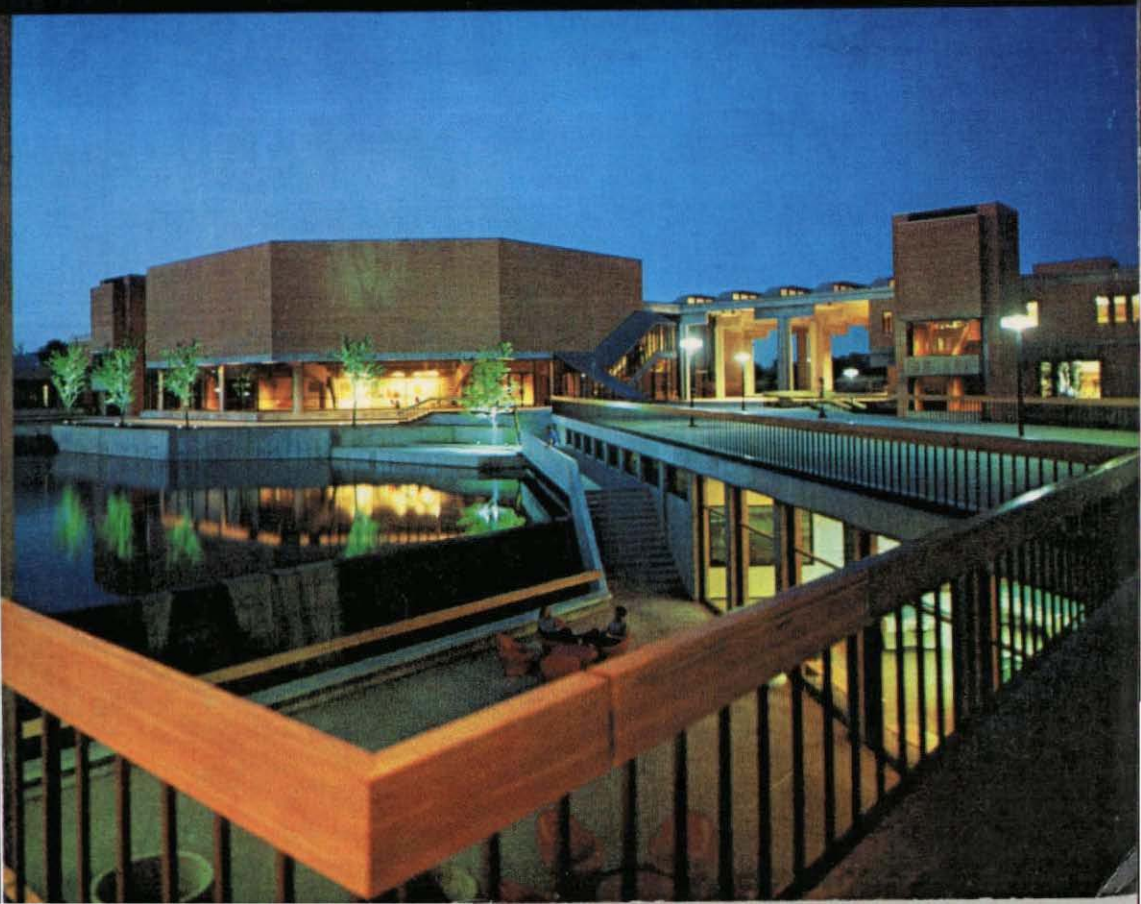


# RICHLAND COLLEGE

DALLAS COUNTY COMMUNITY COLLEGE DISTRICT

1974/75



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# Richland College

12800 Abrams Road  
Dallas, Texas 75231







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This catalog contains policies, regulations and procedures which were in existence as the publication went to press. The college reserves the right to make changes at any time to reflect current board policies and administrative regulations and procedures.

# GENERAL INFORMATION

## 1974-75 Academic Calendar

### First Summer Session (1974)

June 3-4	Registration
June 5	Classes begin
June 6	Last day to apply for tuition refund
July 2	Last day to withdraw with a grade of "W", 8:30 p.m.
July 4	Holiday
July 10	Final examinations
July 10	Semester closes, 5:00 p.m.

### Second Summer Session (1974)

July 12	Registration
July 15	Classes begin
July 16	Last day to apply for tuition refund
August 9	Last day to withdraw with a grade of "W", 5:00 p.m.
August 16	Final examinations
August 16	Semester closes, 5:00 p.m.

### Fall Semester (1974)

August 26	Faculty reports
August 27-29	Registration
August 30	Professional development
September 2	Labor Day holiday
September 3	Classes begin, 8:00 a.m.
September 9	Last day for tuition refund
October 28	Veterans Day holiday
November 27	Thanksgiving holiday begins, 10:00 p.m.
December 2	Classes resume, 8:00 a.m.
December 6	Last day to withdraw with a grade of "W", 5:00 p.m.
December 13	Last day of classes
December 16-20	Final examinations
December 20	Semester closes, 5:00 a.m.



## Spring Semester (1975)

January 6	Faculty reports
January 7-9	Registration
January 10 & 13	Professional development
January 14	Classes begin, 8:00 a.m.
January 20	Last day for tuition refund
February 21	Professional development (to coincide with TJCTA Convention)
March 21	Spring break begins, 5:00 p.m.
March 31	Classes resume, 8:00 a.m.
May 2	Last day to withdraw with a grade of "W", 5:00 p.m.
May 13	Last day of classes
May 14-20	Final examinations
May 20	Semester closes, 5:00 p.m.
May 30	Memorial Day holiday

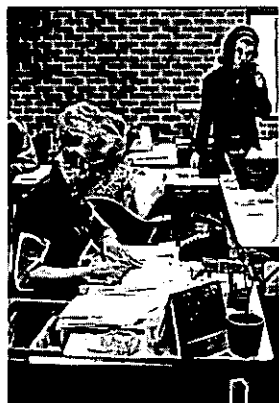
The academic calendar may be subject to change or modification.

Richland College is offering four courses via television. These courses are Government 201, Biology 290 (Man and Environment), English 101 and Psychology 105. Content of and credit for these courses is the same as for similar courses taken on campus.

Television courses include viewing of two 30-minute television programs on KERA-Channel 13 each week, plus reading assignments and study guide assignments. Students come to the Richland College campus for an orientation session at the beginning of the semester, for one or two seminars (discussion meetings), and for three or four tests during the semester. These visits to the campus are normally scheduled so that they may be attended either in the afternoon or at night.

Television courses may be taken in conjunction with on-campus courses or by persons who are taking no on-campus instruction.

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## Administrative Staff

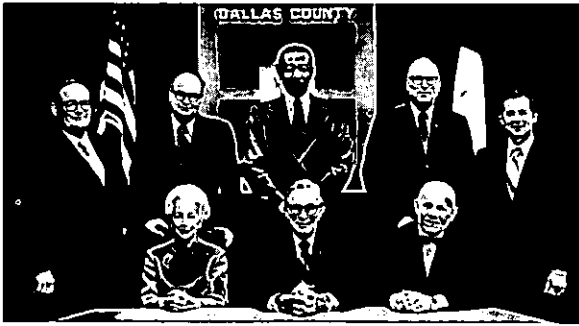
### Richland College

President	Ed Biggerstaff
Dean of Instruction	Don McInnis
Dean of Student Services	Eleanor D. Ott
Dean of Business Services	Holland B. Evans
Associate Dean of Instruction, Technical and Occupational Programs	Bill B. Passmore
Associate Dean of Instruction, Evening Administration	Paul Meacham
Associate Dean of Instruction, Staff Development	Bill H. Thrash
Assistant Dean of Learning Resources	Dick Smith
Assistant Dean of Community Services	Steve Mittelstet
Administrative Assistant	Rodger A. Pool
Director of Admissions and Registrar	Fred Newbury
Director of Counseling	Tom Johnson
Director of Financial Aids and Placement	Frank Gornick

### Instructional Division Chairmen

Business	Jay L. Todes
Communications	Mark Kelso
Developmental Studies	Glenna Scheer
Humanities	Jack Stone
Human Potential	Tom Johnson
Physical Education	Tom McLaughlin
Science/Technology	Floyd T. King, Jr.
Social Science	Robert B. Boyle

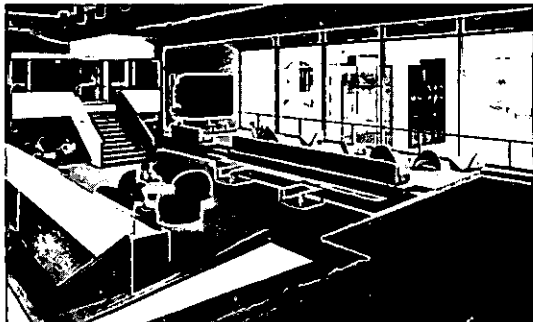
## Board of Trustees — DCCC District

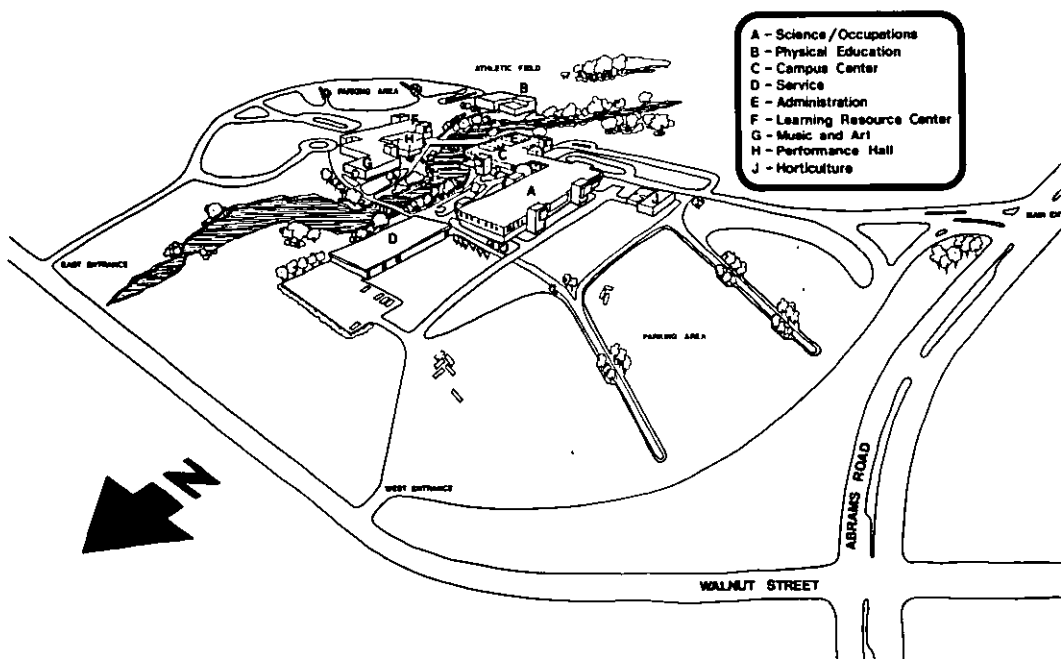
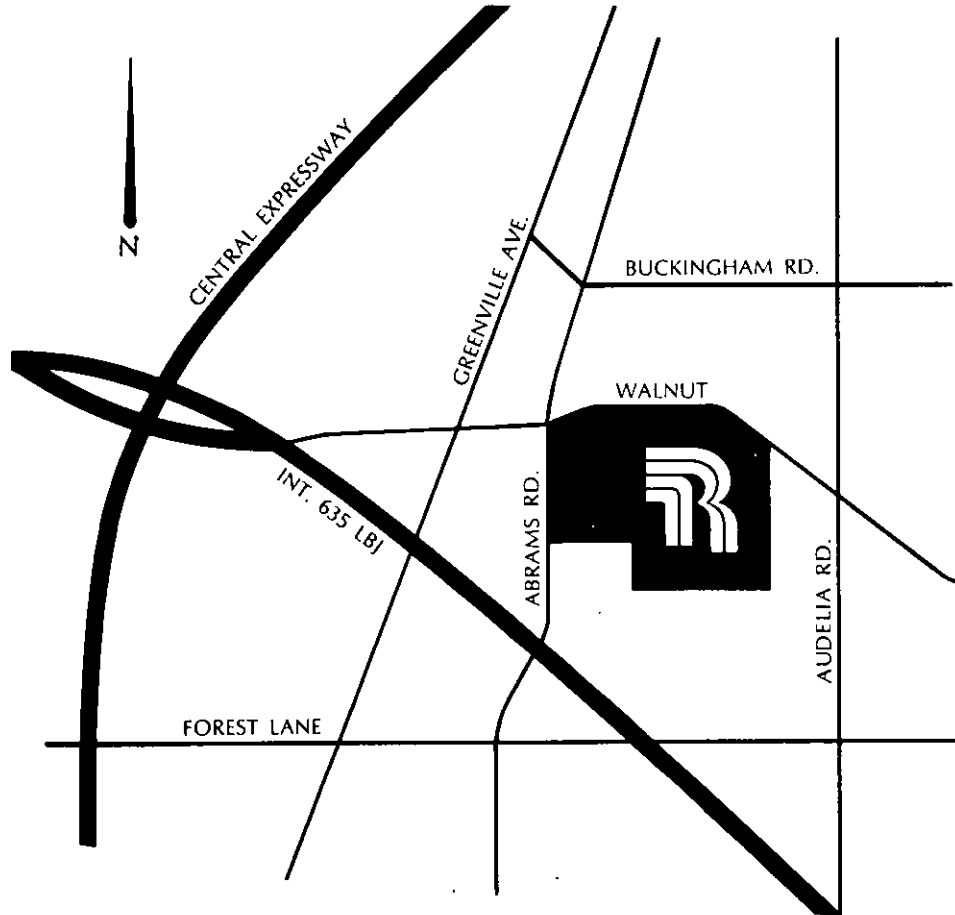


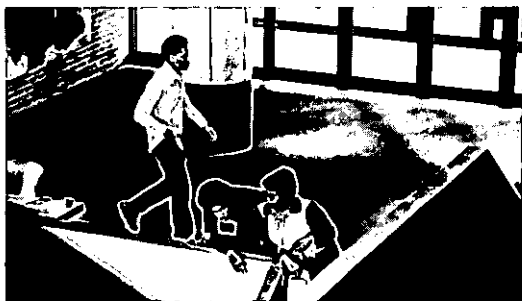
Left to right, Standing: Durwood A. Sutton, Loncy L. Leake, Mildren M. Montgomery, Carie E. Welch, Jim Scoggins; Seated: Mrs. Eugene McDermott, Vice Chairman; R. L. Thornton, Jr., Chairman; Dr. Bill J. Priest, Chancellor and Secretary to the Board.

