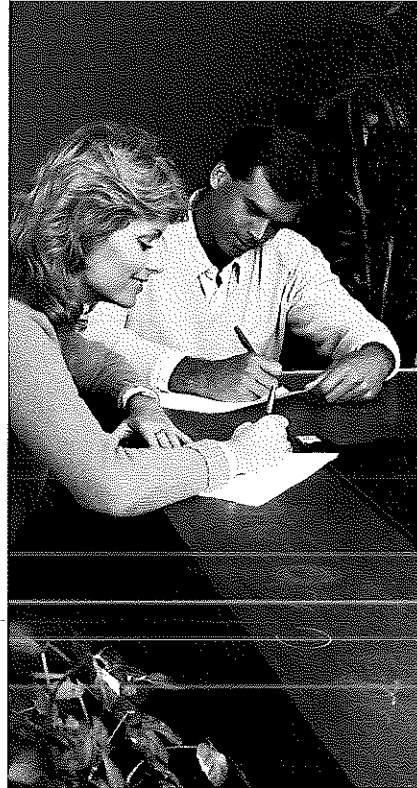
This school is part of a nationwide chain of National Education Centers across the U.S., owned and operated by National Education Corporation.

In an age where technology and training hold the keys to advancement for individuals and companies alike, National Education Centers, a division of National Education Corporation, has emerged as a leader in human resources development.

With headquarters in Newport Beach, California, and through schools across the U.S., National Education Centers provide vital, job-oriented training in high-growth, high-technology areas of business and industry.

From its beginning almost 30 years ago, National Education Corporation has grown to the point where it now encompasses numerous schools throughout the United States offering courses in such diverse areas as computer programming, drafting, electronics, avionics, aviation mechanics, flight training, fashion design and merchandising, accounting, auto and diesel repair, business administration, secretarial skills, medical and dental assisting, and radio and television broadcasting.

Great emphasis is placed on "hands-on" training. Students learn their skills using modern equipment similar to the kind they can expect to find on the job.



Educational Philosophy

It is our philosophy to provide various quality programs with an emphasis on hands-on training that are sound in concept, implemented by a competent and dedicated faculty and geared to serve those seeking a solid foundation in knowledge and skills required to obtain employment in their chosen fields. Programs offered are relevant to employers' needs and are in areas which offer strong long-term employment opportunities to the school's graduates.

Summary of Accreditation Criteria and Standards

This school has voluntarily undergone an accrediting evaluation by a team of competent examiners including subject experts and specialists in occupational education and private school administration.

The accreditation standards and criteria ensure that this school:

- Accepts only qualified applicants.
- Has specific job-oriented training objectives.
- Offers organized, comprehensive training in current occupational experience.

Admission Requirements

Applicants must be high school graduates or be able to qualify under the G.E.D. Testing Programs. It is the responsibility of the applicant to furnish proof of high school graduation or G.E.D. evaluation PRIOR to entering school.

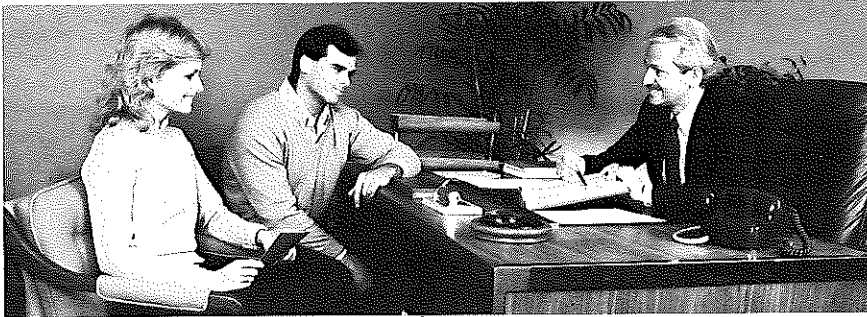
Exceptions:

If an applicant does not meet the Entrance Requirement but, in the opinion of the School Director or Education Coordinator, can benefit from the training offered an exception can be made.

The student must then qualify for enrollment by passing the Entrance Test for the program in which they wish to enroll.

- Provides necessary student services.
- Provides safe and sufficient facilities and equipment.
- Assures that graduates are qualified for employment.
- Has qualified administrators with records of integrity.
- Maintains permanent student records.
- Is financially sound.
- Is fair in all financial dealings.
- Has continuing programs of self-improvement.

Enrollment Procedures



It is suggested that application for admission be made as soon as possible in order to be officially accepted for a specific program and starting date. To apply, complete the Qualification Questionnaire or Application Form and bring it to the school, or call for a priority appointment to visit the school, and receive a tour of its facilities.

Personal Interview

The school requires a personal interview with each applicant prior to acceptance. The school prefers that parent(s) or spouse also attend the interview. This gives both the applicant and family an opportunity to see the school's equipment and facilities and to ask specific questions relating to the school, curriculum and the career being considered. The personal interview also gives the school the opportunity to meet the applicant to determine acceptability for entering the school.

Enrolling for Training

The school follows an open enrollment system allowing individuals to apply up to one year in advance of a scheduled class start. The following items are required to be completed at the time of application:

- Request for High School or College Transcript or G.E.D. Certificate.

- Enrollment Agreement (must be signed by parent or guardian if applicant is under 18 years of age)
- Financial Aid Forms, if applicant wishes to apply for Financial Aid.
- Student Health Notice for Allied Health programs (must be submitted by class start).
- Payment of Registration Fee.

Acceptance by the School

Once the completed Enrollment Agreement and items mentioned above have been submitted, the school reviews the Qualification Questionnaire and the applicant is informed of its decision within seven days. If an applicant is not accepted by the school, all fees paid to the school are refunded.

The school reserves the right to reject a student previously accepted if the items listed above are not successfully completed.

Tuition and Fees

See supplementary information in the addendum to this Catalog.

Rules and Regulations

Personal Property

The school assumes no responsibility for loss or damage to a student's personal property, or vehicle nor loss by theft of any vehicle or any of its contents, in, on, or adjacent to School property.

Weather Emergencies

The School reserves the right to close the School during a weather emergency or other "acts of God." Under these conditions, the student will not be charged with an official absence. Course material will be made up to ensure completion of the entire course.

Personal Conduct

Students are required to follow rules of conduct that are typically expected in the working world. Students may be placed on Probation or terminated for violation of the School's Personal Conduct Rules (including student dishonesty, unprofessional conduct, use of profanity, insubordination, violation of safety rules, use of alcohol or drugs on school property, etc.). The student will be removed from Probation if, in the opinion of the school director, the student demonstrates adherence to the Personal Conduct Rules.

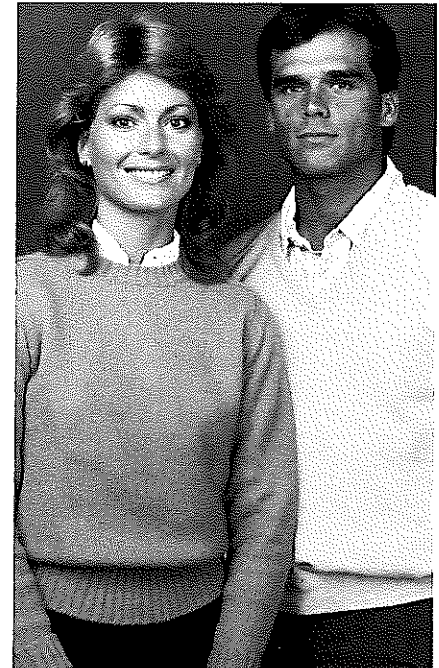


Dress Code

The school has a dress code appropriate for each program. Students are required to follow the Dress Code for the program in which they are enrolled. Infractions of the Dress Code will result in the student being placed on probation. The student will be removed from Probation only if, in the opinion of the School Director, the student demonstrates adherence to the school Dress Code. Continued infractions of the Dress Code may result in the student being Terminated by the school.

Classroom Size

To provide meaningful instruction and training, classes are limited in size. The maximum student/instructor ratio is contained in the current addendum to this catalog.



Rules and Regulations (Continued)

Measure of Course Duration

The School measures its programs in two ways, quarter hours of credit to allow comparability with other post-secondary schools and clock hours to allow measurement of the programs on this basis where required.

Quarter Hours are defined as follows:

For non-laboratory class periods, one quarter hour equals one clock hour per week for a 10 week term.

For laboratory class periods, one quarter hour equals two clock hours per week for a 10 week term.

For externship work experience, six quarter hours are assigned for 160 clock hours during a four week term.

Clock Hours are defined as follows:

A clock hour is one class period of approximately 50 minutes in length where lecture, demonstration, and similar class activities are conducted.

Changes to Courses, Schedules, Etc.

The schools reserve the right to make changes in the equipment and curriculum to reflect the latest technology, to reset class schedules and hours, to consolidate classes, and change locations.

Attendance (Modular System)

Students may be suspended from school if they do not maintain Satisfactory Attendance as described by the school in the addendum of this catalog.

Students may be suspended from school if they are absent three days in any Module or have more than a total of nine absences during the entire program. Students who are absent four or more days in any Module MUST repeat that Module prior to graduation.

NOTE: Under extenuating circumstances, more than nine absences may be approved by the school Director; any absences beyond the total of nine for the program are required to be made up prior to graduation, either during Externship or additional class hours.

Attendance (Quarter System)

Students may be suspended from school if they do not maintain Satisfactory Attendance each Quarter.

Students maintain Satisfactory Attendance if they attend 90% of the scheduled class time per Quarter. Any student whose attendance falls between 80%—90% is placed on Probation. If the student's attendance falls below 80%, the student is subject to termination from the school.

NOTE: Under extenuating circumstances, a student may continue in the school if the attendance falls below 80%. This exception is made by the school Director and appropriate documentation for the exception is kept in the student's file.

Tardiness

Each student is expected to be in class on time. Students who enter class after the class begins or who leave early, shall be counted as tardy. Accumulation of four tardies within a quarter or module is counted as an absence.

Leave of Absence Policy

Under extenuating circumstances, students may be permitted to interrupt their training with a leave of absence (L.O.A.).

Approval for the leave of absence will be granted by the school director.

Required Study Time

Outside study, apart from regular classroom work, is regularly required in order to successfully complete the required course assignments. The amount of time will vary according to the individual student's abilities. All assignments must be turned in at the designated time. Students are responsible for reading any studying materials issued by their instructors.

Grading Standards

A—	100-90	..	4.0	
B—	89-80	..	3.0	
C—	79-70	..	2.0	(Satisfactory Progress) ↑
D—	69-65	..	1.0	(Not Satisfactory Progress) ↓
F—	64- 0	...	0	(Failed) ↓

Make-up Work

Students are required to make up all assignments and work missed as result of absence. The instructor may assign additional make-up work to be completed for each absence; this will be assigned as outside work.

Tests missed because of an absence must be made up on the day the student returns to school unless other arrangements have been made by the instructor, with the school Administration's approval.

Program Transfers

Permission must be obtained from the School Director for a transfer from one program to another or for a requested change in schedule.

Transfer of Credit

Information concerning other schools which accept our credits toward their degree programs can be obtained by contacting the office of the School Director.

Credit for Previous Training

The school maintains a written record of the previous education and training of all students and appropriate credit is granted for previous education and training with the training period shortened proportionately and the person and interested agencies so notified. Any one interested in credit for previous training should make a written request to the school at least one month prior to the start of the program to allow for evaluation of the request.

Student Progress Counseling

Educational objectives, grades, attendance and conduct will normally be reviewed on a regular basis. If a student is failing or not following attendance, conduct or dress rules, the student will be counseled. Failure to correct deficiencies may result in termination. Students desiring academic counseling are encouraged to contact a member of the Education Department.

Withdrawals

If a student finds it necessary to withdraw from school, it is the student's responsibility to immediately notify the school in writing.

Dismissal Procedures

Students may be terminated by the School for Cause. Examples include but are not limited to the following:

1. Excessive Absences or Tardies
2. Failure to maintain Satisfactory Academic Progress
3. Cheating
4. Conduct that reflects poorly on the school or other students
5. Inability to meet financial obligations

Students to be terminated are notified in writing and may appeal the decision by filing a written

Rules and Regulations (Continued)

appeal to the School Director within one week of Notice of Termination.

Exit Interviews

Students who discontinue their training for any reason are required to have an Exit Interview with the School Director before any formal processing of a request for leave or discontinuation may be granted.

Allied Health

Students entering an Allied Health program must present a Health Notice to the school PRIOR to beginning the program which evidences

the student's good health and which is prepared by the student's physician. Health Notice forms are furnished by the school.

Due to X-ray requirements, applicants for Allied Health programs must be at least 17 years of age when they begin classes.

Veteran Students

Absence and Tardiness rules are governed by V.A. regulations. For benefit purposes, absences and tardies may be computed in a manner different from that described in this catalog.



Financial Aid and Tuition Assistance

This school is eligible to participate in several financial assistance programs. The largest program is the Guaranteed Student Loan (GSL). Those who qualify for assistance can borrow up to \$2500 under this program. This type of loan is secured through a financial institution (bank, savings and loan, etc.) and is guaranteed by the U.S. Government. Repayment is made according to standard terms set forth by the Government. We are also eligible to participate in the Parent Loan for Undergraduate Students (PLUS) loan program. Loan origination fees may be deducted from the loan by the institution making the loan as set forth by government regulations.

We are also eligible for the following Federal education assistance programs:

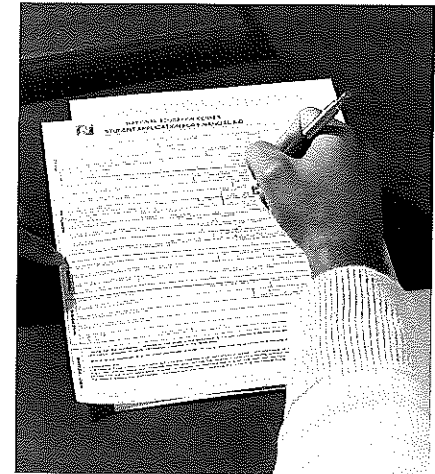
- PELL—previously Basic Educational Opportunity Grant
- SEOG—Supplemental Educational Opportunity Grant
- NDSL—National Direct Student Loan

Additional information may be obtained by contacting one of our authorized representatives or by writing to the Director of Financial Aid at the School.

Those students interested in applying for school benefits from VA, BIA, Vocational Rehabilitation or Social Security should contact their local agency or write the School for further information.

Statement of Non-Discrimination

National Education Center does not discriminate on the basis of sex, age, physical handicap, race, creed or religion in admissions, counseling, training, placement employment or any other of its activities. The School's Director is the Title IX Coordinator and will receive any inquiries under the sex discrimination provisions of the Educational Amendments of 1972.



Voluntary Pre-Payment Plan

The school provides a voluntary pre-payment plan to students and their families to help reduce the balance due upon entry. Details are available upon request from the Financial Aid Office.

Privacy Act

The school has established a policy for the release of student and/or graduate information. The policy is available upon request from the administrative offices.

Examination of Student Records

1. All students attending this postsecondary institution shall have the right to review their academic records, including grades, attendance and counseling. (Parental Financial Information is excepted.)
2. Records are supervised by the School Director and access is afforded by School Officials for purposes of recording grades, attendance and counseling, as well as determining financial aid eligibility.
3. Students may request a review by writing the School Director at the address set forth in the catalog and such review will be allowed at regular school hours under appropriate supervision. Students may also obtain copies of their records at a charge of \$0.10 per page.
4. Challenging the record for purposes of correcting or deleting any of the contents must be done in writing stating fully the reason therefore. However, grades and course evaluations can only be challenged on the grounds that they are improperly recorded.
 - a. The instructor and/or counselor involved will review the written challenge and, if desirable, meet with the student and then make a determination to retain, change or delete the disputed data.
 - b. Should further review be requested by the student, the School Director will conduct a hearing at which the student shall be afforded a full and fair opportunity to present evidence relevant to the disputed issues. The student shall be notified of the Director's decision which will be final.
 - c. A copy of the challenge and/or a written explanation respecting the contents of the student record will be included as part of the student's permanent record.
5. "Directory Information" showing student's name, address, telephone, birth date and place, program undertaken, dates of attendance and certificate awarded may be provided to third parties by the school, unless the request to omit such information is presented, in writing, within 10 days of date of enrollment.
6. As a postsecondary educational institute, parental access to student's records will be allowed without prior consent if the student is a dependent as defined in Section 152 of the Internal Revenue Code of 1954.

Student Services

Orientation

Although the school does not maintain dormitory facilities, students who are relocating and must arrange their own housing may request additional assistance from the School Director.