## Dallas County Community College District

Chancellor _____	Bill J. Priest
Vice-Chancellor of Academic Affairs _____	R. Jan LeCroy
Vice-Chancellor of Business Affairs _____	Walter L. Pike
Vice-Chancellor of Planning _____	H. Deon Holt
Director of Computer Services _____	James R. Hill
Director of Special Services _____	Robert J. Leo
Director of Program Development _____	Dexter L. Betts
Director of Public Information _____	Sibyl Hamilton
Director of Personnel _____	Jerry Cooper
Director of Occupational Education _____	John S. Owens
Coordinator of Technical- Occupational Education _____	Claude C. Owens
Administrative Assistant to the Chancellor _____	Travis B. Linn







## Dallas County Community College District — History and Purpose

The Dallas County Community College District's four innovative educational communities are dedicated to a common goal: serving in the best possible way the complex, varied and ever-changing educational requirements of a growing metropolitan community.

Each of the district's colleges — Eastfield, El Centro, Mountain View and Richland — is therefore committed to providing every person in Dallas County a quality educational experience, whether the person is a youth setting forth toward a degree in medicine, or an adult wanting to enrich his leisure hours with an interesting hobby.

There is a place for a student who wishes to spend a year or two preparing himself to enter a trade or profession, and a place for an employed person who wants to further his training in his occupational field.

There is a place for the very bright high school student who is ready to undertake college-level training in advance of his graduation from secondary school, and a place for the high school drop-out who has changed his mind about the necessity of education in today's complex, demanding society.

There is, simply stated, a place for **everyone**.

Of primary importance to the district's goal is making certain that a student's educational program is tailored to his needs, abilities and ambitions. The philosophy of the district is to create an educational program for an individual, rather than to try to squeeze or stretch an individual to fit an "educational mold."

Every student is offered competent, intensive counseling to help discover his goals and special abilities. Continued guidance is available to update a student's educational program if his goals change during his college experience. This emphasis on counseling, rare for some institutions, is routine procedure at all district colleges.

The district officially became the Dallas County Community College District in 1972, when its philosophy, function, and breadth outgrew the traditional "junior" college label. The new name more closely states the district's mission — to meet the educational needs of the entire metropolitan community.

How do the district's colleges serve the educational requirements of such a complex family? The answer is found in educational offerings in four broad categories:

— For the student seeking the first two years of work toward the goal of a bachelor's or higher degree, the colleges offer a wide range of courses which are transferable to senior colleges and universities.

— For the student wishing to enter an occupation at a level above the bottom rung of the ladder, the colleges offer one-year and two-year programs of credit courses covering specific technical-occupational fields.

— For the employed person wishing to improve his knowledge of his field, or train for a move into a new occupational field — the colleges offer a broad range of credit and non-credit adult education courses.

— For the person who simply wants to make life a little more interesting there are community service programs offering a myriad of courses in cultural, civic and avocational subjects.

Dallas County voters created the district in May 1965 and approved a \$41.5 million bond issue.

The following year the district's first college, El Centro, opened its doors for the fall semester in the heart of downtown Dallas. In August 1970, Eastfield College and Mountain View College enrolled their first students and the multi-campus district envisioned by the district planners became a reality. Richland College became the district's fourth college in the fall of 1972.

In September of 1972, the voters of Dallas County approved the sale of an additional \$85 million in bonds, thereby paving the way for the expansion of existing campuses as needed and the planning and construction of three more colleges. The first priority in the expansion program was the remodeling and enlarging of El Centro College. The construction got underway in late 1973, and is scheduled for completion by the fall of 1976.

The addition of the new campuses — Cedar Valley College (1976) North Lake College (1977) and Brookhaven College (1978) — will round out the seven campus plan of the Dallas County Community College District.

## Richland College

A fresh, new educational experience awaits prospective students of Richland College, a sparkling campus which opened in the fall of 1972.

Here a vital and dedicated faculty interacts with nature's primitive architecture and contemporary campus design to create an exciting learning environment for students of all ages.

The campus plan enhances the natural beauty of the site, which includes a meandering, spring-fed creek interrupted by dams to form two picturesque lakes. Campus facilities extend along both sides of the lakes, linked by open and closed pedestrian bridges. Extensive landscaping augments the many natural trees which exist on the site.

Richland College is located on a 259-acre site at 12800 Abrams Road, with convenient access routes from Richardson, Garland and other areas of north and northeast Dallas County.

The land occupied by the college was previously used for agricultural purposes, with a history of ownership dating back to the early settlement days of Dallas County in the early to mid-1800's.

Official action acquiring the site was taken by the Board of Trustees on August 30, 1966. The name, Richland College, was approved by the Board the following month, on September 20, 1966, to suggest a link between the two major adjacent communities of Richardson and Garland.

Planning for the college began in the spring of 1967, with the selection of architects on March 21, 1967. The long-range master plan and the design for the first phase of construction were prepared by The Oglesby Group Architects of Dallas with The Perkins and Will Partnership of Chicago as associated architects.

Construction on Richland College began in the fall of 1969 with the awarding of an advanced site work and paving contract. Work on the general contract for building construction began in July of 1970.

The campus plan makes extensive use of pre-cast concrete both as a structural and a design feature. Exterior walls are typically of masonry, with frequent use of glass to provide vistas of the exterior areas.

Structures on the east side include the Learning Resources Center, Physical Education and Fine Arts complexes. The west side units include the Campus

Center, Science/Occupations and Administration buildings. The bridge-like structure which links the two sides provides open and closed pedestrian circulation across the lakes, and houses recreation, college store and student activity spaces.

Richland College has the district's only planetarium, a 100-seat facility with a 40-ft. dome. The planetarium has provision for lowering the projection instrument into a floor pit, permitting the space to double as a lecture classroom. The Planetarium Theatre produces several "plays for planetarium" each year for the public, civic, religious, and community groups.

Another "Richland only" feature is the horticulture unit located near the main entrance to the campus, housing occupational programs in landscape and nursery areas.

## Accreditation

Richland College is a Candidate for Accreditation with the Southern Association of Colleges and Schools. Acceptance as a Candidate for Accreditation attests that the Association's Commission on Colleges considers the institution to be offering its students, on at least a minimally satisfactory level, the educational opportunities implied by its objectives. It indicates that in the Commission's view the institution's organization, structure, and staffing are acceptable for its stage of development, its sponsors are committed to supplying its needs and are able to do so, its governing board is functioning properly, its academic and financial plans are well designed, and that the institution is progressing steadily and properly toward accreditation.

The college is recognized and sanctioned by the Coordinating Board of the Texas College and University System, and its transfer credits are accepted by senior colleges and universities in Texas.

Richland is an Institutional Member of the American Association of Community and Junior Colleges and a member of the Southern Association of Community and Junior Colleges.

## Housing

Richland is designed as a "commuter college," and does not operate residence halls nor maintain listings of available housing for students. Students who do not reside in the area must make their own arrangements for housing.

# ADMISSIONS & REGISTRATION

## General Admissions Policy

Applications will be accepted any time prior to registration. Since registration priorities are assigned according to the date an application is received, applicants should plan to submit an application at least three weeks before registration. Applications received after this date will receive a low priority and the applicants may be limited in their selection of available classes at registration.

## Standards of Conduct

All students at Richland College are considered adults and are responsible for their own behavior. All students are expected to conform to all local, state and federal laws and all duly constituted college standards of conduct. These standards appear in the student handbook, **Lake Waves**, which may be obtained from the Office of Student Development.

## Admission Requirements

### 1. Beginning Freshmen

Students enrolling in college for the first time will be considered for admission if they are:

- A graduate from an accredited high school.
- A graduate from an unaccredited high school who is eighteen years of age.
- A non-high school graduate who is eighteen years of age whose high school class has graduated.

d. A high school student recommended by the high school principal. In this case, a limited number of high school seniors may be concurrently enrolled for special study, but not for more than six hours per semester, providing the student is making normal progress toward high school graduation.

### 2. Transfer Students

a. College transfer applicants will be considered for admission based on their previous college record. Academic standings for transfer applicants will be determined by the Office of Admissions based on standards established by Richland College.

b. Students on scholastic or disciplinary suspension from another institution must apply via the Admissions Office to the Committee on Admissions and Retention at Richland College.

### 3. Former Students

Former students of El Centro, Eastfield, or Mountain View College must submit an application for re-admission to Richland College. Former Richland students who have not attended school for the preceding long semester should also file an application for re-admission.

A student will not be readmitted to any college within the district if he or she has unsettled financial debts at any of the district campuses.

### 4. Non-credit Students

Students seeking enrollment in non-credit courses should contact the Office of Community Services.

## Admission Procedures

The following material must be submitted to the Office of Admissions before a student's entrance file is considered complete:

1. An application for admission.
2. An official transcript from the last school (high school or college) attended. Transcripts are required by Richland's accrediting agency and are important for

program advising in the counseling office. Students who are seeking a certificate or associate degree are required to submit transcripts of all previous college work prior to the end of the first semester.

3. Written proof from a medical office of:

- a. A negative tuberculin skin test or chest x-ray.
- b. A polio immunization if the applicant is under 19 years of age.
- c. A diphtheria/tetanus injection within the last ten years.

This medical proof is required by state law (Senate Bill 27).

### **Transfer Credit**

Transfer credit will be given for all passing work completed at accredited colleges and universities. The Office of Admissions will be responsible for the evaluation of all transfer credits.

Students who are admitted with a grade point deficiency will not be graduated from Richland College until deficiency hours are cleared by means of earning additional grade points.

Credits earned in military service connected schools or through the U.S. Armed Forces Institute will be reviewed by the Office of Admissions and credit granted if applicable.

### **Foreign Students**

Richland College is authorized under federal law to enroll non-immigrant alien students. However, under present conditions, no foreign students are admitted without the special permission of the President of the college.

All application materials must be on file in the Admissions Office at least 30 days prior to registration.

### **Servicemen's Opportunity College**

Richland College, along with the other colleges in the Dallas County Community College District and in cooperation with other community colleges in the United States, participates in the Servicemen's Opportunity College Program. This program enables an institution to plan with the serviceman an educational experience regardless of his mobility pattern.

For further information concerning this program, contact the Veterans' Affairs Office, Richland College.

### **Student Diversity**

Richland College encourages the attendance of mature students of all ages and from all ethnic backgrounds and fully complies with the provisions of Title VI of the Civil Rights Act of 1964 (P.L. 88-352).

### **Tuition**

Tuition is charged on a sliding scale according to the number of credit hours in which a student is enrolled and his place of legal residence.

Tuition for credit courses will be charged according to the following schedule:

## **Tuition — Fall or Spring Term**

Residents of Dallas County	\$6 per credit hour through 10 credit hours and \$4 per credit hour in excess of 10 credit hours; Minimum \$25
Residents of Other Texas Counties	\$20 per credit hour through 10 credit hours and \$4 per credit hour in excess of 10 credit hours; Minimum \$25.
Non-Texas Residents*	\$40 per credit hour
Out-of-Country	\$40 per credit hour; Minimum \$200.
If a student believes his residence status has changed at any time during his enrollment, it will be the student's responsibility to complete a written request for change of status in the Registrar's Office.	

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## **Tuition — Summer Session**

Residents of Dallas County		
1-6 Credit Hours	\$10 per credit hour, with a minimum of \$25.	
7 Credit Hours	\$64.	
Residents of Other Texas Counties		
1-6 Credit Hours	\$30 per credit hour	
7 Credit Hours	\$184.	
Non-Texas Residents*		
1-6 Credit Hours	\$45 per credit hour	
7 Credit Hours	\$310.	
Out-of-Country		
1-6 Credit Hours	\$45 per credit hour, with a minimum of \$100.	
7 Credit Hours	\$310.	

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## **Special Fees and Charges**

Student Service Fee	
12 or more credit hours	\$7 a semester
6 to 11 credit hours	\$4 a semester
Laboratory Fee (per lab)	\$2 to \$8 a semester
Physical Education Activity Fee	\$5 a semester
Bowling Class Fee	\$10 a semester
Private Music Lessons Fee**	\$35 for 1 hour per week (maximum) for one course; \$20 for ½ hour per week
Audit Fee	The charge for auditing a course is at the same rate as taking a course for credit regardless of the number of hours enrolled, except that a student activity fee is not charged.
Credit by Examination	***Examination fee of \$15 per examination.

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\* A non-resident student is hereby defined to be a student less than eighteen (18) years of age, living away from his family and whose family resides in another state or whose family has not resided in Texas for the twelve (12) months immediately preceding the date of registration; or a student eighteen (18) years of age or older who resides out of the state or who has not been a resident of the state twelve (12) months immediately preceding the date of registration.

\*\* Available only to music majors enrolled for 12 hours or more.

\*\*\* This fee can change without prior notice.

## **Additional Fees**

Additional fees may be assessed as new programs are developed with special laboratory costs. These fees will always be kept to a basic practical minimum for the program involved. A graduation fee is not assessed students receiving a degree; however, each student will pay for cap and gown rental.

## **Refund Policy**

The refund policy for Richland College is based on the fact that student tuition and fees provide only a fraction of the cost of providing educational opportunities. When a student enrolls in a class, he reserves a place which cannot be made available to another student unless he officially drops the class during the first week of the semester. Also, a student's original enrollment represents a sizeable cost to the district whether or not he continues in that class. Therefore, a refund will be made only under the following conditions:

1. No 100% refund is granted unless college error is involved.
2. An 80% refund of tuition and fees may be obtained through the fifth day of classes of a long semester. The first two days of a six week summer session are considered to be equivalent to the five days of the long semester. (The academic calendar lists the last day to apply for a tuition refund in each term.)
3. Requests for a refund must be submitted before the end of a semester or summer session for which the refund is requested.
4. A refund of less than \$4 for tuition and/or fees will not be made.

A student who feels that his refund request is due to an extenuating circumstance beyond the limits of the refund policy may submit a letter of explanation to the Refund Petitions Committee in the Office of the Dean of Student Services.

Refund checks normally require a minimum of one month to process.

# ACADEMIC INFORMATION

## Scholastic Standards: Grades and Grade Point Average

Final grades are reported for each student for every course undertaken according to the following grading system:

Grade	Interpretation	Grade Point Value
A	Excellent	4 points
B	Good	3 points
C	Average	2 points
D	Poor	1 point
P	Progress	Not Computed
F	Failing	0 points
I	Incomplete	Not Computed
W	Withdrawn	Not Computed

Grade points earned for each course are determined by multiplying the number of points for each grade by the number of credit hours the course carries. A student's grade point average is computed by adding the total grade point values for all courses for which grade point values may be computed and dividing by the appropriate number of credit hours attempted during the same period.

Incomplete grades may be given when an unforeseen emergency prevents a student from completing the work in a course. Incomplete grades must be converted to grade point bearing grades within 90 days after the first day of classes in the subsequent regular semester. After 90 days, the "I" grade will be converted to a "W" grade if the student has failed to complete the course requirements.

## Degree Requirements

### Associate in Arts and Sciences Degree

A total of 60 hours must be presented with an average grade of at least "C" (2.0). Courses numbered 99 and below may not be counted toward the 60 hours minimum.

These 60 hours may be earned at any Dallas County Community College District college and must include:

English 101-102, plus an additional 6 hours of English ..... 12 Hours  
A minimum of 8 semester hours of a laboratory science. (Music majors are exempt from this requirement. Check listings under subject field.) ..... 6 Hours  
History 101-102 and Government 201-202 (No substitutions allowed.) .... 12 Hours  
Humanities: To be selected from Theatre 101, Art 104, Music 104 or Humanities 101 ..... 3 Hours

In addition to the course requirements, each degree candidate must earn the last 15 hours as a resident student in the district colleges or accrue 45 hours in residence. The degree will be granted by the college in which the student took the last 15 hours or where the majority of hours were accrued. No more than ¼ of the work required for any degree or certificate may be taken by correspondence. Correspondence work submitted for graduation credit must be approved by the Director of Admissions.

A maximum of two physical education activity hours may be counted as credit toward requirements for graduation. The student should check with the institution to which he desires to transfer to determine if that institution requires physical education. All students who expect to transfer to a four year institution are urged to complete their physical education requirements during their freshman and sophomore years.

The student is encouraged to consult the catalogs of the institutions to which he may transfer for their special requirements. These catalogs should be used by the student and his advisor as a basis for the program plan.

### **Associate in Applied Arts and Sciences Degree**

A minimum of 60 hours exclusive of those courses numbered 99 and below must be presented with an average grade of at least "C" (2.0). All of the prescribed requirements for the specific technical or occupational program for which the student is enrolled must be completed. For some programs, the semester hour total is over 60.

A maximum of two physical education activity hours may be counted as credit toward requirements for graduation.

### **Procedure for Filing Degree and Certificate Plans**

1. The student should request a degree plan from the Office of Admissions at the end of his freshman year.
2. Transcripts of all previous college work must be on file at the time of request for degree plans.
3. A student following a 1-year certificate program should request an official plan during his first semester.
4. Application for the granting of the degree or certificate should be filed in the Registrar's Office prior to the deadline to be announced by the Registrar.
5. A candidate for graduation in May will be required to attend the commencement program unless granted prior permission by the Dean of Students to graduate in absentia.

6. January and August graduates may attend the next commencement if they desire, but are not required to do so. Should the graduating student wish to attend, the Registrar's Office should be notified of his intention.
7. Instructions concerning graduation will be mailed to all candidates 30 days prior to commencement.

Candidates for any degree or certificate will meet the requirements as set forth in the catalog for his first year of enrollment or he may elect to graduate under the requirements of a later catalog. The candidate must indicate the catalog of his choice when he files his degree plan.

### **Class Attendance**

Students are expected to attend regularly all classes in which they are enrolled. Class attendance is the responsibility of the student. It is also the responsibility of the student to consult with his instructors when he is absent from a class.

Instructors are required to report students to the Dean of Students for excessive absences. Generally, first excessive absence reports are made when a student is absent from class the number of hours for which the class has credit. At this point, students are warned that failure to attend class may result in suspension from that class. Second excessive ab-

sence reports are filed with the Dean of Students when, in the opinion of the instructor, a student's continued absences warrant his suspension from class. However, students are encouraged to initiate withdrawal from any class in which, after conferring with the instructor, he believes he will not be successful. This action can be initiated in the Counseling Center and should be accomplished before the deadline for dropping, which is established for each semester.

Students dropped for excessive absences prior to the last two weeks of the semester will receive a grade of "W" in the class from which they are dropped.

### **Classroom Dishonesty**

Dishonest work on tests, term papers, and examinations is a serious offense. Plagiarism (the act of using source material of other persons without following the accepted techniques of crediting) is never acceptable behavior in an academic community.

### **Change of Schedule**

Request for change of schedule must be initiated through the student's counselor and will be determined on the basis of whether space is available in the class to which he wishes to change. The change action is not completed until it has been received and processed by the Registrar's Office with the instructor being notified of the change. Change action from the division chairman will be accepted by the Registrar through the first week of classes.

### **Dropping a Course or Withdrawal from College**

A student must drop a class or withdraw from college in the following manner:

1. Obtain a drop or withdrawal form from his counselor and follow the procedure outlined by the counselor.
2. Should circumstances prevent a student from appearing in person to withdraw from college, he may withdraw by mail by writing to the Director of Admissions. No drop or withdrawal requests are accepted by telephone.

A student who drops or withdraws from college will receive a "W" in each class from which he has withdrawn. The deadline for receiving a "W" is two weeks prior to the end of the semester. After that time, a student will receive a performance grade in the course.

If a student leaves without officially withdrawing, he will receive an "F" in all subjects.

### **Auditing a Course**

Any person 18 years of age or older may, with the consent of the instructor, enroll in the status of audit. This student may attend classes but not take the examinations or receive credit for the course unless he enrolls in the course again as a regular student. The same fee is charged for auditing as for credit.

Procedures for auditing a course will be administered by the Registrar. No audits will be approved prior to the first day of the second week of classes in any semester. Most lab courses may not be audited. In the case of a student enrolled in collegiate level courses, the combined number of semester hours in credit courses and audit shall not exceed 18.

### **Recommended Academic Load**

No student will be permitted to carry more than 18 semester hours of course work or more than 5 classes plus physical education without permission of the administration. Employed students are advised to limit their academic loads in accordance with the following recommendations: If a student carries a full college load (12 semester hours or more), he should not work more than 20 hours per week. If he must work more hours, his credit hour load in college should be reduced proportionately.

The recommended load limit for day or evening students who are employed full-time is 6 semester hours of course work.

The recommended load limit in a 6-week summer session is 6 semester hours of credit. A total of 14 semester hours of credit is the maximum that may be earned in any 12-week summer period.

### **Classification of Students**

1. Freshman: A student who has completed fewer than 30 semester hours.
2. Sophomore: A student who has completed 30 or more semester hours.
3. Part-Time: A student carrying fewer than 12 semester hours work.
4. Full-Time: A student carrying 12 or more semester hours of work.

### **Definition of Acceptable Scholastic Performance**

College work is measured in terms of semester credit hours. The number of semester hours credit offered for each course is included with the course description.

Acceptable scholastic performance is the maintenance of a grade point average of 2.0 (on a four point scale) or better. A student may not be graduated from any degree or certificate program unless he has a cumulative grade point average of 2.0 or better. Grade points and hours earned in courses numbered 99 and below are computed when deriving a student's scholastic standing; however, they are not computed for graduation requirements.

### **Scholastic Probation and Scholastic Suspension**

The policies on scholastic probation and scholastic suspension apply to full-time students (12 semester hours or more) and to part-time students when they have attempted a total of 12 semester hours.

The following criteria will be used to determine academic standing:

1. Students who have completed one or more semesters in a college will be placed on probation if they fail to maintain a 2.0 cumulative grade point average.
2. Students who have been placed on scholastic probation may be removed from probation when they earn a 2.0 cumulative grade point average.
3. Students on scholastic probation who achieve either a cumulative grade point average of 1.5 or above or a previous semester grade point average of 2.0 or above may continue on scholastic probation.
4. Students on probation who do not meet the requirements of paragraph 3 will be placed on scholastic suspension.

The periods of scholastic suspension are: 1) suspension for the first time — one regular semester and 2) subsequent suspension — two regular semesters.

### **Transcripts of Credit from Richland College**

The Registrar's Office will send the student's transcript upon request to any college or agency named. However, a student's official transcript may be withheld until he has settled all financial obligations to the college.

### **Waiving of Scholastic Suspension**

Any student pursuing an academic transfer program who wishes to transfer to a technical-occupational program may have his earned credits evaluated for the possibility of disregarding any grades below a "C" as long as the student follows the technical-occupational program. The logic of this procedure is that many students do poorly while pursuing a course of studies for which they are not suited but make rapid improvements when faced with tasks more suited to their interests and aptitudes. This procedure is contingent upon the student remaining in a technical-occupational pro-

gram. A change to an academic transfer program places the student under the original conditions of the academic transfer program including the calculation of a cumulative grade point average of all college credits earned. This procedure will apply both to Richland College students and to students transferring from other institutions. The student who wishes to avail himself of this opportunity should state his intentions in writing to the Director of Admissions prior to pre-registration and should assume the responsibility of informing his counselor during the pre-registration advisement session.

### **Library Obligations**

Willful damage to library materials (or property) or actions disturbing to the other users of the library may lead to revocation of library privileges. Cases involving such damage will be referred for further action by the appropriate authorities.

All books and other library materials must be returned before the end of each semester. No transcripts of grades may be issued until the library record is cleared.

### **Honors**

A full-time student who has completed at least 12 hours of credit and who earns a grade point average of 3.00-3.49 will be listed on the college honor roll. Full-time students who complete at least 12 hours of credit and who average 3.50-4.00 will be placed on the dean's honor list. In addition, students who

have completed at least 6 and not more than 11 hours of credit in a semester, earning a grade point average of 3.50-4.00, will be placed on an academic recognition roll. The honor roll, dean's honor list and academic recognition roll will be published each semester.

### **Credit by Examination**

A person who believes he is qualified by experience or previous training may take a special examination to establish credit in a particular course. Depending upon the course, the examination may be a section of the College Level Examination Program or a teacher-made test. Not all courses offered at Richland are approved for credit by examination. A list of those credits which may be established through this method is available in the Counseling Center.

Students will be allowed to earn as many credits through the credit by examination procedure as their needs require and ability permits. The last fifteen semester hours required for graduation in any degree or certificate program must be earned in residence and may not be earned through credit by examination.

Credit by examination may be attempted only one time in any given course and a grade of "C" or better on the examination is required in order to receive credit. Only currently enrolled students will have the semester hours earned through examination become part of their permanent record.

Request for examinations should be made to a counselor who will provide the necessary petition forms and advise the student of the procedure. A student, whether part-time or full-time, will pay an examination fee of \$15.00 per examination. There is no refund of this fee. Though great effort has been made to interrelate the credit by examination program with transferring four-year institutions, final acceptance of credit by examination achieved for specific degree purposes is determined by that institution.

For further information concerning graduation requirements, consult the Degree Requirements section in this catalog.

# STUDENT SERVICES

## Counseling Services

Students and prospective students who have provided all necessary admissions information to the college will find a staff of professional counselors available to help them resolve questions of career choice, college transfer requirements, study skills, self-understanding and other kinds of personal problems. Group and individual techniques are employed by the counselors to meet students' needs. A partial review of services available through the Counseling Center is listed for students' information:

1. Counseling.
2. Career information.
3. Psychological tests of personality, vocational interests and aptitudes.
4. Information and catalogs regarding a wide selection of colleges and universities.
5. Educational planning of courses to meet specific degree requirements.
6. Registration information.
7. Information about the general services offered in other divisions of the college.
8. Group sessions.
9. Referral for students requiring therapy for psychological problems.

Those who desire services of a counselor should contact the Counseling Center for an appointment.

## Advisement

For students who have been admitted to the college, educational planning and advisement is provided. A staff of full-time counselors is available to the students of Richland College. Faculty members also serve as program advisors to aid students in defining their educational and vocational goals.

## Financial Aid and Placement

**Financial Aid.** The Office of Financial Aid exists to assist students who without financial assistance would not be able to complete their education at Richland. The Financial Aid Office is located in the Campus Center, Rm. E146. Phone 746-4488.

Students seeking financial aid should complete and submit the following forms by July 1 preceding the academic year for which aid is requested.

1. A student financial aid application, obtained from the Office of Financial Aid, Campus Center, Rm. E146.
2. An Internal Revenue Service Form #1040 to be completed by parents (if dependent) for the previous year's income.
  - a. You may consider yourself a dependent student if:
    1. Your parents have claimed you on their 1040 Form as a dependent;
    2. You are presently living at home and have for the past 12 months;
    3. You have received \$600 or more during the past year from your parents.
  - b. You may consider yourself independent if you can answer NO to all the above questions. If that is the case, you will need to complete the 1040 Form for your income during the previous year.