Car Pooling

If you are interested in driving in a car pool or need a ride to school, see your Student Services Representative. You will receive the help you need to solve your transportation problem.

Student Employment

The school will assist students in locating part-time or full-time employment to assist them in meeting their living expenses during their studies.

Employment assistance includes:

1. Counseling to prepare for an interview
2. A list of specific job openings, when available.
3. Assistance with securing an interview.

Tutoring

Tutoring is available on an as-needed basis. To schedule tutoring, contact a member of the Education Department.

Field Trips

It is the school's belief that course material is greatly enhanced by student exposure to real life applications. Where appropriate, visits to industry or professional offices where interesting or different methods can be observed are frequently arranged.

Special Lectures

In order to expose students to various industry applications or current methods, guest speakers may be invited, as appropriate and as permitted by class schedules.

Student Services

Contact a member of the Education Department for other student services that may be provided by the school.

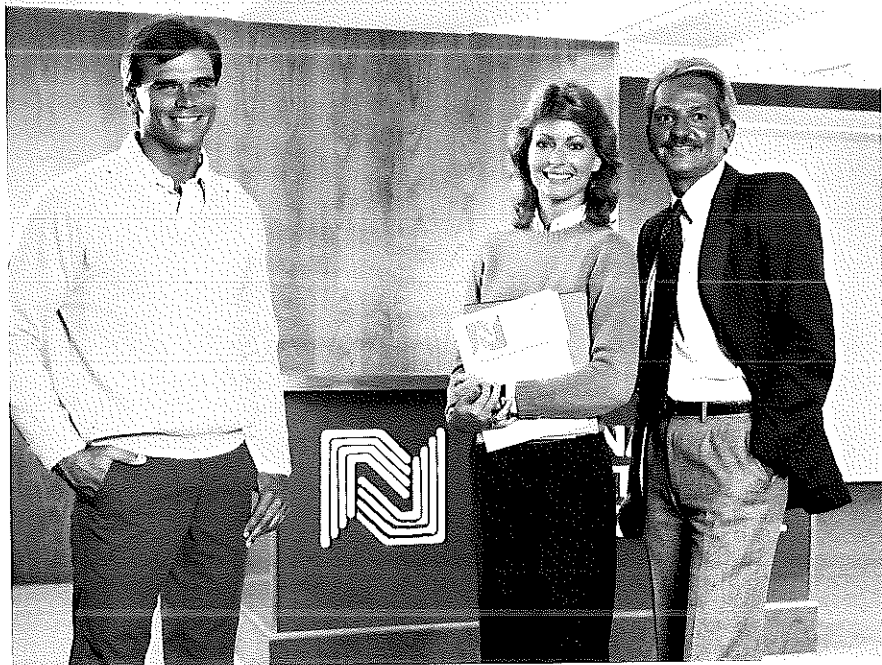
Graduate Placement Assistance

Graduates are counseled regarding opportunities for job interviews. While no ethical school can guarantee employment, this school makes a sincere effort toward successful placement of its graduates.

During the last month of training, each student desiring job placement assistance is expected to make application to the Placement Director. Each student participates in proper interviewing conduct and procedures, preparing resumes and letters of introduction, prior to the school arranging placement interviews. Student referrals for job placement results from direct contact between the school placement officer and prospective employer representatives. Prospective

employers may visit the school from time to time for recruitment purposes. Following graduation, or at any time thereafter, graduates may avail themselves of the school's placement assistance program. The school will make a reasonable effort to satisfy the wishes of a graduate as to location and type of employment. The more flexible a graduate can be regarding initial employment, the easier it is for the school to assist in placement.

NOTE: Failure on the student's part to follow placement procedures may result in discontinuation of placement services.



Staff/Accreditation/Facilities/Class Size

National Education Center
National Institute of Technology
Campus
1800 Newburgh Road
Livonia, Michigan 48152
(313) 464-7387

Administration
Kirk Wood
Director

Catherine Bender
Administrative Director

Barbara Paul
Student Services Director

Jean Lessien
Placement Director

Sam Conn
Director of Education

George Duffy
Director of Admissions

Facility

The school is located on 30 acres; the building features 37,000 square feet and includes 27 classrooms, administrative offices and a student recreation area. There is plenty of free parking.

History

National Education Center—National Institute of Technology Campus was originally a member of RETS Electronic Schools, which was established in 1935. The school was acquired by National Education Corporation in 1978 and in 1979, was made a part of the Technical Schools Group. In 1981, the school's name was changed to National Institute of Technology. The name was again changed in 1983 to National Education Center.

Accreditations, Approvals and Memberships

- Accredited by the Accrediting Commission of the National Association of Trade and Technical Schools.
- Licensed by the State of Michigan Department of Education.
- Member of the Michigan Organization of Private Vocational Schools.
- Authorized under Federal Law to enroll Nonimmigrant, Alien Students.
- Eligible students may obtain Social Security Benefits.
- Eligible instruction under the Guaranteed Student Loan Program.
- Eligible institution for National Direct Student Loan Supplemental Education Opportunity Grant and PELL Grant Programs.
- Provide training services for the State Department of Vocational Rehabilitation.

Tuition and Fees/Refund Policy

Refund Policy

Refunds will be calculated from the date of withdrawal, which is the last date of actual attendance. If a student does not start classes, all tuition paid will be refunded. Refunds will be computed as follows:

Withdrawal during first week...Amount retained by school \$350.00.

Withdrawal after first week but within 25% of course...School retains 25% of total tuition plus \$150.00.

Withdrawal after 25% but within 50% of course...School retains 50% of tuition plus \$150.00.

Withdrawal after 50% of course...Withdrawal after 50% of course...School retains 50% of tuition plus \$150.00.

School retains 100% of tuition.

For courses longer than 1 year (12 months) in length, the cancellation and settlement policy shall apply to the stated course price attributable to each school year.

All of the stated course price attributable to the period beyond the first year will be refunded when the student terminates during the first year.

All monies due the applicant or student shall be refunded within 30 days after cancellation or termination.

Refunds to students eligible to receive benefits under the G.L. Bill will be computed in accordance with applicable refund provisions.

Miscellaneous Fees: The school will retain all miscellaneous fees for each quarter started. All fees for quarters beyond the quarter of withdrawal shall be refunded in full.

TUITION AND FEES

COURSE	LENGTH MONTHS	CLOCK HOURS	QUARTER HOURS	OF CREDIT	REG FEE	TUITION	TOTAL COURSE PRICE
Electronics Engineering Technology	24	1920	128		\$150	\$8,800	\$8,950
Applied Electronics Technology	9	324	21.6		\$100	\$1,590	\$1,690
Specialized Electronic Servicing Technology	12	1152	73		\$150	\$4,400	\$4,550
High School Honors Program	12	216	14.4		\$100	\$1,100	\$1,200
Microprocessor	3	108	7.2		\$100	\$ 550	\$ 650
Electronic Communications Technology	6	216	14.4		\$100	\$1,100	\$1,200
Industrial/Computer Electronic Technology	6	216	14.4		\$100	\$1,100	\$1,200
Business Administration							
Accounting	18	1440	102.5		\$150	\$6,600	\$6,750
Information Systems	18	1440	105		\$150	\$6,600	\$6,750
Management	18	1440	108.75		\$150	\$6,600	\$6,750
Secretarial Science							
Legal	18	1400	93.75		\$150	\$6,600	\$6,750
Executive	18	1440	92.5		\$150	\$6,600	\$6,750
Admin. Assistant	18	1440	98.75		\$150	\$6,600	\$6,750

Books and Supplies
 Books and supplies are not included in tuition. The cost of such items is approximately \$75 to \$100 per quarter.

1985-Summer Quarter

Start

7/15/85 Monday ... 10/4/85 Friday

1985-Fall Quarter

End

10/14/85 Monday ... 1/17/86 Friday

Quarter Break-None

1985 Holidays

Presidents Day 2/18

Spring Holiday 4/5

Memorial Day 5/27

Independence Day 7/4, 7/5

Labor Day 9/2

Thanksgiving 11/28, 11/29

Christmas Recess 12/23, 24, 25, 26,
27, 30, 31, 1/1, 2, &

3/86

Satisfactory Progress

Quarter Programs

Definition of Satisfactory Progress

To remain eligible for Financial Aid, students must continue to make acceptable academic progress.

The student must be enrolled in an eligible program of instruction and must either:

1. Be maintaining a minimum cumulative grade point average (GPA) of 2.0;

or

2. Be on academic probation.

If, at the end of the Probationary Quarter, the student's cumulative grade point average is less than 2.0, the student will be suspended from school and will be ineligible for further financial assistance.