Upon receipt of the above information and after it is determined that the student requires financial assistance, the Director will use his professional judgment in determining the resources available to assist the applicant. The following financial aid resources are available to students to assist in developing a financial aid "package", that is, the combination which will best meet the student's financial need.

**College Work-Study.** A student must demonstrate financial need and be enrolled for 6 or more semester hours to be eligible for the federal work-study program. He will be referred to a division chairman, or to an off-campus supervisor, for an interview to determine his ability to perform the task.

**Educational Opportunity Grants.** A student must demonstrate financial need and be enrolled for 6 or more semester hours to be eligible.

## **FRESHMEN NOTE:**

**Basic Educational Opportunity Grant.** The Basic Educational Opportunity Grant Program is a federal aid program designed to provide financial assistance to those who need it to attend post-high school educational institutions.

You may be eligible for a grant if you meet three important criteria:

1. You plan to enroll for the first time in a post-high school program at an eligible college, university, vocational or technical school.
2. You will be attending school on a full-time basis.
3. You are a U.S. citizen or are in the United States for other than a temporary purpose and intend to become a resident.

Applications and additional information are available at the Office of Financial Aid, Rm. E146.

**Institutional Scholarship.** A student must demonstrate financial need.

**Wayne Yancey Memorial Scholarship.** This is a scholarship in memory of Wayne Yancey, a freshman at Richland College. Wayne had a keen interest in education, particularly in engineering, architecture and the construction management curriculum. It is the intent of this scholarship to assist students who demonstrate financial need and share the same educational interests as Wayne Yancey.

**Hinson-Hazlewood College Student Loan.** A student must demonstrate financial need. The maximum loan is \$1,500 per academic year.

**Short Term Loans.** These loans are for tuition, fees, book purchases, and personal needs. Each student is required to apply at least ten days prior to needing these funds.

**Mary Ellen Mittelstet Memorial Loan Fund.** This is a short-term loan available to students who demonstrate a financial need. This loan has been established by friends and acquaintances of the family in memory of Mary Ellen Mittelstet.

**Regular Campus Employment.** A student will be allowed to work a maximum of 15 hours per week at an on-campus position.

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**Placement.** From the Placement Office, also located in the Campus Center, Rm. E146, students can obtain needed employment information on off-campus employment and can discuss career plans and job opportunities. To aid students in finding a suitable job or in exploring a variety of occupations, the Placement Office provides full-time, part-time and summer job listings; spring recruiting sessions; career guidance materials; and various seminars dealing with occupational possibilities.

Students enrolled in the career programs at Richland are encouraged to register a semester before graduation at the Placement Office for assistance in résumé writing, employment interviewing and job placement.

Students who combine college study with outside employment must plan a realistic proportion of work and study in order to remain in good academic standing. Phone 746-4488.

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## **Veterans' Affairs**

Complete approval of Richland College courses by the Veterans Administration makes possible the training of veterans under the public laws which give them educational benefits. A veterans' counselor at the college assists in any matter pertaining to the relationship of students with the United States Veterans Administration and Richland. In applying for benefits, the student veteran should submit his VA application form at least one month prior to college registration dates. Necessary forms can be obtained at the Veterans' Affairs Office, which is located in the Campus Center, Rm. F144. Phone 746-4427. For the initial application, the student veteran must also provide the VA with a copy of his DD 214 (discharge papers) and if married, a copy of his marriage license, birth certificate for each child, and copies of court actions in prior marriages.

## **Student Development**

A full program of co-curricular activities is available under the direction of the Office of Student Development. This office endeavors to provide experiences out of class which will add to the student's personal and intellectual growth and development, and increase his awareness, understanding, and acceptance of himself and others. The student development program offers a variety of experiences, including social activities, student government, special interest clubs and organizations, discussion sessions, and sports. The Student Development Office is located in the Campus Center, Rm. M42. Phone 746-4430.

The college is a member of the Metro Athletic Conference and competes in basketball, tennis, baseball, and golf.

Soccer and wrestling clubs have also been formed. In all cases, students participate in athletics as a result of their own interest. There are no students on athletic scholarships. A campus intramural program for students and faculty is provided and emphasized.

## **Health Center**

Health is the most fundamental of human needs and a high standard of physical and mental health is a fundamental right of every human being. Therefore, the Health Center of Richland College is available to help maintain and promote the health of students, faculty and staff.

Some of the services provided by the Health Center are:

1. Health education and counseling about physical and emotional health.
2. Emergency first aid treatment.
3. Referral service to community agencies and physicians.
4. Various screening programs.
5. Programs of interest in the area of health to students and faculty.

The Health Center is open from 8 a.m. until 10 p.m. daily, Monday through Thursday, from 8 a.m. until 5 p.m. on Friday, and from 8 a.m. until 4 p.m. on Saturday. All students are encouraged to complete the health history form as fully as possible so that the Health Center can best serve their needs.

## **Campus Security**

The Office of Campus Security is required by state law to "protect and police buildings and grounds of state institutions of higher learning." Since all of the general and criminal laws of the state are in full force and effect within the campus community, specially trained and educated personnel are commissioned to protect not only the physical property of the campus community but also to protect the person and the property of campus citizens. The security officers are responsible for enforcing rules, regulations, and Board policies of the college, including a code of conduct for students. The department seeks to operate a student-oriented program which encourages face-to-face contact between students and security officers to facilitate the open exchange of ideas and to develop a tolerance for individual points of view.

# EDUCATIONAL PROGRAMS & SERVICES

## Lower Division Transfer Studies

Students whose educational objective is the bachelor's degree may complete their first two years at Richland College before transferring to a four-year institution.

The academic transfer curriculum is coordinated with senior colleges and universities to facilitate the transfer of credits to these schools.

## Technical-Occupational Programs

Richland College offers a variety of technical-occupational programs designed to enable a student to enter his chosen career field as a skilled employee after one or two years of college work.

These programs are established only after studies verify that employment opportunities will exist at the time the student completes his training, matching the community's manpower requirements with the ambitions and goals of the student.

This realistic approach to occupational education is made possible by the excellent cooperation of local industry, business and public agencies who more and more are looking to the district's colleges for skilled personnel.

Continuous liaison is maintained with prospective employers to assist in placement of graduates and to keep the training programs up-to-date with the current job requirements.

Recommendations for adding new programs to the college offerings will be made periodically based on community studies which identify additional training needs that can be met by Richland College.

Technical-occupational courses carry college credit leading to a certificate of completion (1-year programs) or an associate in applied arts and sciences degree (2-year programs).

## Hamilton Park Center

Richland College offers credit programs in developmental studies in the Hamilton Park area. These programs are designed to afford area residents an opportunity to become proficient in the basic skills required to pursue a college-level program.

## Evening Programs

Richland College offers an evening program for the benefit of persons who are unable or do not desire to attend course-work during daytime hours. Most lower division transfer courses and certain technical-occupational courses are available during evening hours.

Instructors for the evening courses are selected from Richland's full-time staff and from among outstanding Dallas area educators and other professionals.

The evening program offers the same high quality instruction and excellent facilities found in the day schedule. Evening students have available the services of the Learning Resources Center, Counseling Center, Health Center and College Store, as well as recreation and dining facilities.

The college also provides a Saturday program for those students who cannot attend classes during the week.

## **Community Service Programs**

Short-term, non-credit community service courses are Richland's answer to the community's challenge to provide educational opportunity for everyone.

These courses reflect the interests and needs of the community and cover a wide variety of subjects, ranging from occupational training to personal entertainment and cultural enrichment.

Instructors are leading professional men and women, college faculty members and experts in the course subject. There are no entrance requirements and class schedules are set for the convenience of the students during both daytime and evening hours.

Special courses can be designed to meet the needs of individuals, groups and organizations. Community services staff members are eager to cooperate with firms which wish to arrange for courses, workshops or seminars in conjunction with their own training programs.

# DIVISIONS OF THE COLLEGE

## **Divisions of the College**

### **Business Division**

- Business
  - Accounting
  - General Business
  - Mid-Management
  - Secretarial Careers
    - Administrative
    - Educational
    - Executive
    - Professional
  - Office Skills and Systems
- Computer Science
- Economics

### **Communications Division**

- Communications
- English
- French
- German
- Journalism
- Spanish
- Speech

### **Developmental Studies Division**

- Developmental Mathematics
- Developmental Reading
- Developmental Writing
- Human Development
- Human Services
  - Mental Health Assistant
  - Social Worker Assistant
- Reading
- Teacher Aide

### **Humanities Division**

- Art
- Humanities
- Music
- Philosophy
- Theater

### **Human Potential Division**

- Human Development

### **Physical Education Division**

- Physical Education Theory
- Physical Education Activity

### **Science-Technology Division**

- Astronomy
- Biology
- Chemistry
- Construction Management and Technology
- Electro-Mechanical Technology
- Engineering
- Fluid Power Technology
- Geology
- Mathematics
- Ornamental Horticulture Technology
- Physical Science
- Physics
- Quality Control Technology

### **Social Science Division**

- Anthropology
- Geography
- Government
- History
- Psychology
- Religion
- Social Science
- Sociology



# COURSE DESCRIPTIONS

In the following listing of courses, the credit value in semester units is indicated in parenthesis following the course number.

Courses numbered 100 or above are applicable to the associate degrees. Courses numbered below 100 are developmental in nature. The student is urged to consult his counselor or specific college catalogs for information regarding transferability of courses.

Course prerequisites may only be waived by the appropriate division chairman.

All courses listed in this catalog may not be offered during the 1974-75 year.

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**Anthropology 100 (3)**  
**Introduction to Anthropology**  
**3 hrs. Lec.**

A survey of the origin of mankind involving the processes of physical and cultural evolution; ancient man; preliterate man today. Attention is centered on fossil evidence, physiology and family/group roles and status.

**Anthropology 101 (3)**  
**Cultural Anthropology**  
**3 hrs. Lec.**

A survey of the cultures of the world with emphasis on those of North America. The concept of culture; social and political organization; language; religion and magic; elementary anthropological theory.

**Anthropology 104 (3)**  
**American Indian Culture**  
**3 hrs. Lec.**

This course attempts to lead to a better understanding of native Americans from three perspectives: native American history and prehistory; traditional Indian cultures; and native Americans today. The latter theme stresses current topics such as discrimination, poverty, employment, reservations, the Bureau of Indian Affairs, self-determination, health care, etc.

**Anthropology 110 (3)**  
**The Heritage of Mexico**  
**3 hrs. Lec.**

This course presents major historical developments and personalities which have shaped the Mexican nation, with emphasis on cultures and customs. Beginning with the peoples who inhabited the country before the Spanish conquest, the course leads to modern Mexico, emphasizing the historical relations between Mexico and the United States and the role of the Mexican-American in the contemporary United States. The student may register for either Anthropology 110 or History 110.

**Art 104 (3)**

**Art Appreciation**

**3 hrs. Lec.**

Films, lectures, slides, and discussions on the theoretical, cultural, and historical aspects of the visual arts. Attempts to develop visual and aesthetic awareness, thus relating art to the student as an individual.

**Art 105 (3)**

**Survey of Art History**

**3 hrs. Lec.**

This course covers the chronological sequence of art from the pre-historic through the Renaissance. Explores the cultural, geophysical, and personal influences on art styles, offering the student a broader range of ideas which will enable him to relate the past to his own work and provide stimuli for his future works.

**Art 106 (3)**

**Survey of Art History**

**3 hrs. Lec.**

This course covers the chronological sequence of art from the Baroque through the present. Explores the cultural, geophysical, and personal influences on art styles, offering the student a broader range of ideas which will enable him to relate the past to his own work and provide stimuli for his future works.

**Art 110 (3)**

**Design I**

**2 hrs. Lec.**

**4 hrs. Lab.**

A study of basic concepts of design, using two-dimensional materials. Use of line, color, illusion of space or mass and texture, and shape in composition. Required of all art majors. Open to all interested students.

**Art 111 (3)**

**Design II**

**2 hrs. Lec.**

**4 hrs. Lab.**

A study of basic concepts of design with three-dimensional materials, using mass, space, movement and texture. Required of all art majors. Open to all interested students. Laboratory fee required.

**Art 114 (3)**

**Drawing I**

**2 hrs. Lec.**

**4 hrs. Lab.**

A beginning course investigating a variety of media, techniques and subjects. Exploring perceptual and descriptive possibilities with consideration of drawing as a developmental process as well as an end in itself. Required of all art majors. Open to others who are interested.

**Art 115 (3)**

**Drawing II**

**2 hrs. Lec.**

**4 hrs. Lab.**

*Prerequisite:* Art 114. Expansion of Drawing I stressing the expressive and conceptual aspects of drawing including the human figure within a spatial environment. Required of all art majors. Open to others who are interested.

**Art 116 (3)**

**Introduction to Jewelry**

**2 hrs. Lec.**

**4 hrs. Lab.**

*Prerequisites:* Art 110, Art 111, or permission of instructor. The basic techniques of fabrication and casting of metals, with emphasis on original design. Laboratory fee required.

**Art 201 (3)**

**Drawing III**

**2 hrs. Lec.**

**4 hrs. Lab.**

*Prerequisites:* Art 110, Art 111, and Art 115, sophomore standing and/or permission of the division chairman. Analytic and expressive drawing of the human figure, stressing study of movement and volume. Laboratory fee required.

**Art 202** (3)  
**Drawing IV**  
2 hrs. Lec.  
4 hrs. Lab.  
*Prerequisite:* Art 201, sophomore standing and/or permission of the division chairman. A continuation of Art 201 with emphasis on individual expression. Laboratory fee required.