Probationary Status

Students not meeting the Grading Standards will be placed on Probation. Falling to maintain satisfactory academic progress may be reinstated through the Appeal Process. If the Appeal is approved by the school director, the student will be scheduled to return to school after remaining out of school for a minimum of one Quarter.

Academic Probation

Students are placed on Academic Probation for a period of one Quarter if they have failed to maintain a cumulative grade point average of at least 2.0 as measured at the end of the last Quarter.

Students are removed from academic probation if they achieve a cumulative grade point average of 2.0 at the end of their Probationary Quarter.

Repeating of Course Work

To continue in the program, students who fail any course must retake those courses. If the student is required to repeat Quarters of training due to academic failure, the length of their program will be extended up to an additional two Quarters.

Appeal Process

If a student feels that there are extenuating reasons for failing to maintain satisfactory academic progress they may appeal this decision by petitioning the school director, in writing, within five (5) days of the end of the Quarter documenting, in detail, the extenuating circumstances. A decision on the appeal will be made in writing within seven (7) working days and the student so notified.

Reinstatement

A student who has been terminated by failing to maintain satisfactory academic progress may be reinstated through the Appeal Process. If the appeal is approved by the school director, the student will be scheduled to return to school after remaining out of school for a minimum of one Quarter. A student will not be eligible for financial aid during the Reinstatement Quarter. If the student achieves a cumulative GPA of 2.0 or better by the end of the Reinstatement Quarter, he or she will be considered to be making satisfactory academic progress and will be eligible for financial aid consideration in subsequent Quarters.

Graduation Requirements

A student may qualify for graduation while on probation if, at the end of the Probationary Quarter, the student meets the Satisfactory Progress requirements.

If:

1. The student does not have a cumulative grade point average of 2.0.

2. The student does not meet their financial obligations to the school.

Termination

A student may be terminated for failure to meet the Academic Standards.

Monitoring

Satisfactory Progress will be monitored by the institution at the end of each Quarter. Notice of Probationary Status will be in writing.

Electronics

The electronics industry is one of the fastest growing fields today. Employment opportunities in electronics are exceptionally good. The American Electronics Association estimates its members alone will need 48,000 additional technicians by 1985. Advances in technology steadily create additional jobs and opportunities for advancement in this field.

National Education Center's Electronics Programs provide the student with knowledge and skills necessary to gain employment as Electronic Technicians. Modern training methods and equipment provide the students with the background needed to keep pace with exciting changes taking place in this field. National Education Center's Electronics Programs include ample "hands on" training on state-of-the-art equipment.

Students learn to use meters, oscilloscopes, signal function generators, analog, digital and microprocessor trainers and computers in the course of instruction. Average class size is 30 students.

Electronics

ELECTRONICS ENGINEERING TECHNOLOGY

Objective:

This program provides students with the skills and knowledge needed to gain entry-level employment as electronic technicians. At the completion of this program, students will be able to use test equipment to analyze, design, or repair electronic circuits. Students will learn the fundamentals of AC and DC electricity, solid state electronics, digital electronics and microprocessor technology. Students will be able to specialize in one of the following areas: Computer Electronics, Industrial Electronics or Electronic Engineering Technology.

COURSES

CONTACT HOURS
QUARTER HOURS

Quarter I
Electronics 101 100.0 8.3
Laboratory 101 90.0 3.6
Mathematics 101 50.0 4.1

Quarter II
Electronics 102 100.0 8.3
Laboratory 102 72.0 3.0
Mathematics 102 50.0 4.1
Engineering Drawing 101 18.0 .6

Quarter III
Electronics 103 80.0 6.7
Laboratory 103 72.0 3.0
Mathematics 103 50.0 4.1
Engineering Drawing 102 18.0 .6

Quarter IV
Electronics 104 80.0 6.7
Laboratory 104 90.0 3.6
Mathematics 104 50.0 4.1
English Communications 201 20.0 1.6

Quarter V
Electronics 201 100.0 8.3
Laboratory 201 90.0 3.6
Mathematics 201 30.0 2.5
Technical Writing 101 20.0 1.6

Quarter VI
Electronics 202 80.0 6.7
Laboratory 202 90.0 3.6
Mathematics 202 30.0 2.5
Physics 201 20.0 1.6
Technical Writing 201 20.0 1.6

Quarter VII
Electronics 203 100.0 8.3
Laboratory 203 90.0 3.6
Mathematics 203 30.0 2.5
Technical Writing 301 20.0 1.6

Quarter VIII
Electronics 301 110.0 9.2
Laboratory 301 90.0 3.6
Microprocessor Training Devices 30.0 2.5
Mathematics 301 20.0 1.6
Technical Writing 401 20.0 1.6

Course Totals
1920.0
128.0

Upon successful completion of all areas of the 24 month (1,920 clock hour) program, a Diploma will be awarded.

SPECIALIZED ELECTRONIC SERVICING TECHNOLOGY

Objective: The Specialized Electronic Servicing Technology Course was developed to meet the continuing demand for trained electronics personnel to fill entry level jobs in this vast industry. Employment opportunities in the following areas are within the scope of our graduates: Installation and repair of radio and television systems, hi-fidelity sound systems, intrusion alarm systems, closed-circuit television systems, recording systems, automated dispensing and copy equipment, electronic organs, industrial instrumentation and testing.

Since the terminal objective is employment in the service industry, this course is of an extremely practical nature. The ability of the graduate should be such that he will be immediately profitable to his employer. This is not a design engineering course. The mathematics included in the course are limited to that required to understand the operation of practical circuits and systems, which allows as much of the available time as possible to be devoted to practical subject matter.

COURSES

CONTACT HOURS
QUARTER CREDITS

Quarter I
Electronics III 150.0 12.5
Laboratory III 138.0 5.75

Quarter II
Electronics 1122 150.0 12.5
Laboratory 12 138.0 5.75

Quarter III
Electronics 211 150.0 12.5
Laboratory 211 138.0 5.75

Quarter IV
Electronics 212 150.0 12.5
Laboratory 212 138.0 5.75

Total
1152.0 73

Upon successful completion of the 12 month (1152 clock hour) program a certificate will be awarded.

Electronics

EQUIPMENT LIST

Audio Frequency Generators 8.3
Capacitance Meters 3.6
Computer Training Systems 2.5
Experiment Boards 1.6
Frequency Counters 9.2
Logic Analyzers 3.6
Microprocessor Training Devices 3.6
Pulse Generators 1.6
Signal Generators 1.6
Single and Dual Trace Oscilloscopes 1.6
Volt-ohm Meters 1.6

Continuing Education Programs

Advancements in electronic technology occur on a daily basis. The technology that was considered to be revolutionary five years ago may well be considered obsolete today. This poses a serious problem for many engineers and technicians if their present employment does not allow for the continuing education necessary to keep pace with the changing technology; they may well find the state-of-the-art slipping away from them. Quite often, industry sponsors employees in the attendance of seminars. Unfortunately, only a limited amount of education can be obtained in this fashion. A three-day crash course is no substitute for proper resident training. Addressing this problem, several courses are available for existing technicians and engineers for the primary purpose of upgrading their technical expertise. These courses have specific prerequisites and are current with today's technology. As these courses are offered on a part-time basis, it will be assumed that the student has sufficient time outside of class to complete the assigned homework. Upon completion of these courses, the graduate will have obtained the skill levels necessary to implement the application of these technologies in their present position or to prepare for employment in other areas that would demand such expertise.

MICROPROCESSOR

Objectives: The Microprocessor Course was designed in conjunction with industry to upgrade the technical skills of the Electronic Technicians and Engineers in the area of microprocessors. Employment opportunities in the following areas are within the scope of our graduates: product development specialist, industrial maintenance specialist, microprocessor applications specialist, electronic technician, etc. These and similar positions require the application of microprocessor technology in design, programming, repair, prototyping and development of electronic products.

Length: Twelve weeks, two nights per week, with nine contact hours per week.

Prerequisites: All enrollees must have a sound understanding of analog and digital electronics and must possess a minimum of one year of experience in the field as an engineer or technician, or must have completed the Applied Electronic Technology program.