**Art 205** (3)  
**Painting I**  
2 hrs. Lec.  
4 hrs. Lab.  
*Prerequisites:* Art 110, Art 111, Art 115, or permission of the instructor. A studio course stressing fundamental concepts of painting with acrylics and/or oils. Emphasis on painting from still life, models and the imagination.

**Art 206** (3)  
**Painting II**  
2 hrs. Lec.  
4 hrs. Lab.  
*Prerequisite:* Art 205. Continuation of Painting I with emphasis on individual expression.

**Art 208** (3)  
**Sculpture I**  
2 hrs. Lec.  
4 hrs. Lab.  
*Prerequisites:* Art 110, Art 111, Art 115, or permission of the instructor. An exploration of various sculptural approaches in a variety of media and using different techniques. Laboratory fee required.

**Art 209** (3)  
**Sculpture II**  
2 hrs. Lec.  
4 hrs. Lab.  
*Prerequisite:* Art 208. A continuation of Sculpture I with emphasis on individual expression. Laboratory fee required.

**Art 210** (3)  
**Commercial Art I**  
2 hrs. Lec.  
4 hrs. Lab.  
*Prerequisites:* Art 110, Art 111, Art 115 or consent of instructor. An introduction to the working world of commercial art with emphasis on the acquisition of professional attitudes and basic studio skills through the working out of typical commercial assignments. Laboratory fee required.

**Art 211** (3)  
**Commercial Art II**  
2 hrs. Lec.  
4 hrs. Lab.  
*Prerequisite:* Art 210. A continuation of Art 210 with added emphasis on layout and design concepts through increased individual assignments, work with simple art for reproduction techniques, and the development of a professional portfolio. Laboratory fee required.

**Art 215** (3)  
**Ceramics I**  
2 hrs. Lec.  
4 hrs. Lab.  
*Prerequisites:* Art 110, Art 111, Art 115 or permission of instructor. Building of pottery forms by coil, slab and use of wheel; glazing and firing. Laboratory fee required.

**Art 216** (3)  
**Ceramics II**  
2 hrs. Lec.  
4 hrs. Lab.  
*Prerequisite:* Art 215, or permission of instructor. A study of glaze technology and advanced problems in the creation of sculptural and utilitarian ceramic ware. Laboratory fee required.

**Art 228** (3)  
**Three Dimensional Design**  
2 hrs. Lec.  
4 hrs. Lab.  
*Prerequisites:* Art majors – Art 110, Art 111, and Art 114. Drafting technology majors – Drafting 183 and Engineering 186. Development of three-dimensional projects in metal, plastic, and wood through the stages of design: idea, sketches, research, working drawing, model and finished product. Emphasis is on function, material and aesthetic form. Laboratory fee required.

**Astronomy 101 (3)****Descriptive Astronomy****3 hrs. Lec.**

A descriptive course consisting of a survey of the fundamentals of astronomy. Emphasis on the solar system, including a study of the celestial sphere, the earth's motions, the moon, planets, asteroids, comets, meteors, and meteorites.

**Astronomy 102 (3)****General Astronomy****3 hrs. Lec.**

A course emphasizing stellar astronomy which includes a study of the sun, the properties of stars, star clusters, nebulae, interstellar gas and dust, the Milky Way galaxy, and external galaxies.

**Biology 101 (4)****General Biology****3 hrs. Lec.****3 hrs. Lab.**

*Prerequisite to all higher level biology courses and must be taken in sequence.* Recommended for science majors. The first semester of the two semester sequence surveying in depth the principle concepts of biology, including a study of the cell, levels of organization, an introduction to metabolism, and evolutionary relationships. An introductory survey of the plant and animal kingdoms is included which emphasizes the classification and basic structure and function of the more important groups. Laboratory fee required.

**Biology 102 (4)****General Biology****3 hrs. Lec.****3 hrs. Lab.**

*Prerequisite: Biology 101.* A continuation of Biology 101. Laboratory fee required.

**Biology 115 (4)****Biological Science****3 hrs. Lec.****3 hrs. Lab.**

A presentation of selected topics in biological science for the non-science major including the cell concept, basic chemistry as it relates to biology, an introduction to genetics, cellular processes such as mitosis, meiosis, respiration, photosynthesis, and plant and animal reproduction. Laboratory fee required.

**Biology 116 (4)****Biological Science****3 hrs. Lec.****3 hrs. Lab.**

*No prerequisite.* A study of selected topics of biological science for the non-science major including all systems of the human body, disease, drug abuse and aging, evolution, ecology and man in relation to his environment. Laboratory fee required.

**Biology 203 (4)****Intermediate Botany****3 hrs. Lec.****3 hrs. Lab.**

*Prerequisites: Biology 101 and 102.* A survey of the major plant groups with emphasis placed on morphology, physiology, classification, life cycles, and evolutionary relationships to each other and their economic importance to man. Recommended for science majors. Laboratory fee required.

**Biology 211 (4)****Invertebrate Zoology****3 hrs. Lec.****3 hrs. Lab.**

*Prerequisite: Eight hours of biological science.* An intermediate level course surveying the major groups of animals below the level of chordates. Consideration is given to the phylogeny, taxonomy, morphology, physiology, and biology of the groups involved. Relationships and importance to higher animals and man are stressed. Recommended for science majors. Laboratory fee required.

**Biology 216** (4)  
**General Microbiology**  
3 hrs. Lec.  
4 hrs. Lab.  
*Prerequisites: Biology 101 and Chemistry 102.* A study of microbes with emphasis on classification, growth, nutrition, metabolism, reproduction, and the genetics of micro-organisms. Recommended for science majors and science-related programs. Laboratory fee required.

**Biology 221** (4)  
**Anatomy and Physiology I**  
3 hrs. Lec.  
3 hrs. Lab.  
*Prerequisite: Biology 102 or approval of instructor.* Recommended for science majors. First course of a two course sequence. Structure and function as related to the human skeletal, muscular and circulatory system. Emphasis placed on the inter-relationships of these systems. Laboratory fee required.

**Biology 222** (4)  
**Anatomy and Physiology II**  
3 hrs. Lec.  
3 hrs. Lab.  
*Prerequisite: Biology 221 or approval of instructor.* Second course of a two-course sequence. Structure and function as related to the human digestive, nervous, respiratory, reproductive and endocrine systems. Emphasis placed on the inter-relationships of these systems. Laboratory fee required.

**Biology 235** (4)  
**Comparative Anatomy of the Vertebrates**  
3 hrs. Lec.  
4 hrs. Lab.  
*Prerequisites: Biology 101 and 102.* A survey of the major groups of vertebrates from a comparative point of view. The lectures will involve an intensive study of each vertebrate class, with emphasis on morphology and evolutionary relationships. Representatives of each vertebrate class will be dissected and compared in sequence during laboratory sessions. For science majors, pre-medical and pre-dental students. Laboratory fee required.

**Biology 290** (3)  
**Man and His Environment**  
3 hrs. Lec.  
Selected topics affecting man and his environment will be treated through seminars, field studies, and special lectures. Recognized authorities and specialists from the many academic disciplines will be used as guest lecturers and resource persons. Man's responsibility to his environment, both biological and physical, will be the thesis of this course and its presentation will be interdisciplinary. This course is directed to all students interested in the environmental problems of today. (This course is offered on campus and via television.)

**Bookkeeping**  
(See Business 131, 132)

**Business 105** (3)  
**Introduction to Business**  
3 hrs. Lec.  
Provides overall picture of business operation; includes analysis of specialized fields within business organizations; identifies role of business in modern society.

**Business 131** (3)  
**Bookkeeping**  
3 hrs. Lec.  
The fundamental principles of double-entry bookkeeping as applied to practical business situations. Emphasis is given to the following: financial statements, trial balances, work sheets, special journals, adjusting and closing entries. A practice set covering the entire business cycle will be completed.

**Business 132** (3)  
**Bookkeeping**  
3 hrs. Lec.  
*Prerequisite:* Business 131. Attention will be given to accruals, bad debts, taxes, depreciation, controlling accounts, and business vouchers. Bookkeeping for partnerships and corporations will be introduced.

**Business 136** (3)  
**Principles of Management**  
3 hrs. Lec.  
A study of the process of management including the functions of planning, organizing, leading, and controlling. Particular emphasis on policy formulation, decision-making processes, operating problems, communications theory, and motivation techniques.

**Business 140** (3)  
**Educational Processes**  
3 hrs. Lec.  
An overview of the educational processes (public and private) from pre-school through college. Emphasis is placed on the contribution and influence made by education on our culture and our economy.

**Business 141** (3)  
**Current Practical Problems**  
3 hrs. Lec.  
Orientation to school organization, procedures, and staff utilization via the problem solving approach.

**Business 143** (3)  
**Personal Finance**  
3 hrs. Lec.  
A study of everyday financial problems encountered in managing personal affairs. Includes financial planning, insurance, budgeting, use of credit, home ownership, savings, investment, and tax problems.

**Business 150** (4)  
**Management Training**  
20 hrs. Lab.  
*Prerequisite:* Concurrent enrollment in approved mid-management program. Supervised employment in the student's chosen field. Intended to provide practical experience for students preparing for careers in business management. Business 150 will be offered the first semester.

**Business 151** (4)  
**Management Training**  
20 hrs. Lab.  
*Prerequisite:* Concurrent enrollment in approved mid-management program. A continuation of Business 150. Business 151 will be offered the second semester.

**Business 154** (2)  
**Management Seminar — Role of Supervision**  
2 hrs. Lec.  
*Prerequisite:* Concurrent enrollment in Business 150 and preliminary interview by mid-management faculty. Problem analysis and project development for students majoring in mid-management. Special emphasis is placed upon the development of management, goal setting and planning, leadership, communication and motivation as applied to the student's work experiences.

**Business 155** (2)  
**Management Seminar — Personnel Management**  
2 hrs. Lec.  
*Prerequisites:* Business 150, Business 154 and concurrent enrollment in Business 151. A study of the principles, policies, and practices relating to the personnel functions of business as applied to the student's work experiences.

**Business 160** (3)  
**Machine Transcription**  
3 hrs. Lec.  
*Prerequisite:* Credit in Business 173 or one year of typing in high school. Intensive course in transcribing from recording machines using predicated business letters and other forms of business communication from a variety of professions, industries, and government agencies. Training in use of major dictating-transcribing machines with electric typewriters. Goal is development of employable skill. Familiarization with typewriter-related equipment.

**Business 161** (2)  
**Office Machines**  
1 hr. Lec.  
2 hrs. Lab.  
Office machines is designed to provide the student with a skill in the operation of such machines as adding machines, printing calculators, and electronic calculators. Emphasis is placed on using the touch system in both speed and accuracy for performing the basic functions, solving problems that require the use of special keys and controls, and solving application problems.

**Business 162** (3)  
**Secretarial Training**  
3 hrs. Lec.  
*Prerequisite:* Credit in completion of Business 173 or one year of typing in high school. Special emphasis is given to the most frequently performed secretarial duties. Units of work include filing, skill in the use of duplicating machines, mail, telegraph, postal and shipping service, handling travel details and meeting arrangements. Duties of the receptionist and development of a desirable secretarial appearance and personality are used.

**Business 163** (3)  
**Beginning Shorthand**  
2 hrs. Lec.  
3 hrs. Lab.  
*Prerequisite:* Credit in or concurrent enrollment in Business 173 or one year of typing in high school. Introduction of fundamental principles of Gregg Shorthand, Diamond Jubilee Series. Includes development of ability to read, write and transcribe shorthand outlines. Development of knowledge of mechanics of English.

**Business 164** (3)  
**Intermediate Shorthand**  
2 hrs. Lec.  
3 hrs. Lab.  
*Prerequisite:* Credit in Business 163 or one year of shorthand in high school; credit in Business 173 or one year of typing in high school. Application of principles of Gregg Shorthand to develop the ability to take and accurately transcribe shorthand notes at increased dictation speeds. Includes oral reading of shorthand outlines, speed building dictation and timed mailable transcripts. Training to strengthen knowledge of English mechanics and reinforce typing skills.

**Business 173** (2)  
**Beginning Typing**  
1 hr. Lec.  
2 hrs. Lab.  
Fundamental techniques in typewriting are developed. The skills involved in typing manuscripts, business letters and tabulation are introduced. This course is for students with no previous training in typewriting.

**Business 174** (2)  
**Intermediate Typing**  
1 hr. Lec.  
2 hrs. Lab.  
*Prerequisite:* Credit in Business 173 or one year of typing in high school. Further development of techniques. Emphasis will be placed on problem solving, increasing speed and accuracy in typing business forms, correspondence and manuscripts.

**Business 201** (3)  
**Principles of Accounting**  
3 hrs. Lec.  
Theory and practice of measuring and interpreting financial data for business units; study of problems of income measurement, such as depreciation, inventory valuation, and credit losses; the operating cycle and the preparation of financial statements.

**Business 202** (3)  
**Principles of Accounting**  
3 hrs. Lec.  
*Prerequisite:* Business 201. Accounting procedures and practices applicable to partnerships and corporations; the use of cost data, budgetary controls, analysis and interpretation of financial reports for use by creditors, investors, and management.

**Business 203 (3)**

**Intermediate Accounting**

**3 hrs. Lec.**

*Prerequisite: Business 202.* An intensive study of the concepts, principles, and practice of modern financial accounting. Included is a complete study of the purposes and procedures underlying the financial statements.

**Business 204 (3)**

**Managerial Accounting**

**3 hrs. Lec.**

*Prerequisite: Business 202.* A study of accounting practices and procedures in providing information for business management. Emphasis is placed on the preparation and internal use of financial statements and budgets, types of accounting systems, and other accounting information and procedures used in management planning and control.

**Business 206 (3)**

**Principles of Marketing**

**3 hrs. Lec.**

A study of the scope and structure of marketing institutions in the marketplace today. Analysis of the marketing functions, consumer behavior, market research, sales forecasting and relevant state and federal laws.