Content: This course will concentrate on microprocessors, their hardware, software and applications. The topics of in-depth discussion will be:

- A. Tri-state and open collector technology
- B. Microprocessor-systems overview
- C. Bus structures
- D. Specific block diagrams of microprocessors
- E. Internal block diagrams
- F. Analysis of specification sheets of processor chips
- G. Hardware
- H. Machine language programming; addressing modes, structure, interrupt routines, considerations of writing an executive (monitor) program and timing loops
- I. Assembler language programming (introduction)
- J. Memory devices and architecture
- K. Memory decoding and buffering
- L. Memory organization (small vs. large system)
- M. Support ICs; serial outputs, parallel outputs, support software
- N. Hardware vs. software
- O. Applications; industrial, minicomputers, transducers, keyboards and seven segment displays
- P. Lab involves machine language programming and construction of interfacing circuits
- Q. Latest innovations in microprocessor research

Electronic Communications Technology (ECT)

Prerequisite:

Completion of the Applied Electronic Technology Program or equivalency.

Objectives:

The Electronic Communications Technology program, which is offered two nights a week, was developed to meet the continuing demand for trained electronic personnel to fill entry level positions in the commercial and noncommercial communications industry. Two-way mobile communications, commercial radio and television broadcast engineering, CB transmitter repair and installation, electronic instrumentation and test, marine two-way communications are just a few of the employment opportunities that graduates would qualify for. FCC Radio/Telephone License preparation is an integral part of this course. The mathematics included in this course is limited to that required for the preparation needed to take the FCC exams.

Since this course is offered on a part time basis only, it will be assumed that the student has sufficient time outside of class to complete the assigned homework.

Saturdays Only

Course	Contact Hours	Quarter Credits
TL500—Transmitter Principles	108.0	7.2
TL501—Transceiver Theory and Repair	108.0	7.2
Totals	216.0	14.4

Upon successful completion of the program a certificate will be awarded.

Applied Electronic Technology (AET)

Objectives: The Applied Electronics Technology program was developed to provide a vehicle by which serious students could acquire comprehensive training in electronics on a part-time basis. It will be assumed that the enrollee has sufficient time outside of class to complete the assigned homework. Each class day will be divided into approximately 60% lecture and a discussion of the assigned homework, and 40% lab. The lab is an extension of the theory in which the students actually construct and test the circuits discussed in lecture, and learn the use of the appropriate test equipment.

The objective of this program is to provide a method by which an individual may obtain entry level employment in the electronics industry, or to serve as a means by which existing industrial electronic technicians can update to the current state-of-the-art technology, or to provide a method by which employees in unskilled occupations can obtain a lateral transfer to the electronics department within their companies. This course also prepares the student for entry into one of the specialized programs such as: Industrial/Computer Technology, Home Entertainment Technology, or Communications Technology. Employment opportunities in the following areas are within the scope of our graduates: automotive electronics, installation and maintenance of electronic mechanical copying and dispensing machines, electronic test technician, Industrial maintenance technician, electronic security technician, etc.

Two Nights a Week

Course	Weeks	Contact Hours	Quarter Credits
TL100—Basic Electronic Principles	12	108.0	7.2
TL101—Electronic Circuit Concepts	12	108.0	7.2
TL200—Digital/Analog Principles and Systems	12	108.0	7.2
Totals	36	324.0	21.6

Saturday Only

Course	Weeks	Contact Hours	Quarter Credits
TL100—Basic Electronic Principles	24	108.0	7.2
TL101—Electronic Circuit Concepts	24	108.0	7.2
TL200—Digital/Analog Principles and Systems	24	108.0	7.2
Totals	72	324.0	21.6

Upon successful completion of the 9 month (324 clock hour) program a certificate will be awarded.

Industrial/Computer Electronic Technology (IET)

Prerequisite: Completion of the Applied Electronic Technology program or equivalency.

Objectives: The Industrial/Computer Electronic Technology program offered two days a week, was developed to provide a method by which graduates of the Applied Electronic Technology program, or existing electronic technicians, may attain the skills suitable for entry into the industrial or computer industry. Since this course is offered on a part-time basis, it will be assumed that the student has sufficient time outside of class to complete the assigned homework. Each class day will be divided into approximately 60% lecture and a discussion of the assigned homework, and 40% lab. The lab is an extension of the theory in which the student actually constructs and tests the circuits discussed in lecture, and learns the use of the appropriate test equipment.

Computer installation and maintenance computer peripherals, numerical control, instrumentation, applications engineering, and industrial electronics are just a few of the occupational areas that are available to graduates of this program. Existing electronic technicians who take this course for upgrading should expect to see new avenues of upward mobility opening for them within their present companies.

Course	Weeks	Contact Hours	Quarter Credits
TL300—Microprocessors	108.0	7.2	
TL301—Industrial Electronics & Computers	108.0	7.2	
Totals	216.0	14.4	

Upon successful completion of all areas of the 3 month (216 clock hour) program, a certificate will be awarded.

High School Honors Program (HSH)

Objectives: This program was designed to give high school seniors the opportunity to start their training in electronics while still attending high school. Meeting on Saturdays, the students will have the opportunity to experience the same labs and lectures that are offered in our full-time resident program. Since this program is offered part-time, it will be assumed that the students have the necessary time outside of class to complete the assigned homework.

Upon successful completion of this course, a student may advance up to two quarters of training in the Electronic Engineering Technology program, provided that he or she can demonstrate the necessary math proficiency. Additional math lessons will be issued to help prepare the students for this course of study.

In order to qualify for enrollment, an applicant should be maintaining a "B" average in his/her high school work and present a letter of recommendation from their high school counselor or Industrial Arts instructor.

Course	Weeks	Contact Hours	Quarter Credits
TL100—Basic Electronic Principles	24	108.0	7.2
TL101—Electronic Circuit Concepts	24	108.0	7.2
Totals	48	216.0	14.4

Upon successful completion of the 12 month (216 clock hour) program a certificate will be awarded.

Secretarial Science Programs

Competent, highly-skilled professional secretaries are in high demand in today's business world. The diverse responsibilities and challenges of their jobs make them an indispensable part of the management team. National Education's programs are designed to expose the students to as many aspects of the business world as possible within the academic setting and to have the student attain proficiency in both technical and administrative skills. It is our goal to graduate well-qualified and highly-trained executives, medical and legal secretaries who can assume responsible positions in business, industry and government.

Legal Secretary

The legal profession is one of the most interesting and varied of all the professions. Competent, well-qualified legal secretaries are an essential component in this profession. National Education Center's specialized legal program prepares its graduates for entry-level employment with corporate legal departments, attorneys, judges, insurance companies, government agencies and many others. A Diploma is conferred upon successful completion of the 18-month program.

Course #	Course Titles	Clock Hours	Quarter Credits
BE101	Introduction to Business	60	5.0
SS101	Typing I (Beginning)	60	2.5
SS102	Typing II (Intermediate)	60	2.5
SS201	Typing III (Advanced)	60	2.5
SS110	Shorthand I (Beginning)	60	2.5
SS111	Shorthand II (Intermediate)	60	2.5
SS210	Shorthand III (Advanced)	60	2.5
SS202	Word/Information Processing I	60	3.75
SS203	Word/Information Processing II	60	3.75
BE104	Principles of Management	60	5.0
LS101	Business Law	60	5.0
BE102	Business Mathematics	60	3.75
AC101	Principles of Accounting I	60	3.75
SS220	Secretarial Office Procedures I	60	3.75
BE103	Business Correspondence	60	3.75
SS222	Office Machines	60	2.5
LS102	Legal Terminology, Documentation & Procedures	60	5.0
LS201	Legal Office Procedures	60	3.75
GE101	Human Motivation	60	5.0
GE102	English I	60	5.0
GE103	English II	60	5.0
GE104	Speech	60	5.0
GE105	Psychology	60	5.0
GE201	Professional Career Development	60	5.0
TOTALS		1440	99.75

Course #	Course Titles	Hours	Quarter Credits
BE101	Introduction to Business	60	5.0
SS101	Typing I (Beginning)	60	2.5
SS102	Typing II (Intermediate)	60	2.5
SS201	Typing III (Advanced)	60	2.5
SS202	Word/Information Processing I	60	3.75
SS203	Word/Information Processing II	60	3.75
BE104	Principles of Management	60	5.0
LS101	Business Law	60	5.0
BE103	Business Correspondence	60	3.75
BE102	Business Mathematics	60	3.75
AC101	Principles of Accounting I	60	3.75
AC102	Principles of Accounting II	60	3.75
SS220	Secretarial Office Procedures I	60	3.75
SS221	Executive Office Procedures	60	3.75
SS222	Office Machines	60	2.5
GE101	Human Motivation	60	5.0
GE102	English I	60	5.0
GE103	English II	60	5.0
GE104	Speech	60	5.0
GE105	Psychology	60	5.0
GE201	Professional Career Development	60	5.0
TOTALS		1440	92.50