**Business 230 (3)**

**Salesmanship**

**3 hrs. Lec.**

A course in general salesmanship involving the factors of successful selling of goods and ideas. Buying motives, sales psychology, customer approach, and sales techniques are studied.

**Business 231 (3)**

**Business Correspondence**

**3 hrs. Lec.**

*Prerequisite: Credit in Business 173 or one year of typing in high school; credit in Communications 131 or English 101.* A practical course that includes a study of letter forms, the mechanics of writing, and composing various types of communications. A critical analysis of the appearance and content of representative business correspondence is made.

**Business 233 (3)**

**Advertising and Sales Promotion**

**3 hrs. Lec.**

Introduces the fundamental principles, practices and common media used in persuasive communication. Includes an insight into buyer behavior, use of advertising media to motivate consumer, and methods of stimulating salespeople and retailers. Familiarizes the student with the management of promotion programs with respect to goals, strategies, evaluation and control of promotional activities.

**Business 234 (3)**

**Business Law**

**3 hrs. Lec.**

This course is designed to acquaint the student with the historical and ethical background of the law and to familiarize him with present day principles of law. Particular emphasis on contracts, property (bailments, sales, leases, wills, and estates), and torts.

**Business 237 (3)**

**Organizational Behavior**

**3 hrs. Lec.**

This course endeavors to focus on the persisting human problems of administration in modern organizations as they relate to the theory and methods of behavioral science.

**Business 238 (3)**

**Cost Accounting**

**3 hrs. Lec.**

*Prerequisite: Business 202.* The theory and practice of accounting for a manufacturing concern. Detailed study of the measurement and control of material, labor and factory overhead for the job order and process cost system. Budgets, variance analysis, standard costs, joint and by products costing will be discussed.



**Business 239**  
**IncomeTax Accounting**  
**3 hrs. Lec.**

(3)

*Prerequisite:* Business 202. Provides an understanding of basic income tax laws applicable to individuals, partnerships and corporations. Subjects treated include personal exemptions, gross income, business expenses, non-business deductions, capital gains and losses. Emphasis is on those problems commonly encountered in the preparation of income tax returns.

**Business 250**  
**Management Training**  
**20 hrs. Lab.**

(4)

*Prerequisites:* Business 150-151; concurrent enrollment in Business 254. Continuation of supervised employment in the student's chosen field. Intended to provide increased supervisory responsibility for students preparing for careers in business management. Business 250 will be offered the first semester.

**Business 251**  
**Management Training**  
**20 hrs. Lab.**

(4)

*Prerequisites:* Business 150-151; concurrent enrollment in Business 255. A continuation of Business 250. Business 251 will be offered the second semester.

**Business 254**  
**Management Seminar—**  
**Organizational Development**  
**2 hrs. Lec.**

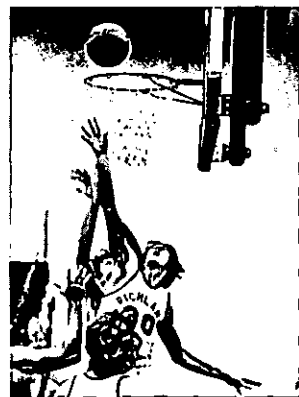
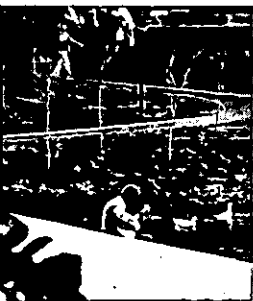
(2)

*Prerequisites:* Business 151, 155 and concurrent enrollment in Business 250. A study of the organizational objectives and management of human resources including the various approaches to organizational theory as applied to the student's work experiences.

**Business 255**  
**Management Seminar —**  
**Business Strategy, The Decision**  
**Process and Problem Solving**  
**2 hrs. Lec.**

(2)

*Prerequisites:* Business 250, Business 254 and concurrent enrollment in Business 251. Business strategy and the decision-making process applied to the first line supervisor and middle-management positions. Specific emphasis will be placed upon the application of the student's course knowledge and work experiences.



**Business 263**  
**Advanced Shorthand**  
**2 hrs. Lec.**  
**3 hrs. Lab.**

(3)

*Prerequisite:* Credit in Business 164 or two years of shorthand in high school; credit in Business 174 or two years of typing in high school. Further development of shorthand skills to attain proficiency required for stenographic work. Emphasis on speed building dictation, timed typewritten transcription of shorthand notes for mailable letters.

**Business 264**  
**Shorthand Transcription**  
**2 hrs. Lec.**  
**3 hrs. Lab.**

(3)

*Prerequisite:* Credit in Business 263; credit in Business 273. Emphasis upon specialized dictation, mailable transcriptions, and vocabulary building. Development of high-level skill in production work meeting office standards.

**Business 273**  
**Advanced Typing**  
**1 hr. Lec.**  
**2 hrs. Lab.**

(2)

*Prerequisite:* Credit in Business 174 or two years of typing in high school. Decision making and timed production of all types

of business material are emphasized. A continuation of skill development and a review of typing techniques are also stressed. This course will demand accuracy at advanced speeds.

**Business 275**  
**Secretarial Procedures**  
**3 hrs. Lec.**

(3)

*Prerequisites:* Business 263 and Business 273. This course is designed primarily to make the student think in terms of initiative, creative thinking, and follow-through within these units of work: in-basket exercises, decision-making problems, utilization of the shorthand/transcription skills, units on public and personal relations, supervisory principles, business ethics, and organizing time and work.

**Business Mathematics**  
(See Mathematics 130)

**Chemistry 101** (4)  
**General Chemistry**  
3 hrs. Lec.  
3 hrs. Lab.

*Prerequisite:* *Developmental Mathematics 093 or equivalent.* Designed for science and science-related majors, the course includes the fundamental laws and theories dealing with the structure and interactions of matter and the use of these principles in understanding the properties of matter, chemical bonding, chemical reactions, the physical states of matter and changes of state. The fundamental principles are applied to the solution of quantitative problems relating to chemistry. Laboratory fee required.

**Chemistry 102** (4)  
**General Chemistry**  
3 hrs. Lec.  
3 hrs. Lab.

*Prerequisite:* *Chemistry 101.* Designed for science and science-related majors, this course is a continuation of Chemistry 101. The fundamental concepts introduced previously, together with additional ones, are applied to a variety of topics, including solutions and colloids, chemical kinetics and equilibrium, electrochemistry, and nuclear chemistry. Qualitative inorganic analysis is included in the laboratory work. Laboratory fee required.

**Chemistry 115** (4)  
**General Chemistry**  
3 hrs. Lec.  
3 hrs. Lab.

*Prerequisite:* *Developmental Mathematics 091 or equivalent.* Designed for non-science majors, the course traces the development of theoretical concepts and the evolution of these concepts in explaining various observations and laws relating to chemical bonding reactions, states of matter, solutions, electrochemistry and nuclear chemistry. The descriptive chemistry of some common elements and inorganic compounds is included. Laboratory fee required.

**Chemistry 116** (4)  
**General Chemistry**  
3 hrs. Lec.  
3 hrs. Lab.

*Prerequisite:* *Chemistry 115.* Designed for non-science majors, this course covers organic chemistry and biochemistry. The important classes of organic compounds are surveyed with the concept of structure providing the central theme. The biochemistry section includes carbohydrates, proteins, lipids, chemistry of heredity, disease and therapy and plant biochemistry. Laboratory fee required.

**Chemistry 201** (4)  
**Organic Chemistry I**  
3 hrs. Lec.  
4 hrs. Lab.

*Prerequisite:* *Chemistry 102.* Designed for science and science-related majors. An integrated introductory course in organic chemistry dealing with the fundamental types of organic compounds, their nomenclature, classification, reactions, and applications. The reactions of aliphatic and aromatic compounds are discussed in terms of modern electronic theory with emphasis on reaction mechanisms, stereo-chemistry, transition state theory and technique of organic synthesis. Laboratory fee required.

**Chemistry 202** (4)  
**Organic Chemistry II**  
**3 hrs. Lec.**  
**4 hrs. Lab.**  
*Prerequisite: Chemistry 201.* Designed for science and science-related majors, this course is a continuation of Chemistry 201. Emphasis will be given to the further development of aliphatic and aromatic systems, poly-functional compounds including amino acids, proteins, carbohydrates, sugars, heterocyclic and related compounds. Instrumental techniques will be used to identify compounds. Laboratory fee required.

**Chemistry 203** (4)  
**Quantitative Analysis**  
**2 hrs. Lec.**  
**6 hrs. Lab.**  
*Prerequisites: Chemistry 102, Mathematics 101 or Mathematics 104 or equivalent.* This course includes the principles of chemistry as applied by the analytical chemist to quantitative determinations. Topics include gravimetry, oxidation-reduction, indicators, and acid-base theory. Laboratory experience focuses on the fundamentals of gravimetric and volumetric analysis with an introduction to colorimetry. Laboratory fee required.

**Communications 131** (3)  
**Applied Composition and Speech**  
**3 hrs. Lec.**  
 The study of English as a practical means of preparing for successful performance in the student's chosen vocation. Emphasis placed upon assembling, organizing, and evaluating material for the composition of letters, applications, resumes, and short reports. Practice in oral expression.

**Communications 132** (3)  
**Applied Composition and Speech**  
**3 hrs. Lec.**  
*Prerequisite: Communications 131 or consent of instructor.* Enrichment of communication processes with emphasis on oral and written persuasion directly related to occupational training and work experience. Expository techniques of business letters and documented reports. Wide periodical reading.

**Computing Sciences 175** (3)  
**Introduction to Computer Science**  
**3 hrs. Lec.**  
 Provides a basic understanding of the computer and how it is used in a variety of applications. Covers the history of computer development, vocabulary and broad concepts of design and function. Intended for non-programmers who need a familiarization with computers and the effect on their career.

**Construction Management and Technology 130** (4)  
**Building Materials and Their Properties**  
**3 hrs. Lec.**  
**3 hrs. Lab.**  
 An introductory study of the nature, origin, and properties of materials. The nature of materials and their interactions are considered. The process of selecting, specifying and preserving materials is studied with consideration for economy, quality and performance. Included also are roof coverings, wall and floor materials. Laboratory fee required.

**Construction Management and Technology 132** (3)  
**The Construction Industry**  
**3 hrs. Lec.**  
 An introductory course designed to survey the growth, magnitude and economic importance of the construction industry. Emphasis is placed on an understanding of the interrelationship between the many trades, professions and agencies involved in construction.

**Construction Management and Technology 133** (3)  
**Electrical and Mechanical Equipment for Builders**  
2 hrs. Lec.  
3 hrs. Lab.

*Prerequisite:* *Construction Management and Technology 130*. A continuing study of the nature and use of those construction materials and equipment associated with plumbing, heating, ventilation and air conditioning systems; electrical systems; conveying systems used in building construction. The student will be introduced to the design theories and uses for the completed systems.

**Construction Management and Technology 134** (3)  
**Construction Methods and Equipment**  
2 hrs. Lec.  
3 hrs. Lab.

The analysis of up-to-date construction problems with emphasis upon understanding the organization and equipment used in such construction problems as excavation, pile driving, concrete, wood, brick, stone and steel construction. Additional emphasis is placed on developing a sound conception of the related problems faced by the architect, contractor, construction superintendent, and distributors in planning and erecting buildings.

**Construction Management and Technology 136** (4)  
**Surveying and Measurements**  
2 hrs. Lec.  
6 hrs. Lab.

Beginning course designed for students with little or no training in surveying. It combines lectures, laboratory, and field work in theory, methods, equipment and problems involved in surveying and measurement and their application.

**Construction Management and Technology 138** (4)  
**Construction Management I**  
3 hrs. Lec.  
3 hrs. Lab.

An introductory course covering the total responsibilities of a supervisor, such as organization, duties and responsibilities, human relations, grievances, training, rating, promotion, quality and quality control, management-employee relations, scheduling of work, job and safety instructions. Study of roles played by labor and management in the development of American industry. Analysis is made of forces affecting labor supply, employment, and industrial relations under the democratic system of government. A major part of the course is on safety and its value to economic operations and employee morale.

**Construction Management and Technology 230** (4)  
**Quality Control and Cost Control**  
3 hrs. Lec.  
3 hrs. Lab.

*Prerequisites:* *Construction Management and Technology 130, Construction Management 134 or equivalent construction field experience*. A course designed to study standard quality control procedures utilized in the construction industry including laboratory and field testing. The student will also learn to separate, analyze and evaluate construction costs and methods to control them. Laboratory fee required.

**Construction Management and Technology 231** (3)  
**Contracts and Specifications**  
2 hrs. Lec.  
3 hrs. Lab.

The legal, ethical, political, architectural engineering and economic implications of contracts and procedures for soliciting, estimating, proposing, accepting, administering and changing various contracts and specifications. A study of the bid and contract documents related to construction jobs. Laboratory fee required.

**Construction Management and Technology 233 (3)**

**Estimating**

**2 hrs. Lec.**

**4 hrs. Lab.**

*Prerequisite: Construction Management and Technology 230.* A basic course for construction estimators. The student studies quantity surveying, interpretation and uses of bid documents. He learns to compute and assemble labor and material costs, unit and lump sum costs and preliminary and final estimates. Laboratory fee required.

**Construction Management and Technology 237 (4)**

**Soils, Foundations, and Reinforced Concrete**

**3 hrs. Lec.**

**3 hrs. Lab.**

*Prerequisite: Construction Management and Technology 130 or equivalent.* To develop an understanding of soil characteristics and the qualities required of a good foundation. The student will study placement of concrete, reinforcing steel, forms and concrete mixtures indicated in plans and specifications. This course includes standard quality control tests performed on soil and concrete. Laboratory fee required.

**Construction Management and Technology 238 (4)**

**Construction Management II**

**3 hrs. Lec.**

**3 hrs. Lab.**

*Prerequisite: Construction Management and Technology 138.* A course in project planning and development in construction which involves feasibility studies, financing, planning, programming, design and construction. Office engineering techniques are investigated through the solutions of problems related to construction projects.