Course #	Course Titles	Hours	Quarter Credits
BE101	Introduction to Business	60	5.0
SS101	Typing I (Beginning)	60	2.5
SS102	Typing II (Intermediate)	60	2.5
SS201	Typing III (Advanced)	60	2.5
SS202	Word/Information Processing I	60	3.75
SS203	Word/Information Processing II	60	3.75
BE104	Principles of Management	60	5.0
LS101	Business Law	60	5.0
BE103	Business Correspondence	60	3.75
BE102	Business Mathematics	60	3.75
BE105	Economics	60	5.0
AC101	Principles of Accounting I	60	3.75
AC102	Principles of Accounting II	60	3.75
AC103	Principles of Accounting III	60	3.75
SS220	Secretarial Office Procedures I	60	3.75
SS221	Executive Office Procedures	60	3.75
SS222	Office Machines	60	2.5
SS222	Elective	60	5.0
GE101	Human Motivation	60	5.0
GE102	English I	60	5.0
GE103	English II	60	5.0
GE104	Speech	60	5.0
GE105	Psychology	60	5.0
GE201	Professional Career Development	60	5.0
TOTALS		1440	98.75

Administrative Assistant

Administrative Assistant
 Organizational expertise, administrative abilities, and high skill level make the administrative assistant indispensable as part of the management team in today's business.
 National Education Center's Administrative Assistant program is designed to prepare its graduates for entry-level, administrative-support positions in business, industry or government. Courses in accounting, management, word/information processing, and executive office procedures provide the skills needed in this type of position.
 A Diploma is conferred upon successful completion of the 18-month program.

Executive Secretary
 The executive secretary in today's office is a highly-trained professional whose position involves the technical skills of shorthand, typing, and word processing and the nontechnical skills of decision making, exercising initiative and working with people.
 National Education Center's program includes courses which provide its graduates with all of the skills needed to secure entry-level secretarial positions in the Executive office.
 A Diploma is conferred upon successful completion of the 18-month program.

National Education Centers

**Affiliated Institutions:
National Education Center—
Bryman Campus Located In:**

Anaheim, CA

Canoga Park, CA

Long Beach, CA

Los Angeles, CA

Orange, CA (Branch)

Phoenix, AZ

Rosemead, CA

San Francisco, CA

San Jose, CA

Torrance, CA

Atlanta, GA

Houston, TX

East Brunswick, NJ

Oak Park, IL

**National Education Center—
National Institute of
Technology Campus Located In:**

Cross Lanes, WV

Cuyahoga Falls, OH

East Detroit, MI (Branch)

Livonia, MI

Wyoming, MI

West Des Moines, IA

Homewood, AL

Dallas, TX

Oklahoma City, OK

Universal City, TX

Cypress, CA (Exi)

**National Education Center—
Sawyer Campus Located In:**

Los Angeles, CA

Anaheim, CA

Sacramento, CA

The following schools are accredited by the Accrediting Commission of the Association of Independent College & Schools:

- National Education Center— Allentown Business School Campus
 - National Education Center— Thompson Institute Campus, Philadelphia & Harrisburg
 - National Education Center— Kansas City Business College Campus
 - National Education Center— Skadron College of Business Campus
 - National Education Center— Sawyer Campus, Anaheim, L.A. & Sacramento
- The remainder of the affiliated schools are accredited by the Accrediting Commission of the National Association of Trade & Technical Schools.

- National Education Center— Allentown Business School Campus, Allentown, PA
- National Education Center— Vale Technical Institute Campus, Blairsville, PA
- National Education Center— Thompson Institute Campus, Harrisburg, PA
- National Education Center— Thompson Institute Campus, Philadelphia, PA (Branch)
- National Education Center— Kentucky College of Technology Campus, Louisville, KY
- National Education Center— RETS Campus, Nutley, NJ
- National Education Center— Kansas City Business College Campus, Kansas City, MO
- National Education Center— Brown Institute Campus, Minneapolis, MN
- National Education Center— Brown Institute Campus, Ft. Lauderdale, FL
- National Education Center— Bauder College Campus, Ft. Lauderdale, FL
- National Education Center— Arkansas College of Technology Campus, Little Rock, AR
- National Education Center— Tampa Technical Institute Campus, Tampa, FL
- National Education Center— Spartan School of Aeronautics Campus, Tulsa, OK
- National Education Center— Arizona Automotive Institute Campus, Glendale, AZ
- National Education Center— Skadron College of Business Campus, San Bernardino, CA
- National Education Center— Rhode Island Trades Shops School Campus, Providence, RI

of a student's program. Its focus is on human relations in the organizational structure. Of importance to the student is the method of achieving career success in such areas as job hunting, resume preparation, interviews, career goals, employment expectations.

Prerequisite: None

Secretarial Science

SS101 Typing I (Beginning) 2.5 Credits
 Objectives of this course are to develop touch control of the keyboard and proper typing techniques to provide practice in applying those techniques to the production of letters, tables, reports, etc. A minimum speed of 30 WPM is the speed goal.

Prerequisite: None

SS102 Typing II (Intermediate) 2.5 Credits
 Continued development of basic typing skills and emphasis on production of various kinds of business correspondence, tabulations, manuscripts and forms from unarranged and rough-draft WPM is the speed goal.

Prerequisite: SS101

SS103 Keyboarding 2.5 Credits
 The purpose of this course is to develop basic keyboarding skills that will enable the student to function efficiently on a computer terminal.

Prerequisite: None

SS110 Shorthand I (Beginning) 2.5 Credits
 This course is a presentation of basic shorthand and theory as well as the basic elements of dictation, transcription, and the non-shorthand elements of transcription.

Prerequisite: None

SS111 Shorthand II (Intermediate) 2.5 Credits
 Theory principles are reviewed in order to increase word building, phrasing, power, transcription, punctuation, word usage and typing style. Minimum speed of 50 WPM is the speed goal.

Prerequisite: SS110

SS201 Typing III (Advanced) 2.5 Credits
 Refinement of speed and accuracy skills with heavy focus on production of a wide variety of business communications. Minimum speed of 50 WPM is the speed goal.

Prerequisite: SS102

SS202 Word/Information Processing I* 3.75 Credits
 Introduction to information processing, its implications, and its impact on business and society.

Prerequisite: SS201

SS203 Word/Information Processing II* 3.75 Credits
 A continuation of Word/Information Processing I. Careers, technology and applications are featured throughout the course.

Prerequisite: SS202

*Hands-on experience on equipment is an integral part of the course.

SS210 Shorthand III (Advanced) 2.5 Credits
 Students are trained to produce machine correspondence. Dictation skills are integrated with spelling, vocabulary, and the mechanics of English. Minimum speed of 60 WPM is the speed goal.

Prerequisite: SSS111

SS220 Secretarial Office Procedures 3.75 Credits
 This course deals with the multidisciplinary characteristics of secretarial positions, the changing office environment and career self-fulfillment.

Prerequisite: None

SS221 Executive Office Procedures 3.75 Credits
 Practical application of problems confronting the executive secretary in the office environment.

Prerequisite: SS220

SS222 Office Machines 2.5 Credits
 Course is designed to give students extensive experience operating transcription equipment.

Prerequisite: SS102

oscillators, basic transmitters, amplitude modulation systems, frequency modulation systems, and motors and generators.

TL501—TRANSMITTER THEORY

AND REPAIR

This quarter provides preparation for the 1st Class FCC (Federal Communications Commission) license and a study of citizen-band (CB) radio and microwave systems through an examination of the following topics: antennas and transmission lines, transmitter frequency measuring methods, CB installation and SWR checks, broadcast station logs and equipment, FCC regulations, frequency synthesis and phase lock loops, television broadcasting and receiving, and microwave systems.

Accounting

AC101 Principals of Accounting I
3.75 Credits

This course introduces basic accounting principles. Through the recording of transactions of a single proprietorship, the students obtain an understanding of the accounting cycle.

Prerequisites: None

AC102 Principles of Accounting II
3.75 Credits

A continuation of principles with an emphasis on partnership accounting.

Prerequisite: AC101

AC103 Principles of Accounting III
3.75 Credits

A continuation of principles with an emphasis on accounting for corporations.

Prerequisite: AC102

AC104 Accounting & Information Systems
3.75 Credits

This course integrates information system concepts into the basic accounting process. Actual computer-based information systems are included.

Prerequisite: AC103

AC201 Intermediate Accounting I
3.75 Credits

The course begins with an overview of accounting and its theoretical foundation. The following topics are covered in detail: Current assets, inventories, plant and intangible assets, long-term investments and miscellaneous assets.

Prerequisite: AC103

Business Administration Programs

Business administrators are today's leaders. A career in business administration is multi-faceted. Opportunities can be found in many areas—banking, insurance, finance, accounting, information systems, marketing, management, government. National Education's programs are twofold in design. They emphasize those important core courses needed by all administrators and then allow students the opportunity to specialize in Accounting, Information Systems, or Management. It is our goal to graduate well-qualified, highly-trained executives who can assume their respective roles in society and business.

Management

Effective decision making, planning, organizing, directing, understanding the concepts of control, human resources and staffing, processing information—these are the areas in which management is directly involved. National Education's Management program introduces students to these areas through financial, managerial, and information systems courses. Graduates of the program are prepared to enter the work force as entry-level managers in business, industry or government. A Diploma is conferred upon successful completion of the 18-month program.

Course #	Course Titles	Clock Hours	Quarter Credits
BE101	Introduction to Business	60	5.0
AC101	Principles of Accounting I	60	3.75
AC102	Principles of Accounting II	60	3.75
AC103	Principles of Accounting III	60	3.75
AC211	Federal Income Tax	60	3.75
AC104	Accounting & Information Systems	60	3.75
BE102	Business Mathematics	60	3.75
LS101	Business Law	60	5.0
BE105	Economics	60	5.0
IS101	Introduction to Information Systems	60	5.0
IS102	Programming in BASIC	60	5.0
SS103	Keyboarding	60	2.5
BE104	Principles of Management	60	5.0
BE106	Principles of Marketing	60	5.0
BE201	ELECTIVE	60	5.0
BE202	Personnel and Human Resource Management	60	5.0
BE204	Small Business Management	60	5.0
BE204	Business, Government and Society	60	5.0
GE101	Human Motivation	60	5.0
GE102	English I	60	5.0
GE103	English II	60	5.0
GE104	Speech	60	5.0
GE105	Psychology	60	5.0
GE201	Professional Career Development	60	5.0
TOTALS		1440	108.75

Accounting
Accounting is essential to the effective operations of any business organization. Management depends on accurate, up-to-date information as the basis for decision making and business forecasting. Today's accountant must be trained to prepare and analyze financial reports that furnish this kind of information.

National Education's Accounting program provides its graduates with the necessary training for entry-level positions in the demanding field of accounting.

A Diploma is conferred upon successful completion of the 18-month program.

Information Systems
The computer has become an integral part of our lives. We find that technical and managerial skills in data processing are needed in almost every industry. All information systems require specialized workers to complete the many and varied tasks involved in computer operations.

National Education's Information Systems program provides up-to-date technical training in programming, systems design and analysis, accounting, and management in order to train its graduates for entry-level positions in this dynamic, growing field.

A Diploma is conferred upon successful completion of the 18-month program.

Course #	Course Titles	Hours	Quarter Credits
BE101	Introduction to Business	60	5.0
AC101	Principles of Accounting I	60	3.75
AC102	Principles of Accounting II	60	3.75
AC103	Principles of Accounting III	60	3.75
AC201	Intermediate Accounting I	60	3.75
AC202	Intermediate Accounting II	60	3.75
AC203	Intermediate Accounting III	60	3.75
AC211	Federal Income Tax	60	3.75
AC210	Cost Accounting	60	3.75
BE102	Business Mathematics	60	3.75
AC212	Auditing	60	3.75
AC104	Accounting and Information Systems	60	3.75
LS101	Business Law	60	5.0
BE105	Economics	60	5.0
IS101	Introduction to Information Systems	60	5.0
IS102	Programming in BASIC	60	3.75
SS103	Keyboarding	60	2.5
BE104	Principles of Management	60	5.0
GE101	Human Motivation	60	5.0
GE102	English I	60	5.0
GE103	English II	60	5.0
GE104	Speech	60	5.0
GE105	Psychology	60	5.0
GE201	Professional Career Development	60	5.0
TOTALS		1440	102.5

Course #	Course Titles	Hours	Quarter Credits
BE101	Introduction to Business	60	5.0
AC101	Principles of Accounting I	60	3.75
AC102	Principles of Accounting II	60	3.75
AC103	Principles of Accounting III	60	3.75
AC104	Accounting & Information Systems	60	3.75
BE105	Economics	60	5.0
BE104	Principles of Management	60	5.0
IS101	Introduction to Information Systems	60	5.0
IS102	Programming in BASIC	60	3.75
SS103	Keyboarding	60	2.5
IS203	RPG II Programming	60	3.75
IS202	COBOL Programming	120	7.5
IS204	Systems Design & Analysis I	60	5.0
IS205	Systems Design & Analysis II	60	5.0
IS206	Information Systems Seminar	60	5.0
BE102	Business Mathematics	60	3.75
IS201	Programming in Advanced BASIC	60	3.75
GE101	Human Motivation	60	5.0
GE102	English I	60	5.0
GE103	English II	60	5.0
GE104	Speech	60	5.0
GE105	Psychology	60	5.0
GE201	Professional Career Development	60	5.0
TOTALS		1440	105.0

Accounting

Information Systems

ELECTRONIC ENGINEERING TECHNOLOGY

ELECTRONICS 101

A study of the fundamental principles of electrical conduction includes the effects of series and parallel resistors, capacitors and inductors on voltage, current and power. The principles of magnetism and electromagneticism will be explored through solenoids, alternators, generators and motors. Some of the electrical principles studied in this quarter will be illustrated with the automotive electrical system.

ELECTRONICS 102

A comprehensive study of solid state principles and circuits which includes the static and dynamic characteristics of low and high frequency amplifiers. The operating characteristics of rectifiers will be studied and applied to power supply circuits. The operation and function of basic electronic circuits, such as AF amplifiers, RF amplifiers, detectors, AGC, various relaxation oscillators, mixers, antenna input circuits, as they apply to AM/FM radio/transmitters/receivers are analyzed. In addition, basic troubleshooting will be presented.

ELECTRONICS 103

Design Techniques using discrete solid state components are studied with emphasis on power supplies and single and cascade amplifiers.

ELECTRONICS 104

A comprehensive study of design techniques using manufacturers data sheets for linear integrated circuits, and their applications as active filters, comparators and function generators.

ELECTRONICS 201

A presentation of the building blocks of digital electronics which includes basic gates, encoders, decoders, flipflops, counters, shift registers, multiplexers, demultiplexers, digital readouts, basic arithmetic units and digital integrated circuits. Applications of digital electronics are also examined. Analog-to-digital and digital-to-analog conversion techniques, along with IC timers and phase lock loop principles, are also studied.

ELECTRONICS 202

The theory and operation of microprocessors are thoroughly examined. Assembly language programming with program debugging techniques are also studied. Several families of microprocessors are

TL100—BASIC ELECTRONICS PRINCIPLES
A study of the fundamental principles of electrical conduction, which includes the effects of series and parallel resistors, capacitors and inductors on voltage, current and power is accomplished by exploring the following topics: generation of electricity, units and symbols, electrical laws, series and parallel circuits, measuring equipment, fundamentals of AC and oscilloscopes, inductance, capacitance, reactance, resonance, power supplies, electronic systems concepts, and soldering techniques. Basic AC and DC circuits will be constructed in lab as the student learns to use multimeters, oscilloscopes, and other test equipment. Some of the electrical principles studied in this quarter will be illustrated by the study of the automotive electrical system.

TL101—ELECTRONIC CIRCUIT CONCEPTS

A comprehensive study of solid state principles and circuits which includes the static and dynamic characteristics of low and high frequency amplifiers. The function and operation of basic circuits is studied through the following topics: solid state principles, audio amplifiers, detectors, automatic gain control schemes, filter circuits, RF amplifiers, oscillators, signal tracing and electronic devices, FETs, regulated power supplies, specialized solid state devices, blocking oscillators and multivibrators, and vacuum tubes. A solid state superheterodyne receiver is constructed during lab which allows the student to test and examine many of the circuits discussed in theory. Signal generators, VOMs, oscilloscopes and other test equipment are utilized in the construction and testing of the receiver.