**Construction Management and Technology 239 (3)**

**Building Codes and Safety**

**3 hrs. Lec.**

Studies various construction methods and procedures and relates them to the various building codes. Presents organizations, functions and operations of inspection groups and studies the relationship between inspection and construction personnel. Field trips to inspection

organizations will be made. Safety practices will be studied, and the student will become familiar with the recently passed Federal "Occupational Safety and Health Act."

**Developmental Mathematics**

**090 (3)**

**Pre-Algebra Mathematics**

**3 hrs. Lec.**

This course is designed to develop an understanding of fundamental operations using whole numbers, fractions, decimals and percentages and to strengthen basic skills in mathematics. The course is planned primarily for students who need to review basic mathematical processes. It is the first step in the math sequence and includes an introduction to algebra.

**Developmental Mathematics**

**091 (3)**

**Elementary Algebra**

**3 hrs. Lec.**

*Prerequisite: Developmental Mathematics 090 or equivalent.* The course is designed to develop an understanding of first year algebra. It includes special products and factoring, fractions, equations, graphs, functions, and an introduction to geometry. The sequence Developmental Mathematics 090-091 and Developmental Mathematics 093 is preparatory to Mathematics 101 or Mathematics 104 as well as a foundation for technical mathematics.

**Developmental Mathematics**

**093 (3)**

**Intermediate Algebra**

**3 hrs. Lec.**

*Prerequisite: One year high school algebra or Developmental Mathematics 091.* Includes the terminology of sets, properties of real numbers, fundamental operations on polynomials and fractions, products, factoring, radicals, and rational

exponents. Also covered are solutions of linear, fractional, quadratic, and systems of linear equations, coordinate systems, and graphing.

**Developmental Reading 090 (3)**  
**Techniques of Reading/Learning**  
**3 hrs. Lec.**

Developmental Reading 090 is designed to meet individual needs for proficiency in reading comprehension, vocabulary development, study skills, and reading for success in academic areas and career advancement. It emphasizes learning how to learn and includes reading/learning experiences developed to strengthen the total educational background of each student. Developmental Reading 090 and Developmental Reading 091 are offered in a laboratory setting employing varied instructional methods.

**Developmental Reading 091 (3)**  
**Techniques of Reading/Learning**  
**3 hrs. Lec.**

Developmental Reading 091 is designed to meet individual needs for proficiency in reading comprehension, vocabulary development, study skills, and reading for success in academic areas and career advancement. It emphasizes learning how to learn and includes reading/learning experiences developed to strengthen the total educational background of each student. Developmental Reading 090 and Developmental Reading 091 are offered in a laboratory setting employing varied instructional methods.

**Developmental Writing 090 (3)**  
**Writing**  
**3 hrs. Lec.**

Writing 090 emphasizes the diagnosis and correction of deficiencies in basic writing skills. Spelling, grammar, vocabulary improvement, and principles of sentence and paragraph structure (as well as experience in organization for composition) are taught in a laboratory utilizing individualized instruction techniques.

**Developmental Writing 091 (3)**  
**Writing**  
**3 hrs. Lec.**

Writing 091 is a sequel to Writing 090 and concentrates on the composition process; therefore, it is important to develop the student's skills of organization, transition and revision. His program of composition will vary according to his individual needs, which may include brief, simple forms as well as more complex critical and research writing.

**Developmental Writing 092 (1)**  
**Writing Lab**  
**3 hrs. Lab.**

Writing Lab 092 is a workshop to facilitate writing success for course work and other individual interests. Students are given instruction and supervision in written assignments, including the research paper, and in editing for mechanical effectiveness.

**Drafting 182 (2)**  
**Technician Drafting**  
**1 hr. Lec.**  
**3 hrs. Lab.**

A beginning drafting course to enable students to read and interpret engineering drawings. Topics covered include multi-view drawings, pictorial drawings, dimensioning, measurement with scales, schematic diagrams and printed circuit boards.

**Drafting 183 (4)**  
**Basic Drafting**  
**2 hrs. Lec.**  
**6 hrs. Lab.**

A beginning course for students who have had little or no previous experience in drafting. The principal objectives are basic understanding of orthographic projection; skill in orthographic, axonometric, and oblique sketching and drawing; lettering fundamentals; applied geometry; fasteners; sectioning; tolerancing; auxiliaries; experience in using handbooks and other resource materials and development of design skills. U.S.A.S.I., government, and industrial standards are used. Emphasis is placed on both mechanical skills and graphic theory.

**Drafting 184** (3)  
**Intermediate Drafting**  
 2 hrs. Lec.  
 4 hrs. Lab.  
*Prerequisite: Drafting 183.* The instructional units provide additional understanding of drafting problems, place emphasis on the design function, and introduce several specialized drafting areas that are valuable for the designer. This course includes the detailing and assembling of machine parts, gears and cams, jigs and fixtures, a study of metals and metal forming processes, drawing room standards and reproduction of drawings. The student is assigned to work that requires him to make complete and accurate detail and assembly drawings. Laboratory fee required.

**Drafting 185** (4)  
**Architectural Drafting**  
 2 hrs. Lec.  
 6 hrs. Lab.  
*Prerequisite: Drafting 183 or equivalent.* A course in basic architectural drafting beginning with the development of techniques in architectural lettering, drafting of construction details, using appropriate material symbols and conventions. Working drawing including plans, elevations, sections and details as prepared for building construction including steel, concrete, and timber structural components will be emphasized. Reference materials will be used to provide the draftsman with skills in locating data and in using handbooks.

**Drafting, Basic**  
 (See Drafting 183)

**Economics 201** (3)  
**Principles of Economics I**  
 3 hrs. Lec.  
 The fundamental principles of macroeconomics. Economic organization, national income determination, money and banking, monetary and fiscal policy, economic fluctuations and growth. Sophomore standing recommended.

**Economics 202** (3)  
**Principles of Economics II**  
 3 hrs. Lec.  
*Prerequisite: Economics 201 or the consent of the instructor.* The fundamental principles of microeconomics. Theory of demand, supply, and price of factors; income distribution; theory of the firm. Emphasis also on international economics and contemporary economic problems.

**Electro-Mechanical Technology**  
**136** (3)  
**Mechanisms and Linkages**  
 2 hrs. Lec.  
 3 hrs. Lab.  
*Prerequisite: Mathematics 195 or equivalent.* An introduction to mechanism and linkage elements of electro-mechanical systems. Individual mechanisms and linkages are studied in terms of functions and operating characteristics. Selection of components from manufacturers' literature based on design of test data. Mechanical elements are treated in integrated electro-mechanical systems in laboratory work and their effects on input-output characteristics are analyzed.

**Electro-Mechanical Technology**  
**138** (3)  
**Mechanisms and Drives**  
 2 hrs. Lec.  
 3 hrs. Lab.  
*Prerequisite: Electro-Mechanical Technology 136.* Devoted to the study of mechanism and drive elements of electro-mechanical systems. Individual mechanisms and drives are studied in terms of functions and operating characteristics. Selection of components from manufacturers' literature based on design of test data. Drive mechanisms are treated in integrated electro-mechanical systems in laboratory work and their effects on input-output characteristics are analyzed.



## Electro-Mechanical Technology

229

Analog and Digital Circuits

3 hrs. Lec.

3 hrs. Lab.

*Prerequisite:* Electronic Technology 193 or equivalent. This course treats more advanced electronic devices and circuits with primary emphasis on semiconductors. Both analog and digital circuit fundamentals are discussed. The use of these circuits in controls, sensing, and testing is stressed. Attention in the laboratory shifts to the application and characteristics of these circuits. Emphasis is placed on the application and analysis of solid state circuits in electro-mechanical devices with increased reliance on pre-assembled or commercially available units. Laboratory fee required.

(4)

## Electro-Mechanical Technology

230

Electro-Mechanical  
Transducers and Systems

2 hrs. Lec.

3 hrs. Lab.

*Prerequisite:* Electronic Technology 191, or concurrent enrollment in Electronic Technology 191. A course devoted to a detailed study of integrated electro-mechanical devices, controls and systems. Emphasis is on basic understanding of functions in physical systems. This course provides a foundation for a wide variety of scientific and industrial applications and interdisciplinary systems. Electronic and mechanical sensing devices, input-output devices, control devices and information transmitting devices are studied and their system relationship investigated in classroom and laboratory. Laboratory fee required.

(3)

## Electro-Mechanical Technology

231

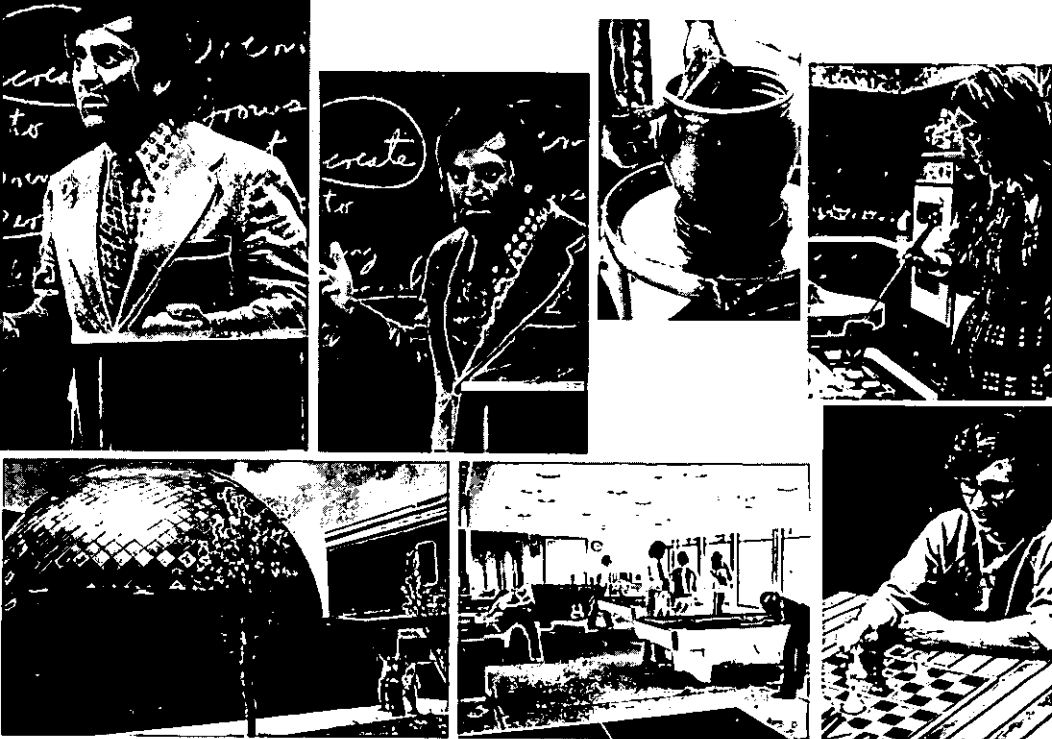
Automatic Control Systems

2 hrs. Lec.

3 hrs. Lab.

*Prerequisite:* Electro-Mechanical Technology 230. This course deals with the use of control devices, control principles,

(3)



timing, and types of controllers. Characteristics of automatic control systems are discussed. These will include: open and closed loop control systems, feedback, stability and the components and devices applied to these systems. Laboratory sessions involve testing and calibration of components and devices; circuit analysis and response characteristics; assembling, adjusting, and troubleshooting of integrated electro-mechanical systems. Laboratory fee required.

### **Electro-Mechanical Technology 233 (3)**

#### **Electrical Machinery**

**2 hrs. Lec.**

**3 hrs. Lab.**

*Prerequisite: Electronic Technology 191 or concurrent enrollment in Electronic Technology 191.* This course is designed to provide both theoretical and functional knowledge of power electricity, including AC and DC machines. Both electrical and mechanical aspects of electrical machinery and controls are stressed. The laboratory provides hands-on experience in operation of electrical machinery, quantitative analysis of performance characteristics, electrical measurements on power circuits and equipment as well

as experimental demonstration of principles discussed in class. Safety practices for the protection of equipment and personnel are stressed. Laboratory fee required.

### **Electro-Mechanical Technology 236 (3)**

#### **Instrumentation and Testing**

**2 hrs. Lec.**

**3 hrs. Lab.**

*Prerequisite: Electronic Technology 191 or concurrent enrollment in Electronic Technology 191.* In this course the student will be introduced to the various aspects of industrial instrumentation and testing. The characteristics of various instruments used in instrumentation and testing will be investigated both in theory and in practical laboratory applications. The static and dynamic characteristics of measuring devices used in such areas as heat flow, liquid flow, electronic control, pressure and related areas in instrumentation, control, and materials handling. Laboratory fee required.

## **Electro-Mechanical Technology**

**237 (3)**

### **Electro-Mechanical Systems**

**2 hrs. Lec.**

**3 hrs. Lab.**

*Prerequisite:* *Electro-Mechanical Technology 230.* An integrated course which ties together all aspects of the curriculum. This laboratory emphasizes analysis and troubleshooting of operational electro-mechanical systems and processes in which faults are intentionally introduced. Systems studied are derived from a wide range of multi-discipline industrial applications. The student is required to demonstrate a substantial degree of independence in problem identification, problem solving, and reporting techniques. There is continued emphasis on safety in both written and oral communication. Laboratory fee required.

## **Electronics Technology**

**190 (4)**

### **D.C. Circuits and**

### **Electrical Measurements**

**3 hrs. Lec.**

**3 hrs. Lab.**

*Prerequisite:* *Credit or concurrent enrollment in Mathematics 195 or equivalent.* Combines mathematical theory and laboratory fundamentals in direct current circuits. Elementary principles of magnetism, electric concepts and units, diagrams, resistance, series and parallel circuits, simple meter circuits, conductors, and insulators will be emphasized. Laboratory fee required.