TL200—DIGITAL/ANALOG PRINCIPLES AND SYSTEMS

The principles of digital and analog ICs and some of their applications in common electronic circuits and systems are studied through an examination of the following topics: relay logic, motors and motor controls, sequence timing, basic gates and logic circuits, arithmetic units, flipflops, counters and shift registers, digital readouts, multiplexing and comparators, solid state memory, transducers, operational amplifiers, and A to D and D to A converters. Analog and digital ICs are used in lab to construct many of the circuits discussed in theory. Electromechanical

TL300—MICROPROCESSORS
vously studied material.
used to illustrate the applications for all pre- devices and basic industrial circuits are

TL301—INDUSTRIAL ELECTRONICS AND COMPUTERS

Basic electronics, analog/digital principles and microprocessors are applied to common industrial circuits and systems. The following topics will be studied during this quarter: power control, induction and dielectric heating, resistance welding, ultrasonic systems, automatic process systems, numerical control concepts, N/C systems, synchro and servo systems, processor controlled systems, programmable controllers, interfacing schemes, and peripherals. Computer fundamentals which includes the operation, function, and typical circuitry of the arithmetic unit, the control unit, the input/output units and memory are studied. During lab, many of the circuits discussed in theory are constructed.

TL500—TRANSMITTER PRINCIPLES

This quarter provides preparation for the 2nd Class FCC (Federal Communications Commission) license, which is required by the Federal government for certain types of employment in broadcast stations and in the repair of transmitters and transceivers. Basic transmitter principles and circuits are studied through an examination of the following topics: DC Theory, AC Theory review, math as applied to AC and DC theory, resonance and filters, low and high frequency amplifiers, solid state devices, power supply theory, measuring devices,

MATHEMATICS 301
This phase provides additional studies in calculus with emphasis on differentiation and integration. The terminal objective of this quarter is to enable the student to pursue advanced electronic theory.

ENGINEERING DRAWING 101
A study and application of basic drafting techniques which includes graphic symbols, basic lines and line weights, lettering, geometric constructions, various types of views and projections, dimensioning, notes, and a familiarization with JIC standards.

ENGINEERING DRAWING 102
This phase applies the basic drafting techniques that were studied in Drawing 101 to schematic diagrams. Schematics of solid state devices are emphasized and the layout and design of printed circuit boards is taught.

TECHNICAL WRITING 101
The basic principles of grammar, punctuation, sentence and paragraph construction are reviewed in preparation for technical report writing.

TECHNICAL WRITING 201
During this phase, the student will study the fundamentals of technical writing which include methods for logical organization of ideas and a format for technical reports. Experience is achieved in this area by submitting technical reports on the laboratory projects that are conducted throughout the quarter.

COMMUNICATIONS 201
This course emphasizes the accurate and effective communication by written word of data and/or ideas. Resumes, technical and business correspondence are also studied during this phase.

COMMUNICATIONS 301
The basic principles of oral expression are explored during this phase. The students receive experience in this area by giving oral presentations on technical topics. Particular emphasis is given throughout the quarter to communications within the work environment beginning with the employment interview.

PHYSICS 201
This phase explores the basic principles of force, motion, work, energy, power, friction, rotation, torque, gears, pulleys which provide preparation for the mechanical aspects of electronic devices. The nature of light and the principles of optical instruments are also studied.

MATHEMATICS 102
This phase applies the Pythagorean theorem to resistive-capacitive, resistive-inductive, and resistive-capacitive-inductive circuits. The techniques for solving linear equations and story problems are emphasized through a continuation of basic algebra. The trigonometric functions are introduced and applied to simple and complex AC circuits.

MATHEMATICS 103
This phase provides a thorough study of common logarithms and their applications. Logarithms are used to solve multiplication, division, roots and power problems. They are also extensively applied to voltage, current and power calculations through decibel problems.

MATHEMATICS 104
During this module, previously learned formulas and math techniques are applied to the design of operational amplifiers and specialized filter circuits.

MATHEMATICS 201
The binary, octal and hexadecimal numbering systems and conversion techniques between the systems are studied during this phase. Digital arithmetic and codes are also covered including Boolean algebra and Karnaugh mapping. In addition, thevenin, Norton and Superposition theorems are studied and applied to electronic circuit analysis.

MATHEMATICS 202
This phase provides additional study in algebra which includes transposition, binomial and trinomial factoring, and solution of multi-variable linear equations. The fundamentals of trigonometry and operators are reviewed and utilized.

MATHEMATICS 203
This phase provides an introduction to calculus, which includes algebraic graphs, functions, limits, increments and derivatives. These early principles of calculus are applied to average and instantaneous rate of change problems including transient waveform analysis.

MATHEMATICS 101
The basic fundamentals of arithmetic, which include addition, subtraction, multiplication, division, fractions, decimals, powers, research, design, prototype, debug and present to their class.

ELECTRONICS LABORATORY 201
The digital circuits discussed in theory are constructed using digital ICs. The student will learn through the construction of several prototypes, the importance of decoupling, fan-in and fan-out limitations and interfacing techniques. Through the designing, construction and troubleshooting of these prototypes, the student will experience many of the same problems that will be encountered when later working in the field.

ELECTRONICS LABORATORY 202
During this phase, the students will write machine language programs, enter and debug these programs, and construct many interfaces as they learn microprocessors. Hands-on experience with RAMS, ROMS, and other microprocessor support chips will enable the student to better understand the microprocessor based systems that will be encountered in industrial electronics and computers. Serial to parallel and parallel to serial conversion techniques, as well as digital to analog and analog to digital conversion as they apply to microprocessors, are also examined.

ELECTRONICS LABORATORY 203
Industrial circuits and systems are constructed during this phase utilizing the technologies previously learned. Logical test procedures and troubleshooting techniques are emphasized throughout this quarter. Practical experience is also gained through exposure to on-site computer peripherals.

ELECTRONICS LABORATORY 301
The students breadboard digital circuits that are representative of the individual sections of the computer. Hands-on experience with computer hardware is achieved through extensive examination and troubleshooting of on-site computers. During the last half of this phase, the students select a project which they individually must complete, research, design, prototype, debug and present to their class.

ELECTRONICS LABORATORY 101
The basic fundamentals of arithmetic, which include addition, subtraction, multiplication, division, fractions, decimals, powers, research, design, prototype, debug and present to their class.

ELECTRONICS LABORATORY 103
Many of the power supplies and amplifiers designed and discussed in theory are constructed and tested. Measurements of gain, input and output impedance, frequency response, etc. are performed.

ELECTRONICS LABORATORY 203
Linear integrated circuits and specialized ICs are also used as the student learns to interpret manufacturer's data sheets and application notes.

ELECTRONICS LABORATORY 201
This quarter is an introduction to the application of electronics in the industrial environment. With the use of all previously learned material, the student studies industrial systems and transducers. All previously studied material will be applied to motor controls, conversion devices, proximity controls, sequence timing, induction and dielectric heating, temperature controls, etc. Numerical controlled machines and programming of these controllers are taught in detail. Television concepts are also taught as needed for the development of CRT terminals. Several other terminals are also taught.

ELECTRONICS LABORATORY 202
This quarter provides a comprehensive study of computers and computer peripherals which includes the theory and operation of card punchers, card readers, cassette, data communications equipment, disk packs, floppy disks, line printers, magnetic recording devices, magnetic tape stations and modems. Basic programming is extensively taught along with an introduction to several business languages.

ELECTRONICS LABORATORY 301
Resistors, capacitors and inductors are utilized to construct DC and AC circuits and then pertinent voltage, current and power measurements are performed. There are also laboratory projects to demonstrate the principles of electromagnetism and automotive electrical systems.

ELECTRONICS LABORATORY 302
A solid state superheterodyne receiver is constructed which affords the student an opportunity to test and examine many of the circuits that are discussed in lecture. Besides the circuits in the radio, various other amplifiers, oscillators, and power supplies are constructed and pertinent measurements are performed. Practical troubleshooting techniques that utilize the signal generator, oscilloscope and VOM are emphasized throughout this phase.

ELECTRONICS LABORATORY 303
The power supplies and amplifiers designed and discussed in theory are constructed and tested. Measurements of gain, input and output impedance, frequency response, etc. are performed.

ELECTRONICS LABORATORY 101
The basic fundamentals of arithmetic, which include addition, subtraction, multiplication, division, fractions, decimals, powers, research, design, prototype, debug and present to their class.