## **Electronics Technology**

**191 (4)**

### **A.C. Circuits**

**3 hrs. Lec.**

**3 hrs. Lab.**

*Prerequisites:* *Electronics Technology 190 and Mathematics 195.* Devoted to the study of fundamental theories of alternating current and their applications in various circuits. Laboratory experiments will include power factor, sine wave analysis, resonant circuits, capacitance, inductance,  $Q$  of coils, electromagnetism, and resistance.

## **Electronics Technology**

**193 (4)**

### **Active Devices**

**3 hrs. Lec.**

**3 hrs. Lab.**

*Prerequisites:* *Electronics Technology 190 and credit in or taken concurrently with Electronics Technology 191.* This is a course in semiconductors (active devices). This course will cover topics such as the physical structure, parameters, linear and non-linear characteristics, and operation action as applied to amplifier, rectifiers, and electronic switching devices. Laboratory fee required.

**Engineering 101 (2)**

### **Engineering Analysis**

**2 hrs. Lec.**

The past, present, and future role of the engineer in society; branches and specialties in engineering; introduction to engineering analysis affording practice in analyzing and solving engineering problems; computational methods and devices, to include slide rule theory and techniques; an introduction to numerical methods and computer programming.

**Engineering 105 (3)**

### **Engineering Graphics**

**2 hrs. Lec.**

**4 hrs. Lab.**

Provides the basic graphic fundamentals necessary for engineering communications and engineering design. Teaches standard engineering graphical techniques, auxiliaries, sections, graphical analysis, pictorial and working drawings in a framework which introduces the student to rational processes of creative engineering. Laboratory fee required.

**Engineering 106** (3)  
**Descriptive Geometry**  
2 hrs. Lec.  
4 hrs. Lab.

*Prerequisite: Drafting 183 or Engineering 105.* Provides training in the visualization of three-dimensional structures, and in accurately representing these structures in drawings by analyzing the true relationship between points, lines, and planes. Attention is given to the generation and classification of lines and surfaces, as well as intersections, developments, auxiliaries and revolutions. Laboratory fee required.

**Engineering 107** (3)  
**Engineering Mechanics I**  
3 hrs. Lec.

*Prerequisite: Mathematics 126 or registration therein.* A study of the statics of particles and rigid bodies with vector mathematics in three-dimensional space. Principles of the equilibrium of forces and force systems, resultants, free body diagrams, friction, centroids and moments of inertia, virtual work and potential energy are used. Distributed forces, centers of gravity, analysis of structures, beams and cables are treated.

**Engineering 186** (2)  
**Manufacturing Processes**  
1 hr. Lec.  
2 hrs. Lab.

Introduces the student enrolled in technical programs to the many steps involved in manufacturing a product. This is accomplished by involving the class in producing a device with precision. The student gains practical experience with working drawings, a variety of machine tools, and the assembly of components. The student is made aware of the factors involved in selecting materials and economical utilization of materials. Laboratory fee required.

**Engineering 187** (2)  
**Manufacturing Processes**  
1 hr. Lec.  
2 hrs. Lab.

*Prerequisite: Engineering 186 or acceptable industrial experience.* A continuing study of metal working processes, chipless machining, threads, gears, jigs, fixtures, surface treatments, automation and operations planning. Laboratory fee required.

**Engineering 188** (3)  
**Statics**  
3 hrs. Lec.

*Prerequisite: Mathematics 196.* A study of the forces acting on rigid bodies using vector mathematics in three dimensional space. The students will learn the principles of resultants and equilibrium of force systems, trusses and three-force members, friction and centroids.

**Engineering 189** (3)  
**Characteristics and Strengths of Materials**  
3 hrs. Lec.

*Prerequisite: Engineering 188.* A study of the characteristics and strengths of materials as they relate to loads, stresses, and deformities within the elastic range.

**Engineering 201** (3)  
**Engineering Mechanics II**  
3 hrs. Lec.

*Prerequisites: Engineering 107, Mathematics 227 or registration therein.* Dynamics — the study of linear and angular motions of particles and rigid bodies resulting from applied forces; time, mass, velocity, acceleration, work and energy, impulse and momentum, kinematics.

**Engineering 202** (3)  
**Engineering Mechanics of Materials**  
3 hrs. Lec.

*Prerequisites: Engineering 107, Mathematics 227 or registration therein.* A study of forces, deformation and material properties of simple structural elements. Concepts of stress, strain and elastic properties are presented. Analysis of thin walled vessels, members loaded in tension, torsion, bending and shear, combined loadings and stability conditions are included. Behavioral phenomena such as fracture, fatigue and creep are introduced.

**Engineering 203** (3)  
**Engineering Production Techniques**  
 1 hr. Lec.  
 5 hrs. Lab.  
*Prerequisites: Engineering 105 or consent of instructor.* Standard machining of metals, layout, turning, boring, shaping, drilling, threading, milling, and grinding. Manufacturing of interchangeable parts, fixtures and jigs with theoretical applications. Laboratory fee required.

**Engineering 204** (3)  
**Electrical Systems Analysis**  
 3 hrs. Lec.  
*Prerequisite: Mathematics 227 or registration therein.* Introduction to electrical science; fundamental electrical systems and signals; basic concepts of electricity and magnetism with mathematical representation and computation.

**English 101** (3)  
**Composition and Expository Reading**  
 3 hrs. Lec.  
 Writing and reading activities designed to help the student write more clearly and effectively and to read more enjoyably and efficiently. This course is offered on campus and via television.

**English 102** (3)  
**Composition and Literature**  
 3 hrs. Lec.  
*Prerequisite: English 101.* Writing and reading activities in poetry, drama, the short story, and the novel designed to increase the student's understanding and enjoyment of good literature.

**English in the Sophomore Year**  
 (English 201, 202, 203, 204, 205, 206, 215, and 216 are independent units of three credit hours each, from which any combination of two will be selected to satisfy degree requirements in sophomore English. Student should consult catalog of the senior college he expects to attend for requirements in his major before choosing English courses.)

**English 201** (3)  
**British Literature**  
 3 hrs. Lec.  
*Prerequisite: English 102.* A study of significant works of British literature from the Old English Period through the eighteenth century.

**English 202** (3)  
**British Literature**  
 3 hrs. Lec.  
*Prerequisite: English 102.* Study of important works from the Romantic Period to the present.

**English 203** (3)  
**World Literature**  
 3 hrs. Lec.  
*Prerequisite: English 102.* Reading and analysis of significant continental European works from the Greek Classical Period through the Renaissance.

**English 204** (3)  
**World Literature**  
 3 hrs. Lec.  
*Prerequisite: English 102.* Study of ten to twelve important post-Renaissance works of continental Europe, England, and America.

**English 205** (3)  
**American Literature**  
 3 hrs. Lec.  
*Prerequisite: English 102.* Study of the works of the important writers before Whitman in the context of their times.

**English 206** (3)  
**American Literature**  
 3 hrs. Lec.  
*Prerequisite: English 102.* Reading and analysis of representative works from Whitman to the present.

**English 209 (3)**

**Creative Writing**

**3 hrs. Lec.**

*Prerequisite: English 102.* Writing of fiction: short story, poetry and short drama.

**English 215 (3)**

**Studies in Literature**

**3 hrs. Lec.**

*Prerequisite: English 102.* The student will read, analyze and discuss selections in literature unified by period, *genre* or theme. Course titles and descriptions will be available each semester prior to registration.

**English 216 (3)**

**Studies in Literature**

**3 hrs. Lec.**

*Prerequisite: English 102.* The student will read, analyze and discuss selections in literature unified by period, *genre* or theme. Course titles and descriptions will be available each semester prior to registration. English 216 courses differ from those offered in English 215.

**Fluid Power Technology 131 (4)**

**Fluid Power Fundamentals**

**3 hrs. Lec.**

**3 hrs. Lab.**

Instruction is designed to give the student a sound knowledge and understanding of basic fluid power principles. Development and growth of hydraulics, the advantages and problems of hydraulic set-ups, and basic physical properties of fluids are all presented. Construction and principles of operation of basic pneumatic components and circuits are included in the course. Laboratory experiments are performed to measure fluid flow characteristics, to test basic valves and pumps, and to build up and operate both hydraulic and pneumatic basic circuits.

**Fluid Power Technology 132 (4)**

**Applied Fluid Mechanics**

**3 hrs. Lec.**

**3 hrs. Lab.**

This course stresses the application of working formulas related to the physical properties of fluids, the flow of fluids in conductors, the measurement of fluid flow, and other considerations dealing with the physical laws of compressible and incompressible fluids. Emphasis is

directed to those laws which govern the behavior of fluids when used for power transmission.

**Fluid Power Technology 221 (3)**

**Fluid Power Circuitry**

**2 hrs. Lec.**

**3 hrs. Lab.**

This course covers the development of various types of standardized hydraulic circuits used in industry. The discussion includes circuits which are manually, mechanically and pilot-operated. Special emphasis is placed on the selection of valves with respect to their operational characteristics. Laboratory fee required.

**Fluid Power Technology 222 (3)**

**Fundamentals of Pneumatics**

**2 hrs. Lec.**

**3 hrs. Lab.**

Instruction is designed to give the student a sound understanding of the constructional features and principles of operation of pneumatic power units, pneumatic controls, and pneumatic cylinders. In addition, he becomes familiar with the layout and operation of pneumatic circuits including power operated holding devices, safety circuits, and remote controlled circuits. Circuits studied are those which are manually, mechanically, pilot, and solenoid operated. Laboratory fee required.

**Fluid Power Technology 223 (3)**

**Fluid Power Circuit Design**

**2 hrs. Lec.**

**3 hrs. Lab.**

This course includes calculations to determine cylinder sizes, pump capacities, valve sizes, transmission sizes, and velocities through various parts of the circuits. The student evaluates certain assigned problems, designs the circuit, calculates the required system pressures and component sizes, lists the components required, and determines the cost. The circuitry problems include those which are remote-controlled and solenoid-operated. Laboratory fee required.

**Fluid Power Technology 224 (3)****Fluid Power Systems Analysis****2 hrs. Lec.****3 hrs. Lab.**

A course designed to analyze and evaluate the requirements of circuits to perform specified functions as new fluid power applications arise. Laboratory tests are made to determine the performance characteristics of pumps, motors, transmissions, valves, and actuators in terms of horsepower, torque efficiencies, and frictional losses. The data obtained are used to set up performance curves as they apply to specific components. Laboratory fee required.

**Fluid Power Technology 235 (3)****Instrumentation and Testing****2 hrs. Lec.****3 hrs. Lab.**

Industrial instrumentation and characteristics of instruments; static and dynamic characteristics, heat transfer and measuring devices, control of fluid systems, analysis and application of control instruments. Laboratory fee required.

**French 101 (4)****Beginning French****3 hrs. Lec.****2 hrs. Lab.**

Essentials of grammar, easy idiomatic prose, stress on pronunciation, comprehension, and oral expression. Laboratory fee required.

**French 102 (4)****Beginning French****3 hrs. Lec.****2 hrs. Lab.**

*Prerequisite: French 101 or equivalent.* Continuation of French 101 with emphasis on idiomatic language and complicated syntax. Laboratory fee required.

**French 201 (3)****Intermediate French****3 hrs. Lec.**

*Prerequisite: French 102 or consent of instructor.* Reading, composition, grammar review and intense oral practice.

**French 202 (3)****Intermediate French****3 hrs. Lec.**

*Prerequisite: French 201 or equivalent.* Continuation of French 201 with reading selections drawn more directly from contemporary literary sources. Composition.

**French 203 (3)****Introduction to French****Literature****3 hrs. Lec.**

*Prerequisite: French 202 or consent of the instructor.* Readings in French literature, history, culture, art and civilization.

**French 204 (3)****Introduction to French****Literature****3 hrs. Lec.**

*Prerequisite: French 202 or consent of the instructor.* Readings in French literature, history, culture, art and civilization.

**Geography 101 (3)****Geography (Physical)****3 hrs. Lec.**

A survey of the physical makeup of the earth: weather and climate, topography, plant and animal life, land and sea. Attention is directed toward the earth in space, use of maps and charts and place geography.

**Geography 102 (3)****World Geography (Economic)****3 hrs. Lec.**

A study of the relation of man to his environment and his utilization of natural resources, dealing with problems of production, manufacture, and distribution of goods throughout the world. The aspects of primitive subsistence and degrees of commercialism are considered.

**Geography 103 (3)****World Geography (Cultural)****3 hrs. Lec.**

Development of regional variations of culture, including the distribution of races, religions, languages, and aspects of material culture, with emphasis on origins and diffusion.

**Geology 101** (4)  
**General Geology (Physical)**  
3 hrs. Lec.  
3 hrs. Lab.  
Study of earth materials and processes for science and non-science majors. Includes examination of the earth's interior, magnetism, setting in space, minerals, rocks, structure and geologic processes. Laboratory fee required.

**Geology 102** (4)  
**General Geology (Historical)**  
3 hrs. Lec.  
3 hrs. Lab.  
*Prerequisite: Geology 101.* Study of earth materials and processes within a time perspective. For science and non-science majors. Utilizes fossils, geologic maps, and field studies to interpret geologic history. Laboratory fee required.

**German 101** (4)  
**Beginning German**  
3 hrs. Lec.  
2 hrs. Lab.  
Essentials of grammar, easy idiomatic prose, stress on pronunciation, comprehension, and oral expression. Laboratory fee required.

**German 102** (4)  
**Beginning German**  
3 hrs. Lec.  
2 hrs. Lab.  
*Prerequisite: German 101 or equivalent.* Continuation of German 101 with emphasis on idiomatic language and complicated syntax. Laboratory fee required.

**German 201** (3)  
**Intermediate German**  
3 hrs. Lec.  
*Prerequisite: German 102 or equivalent or consent of instructor.* Reading, composition, grammar review and intense oral practice.

**German 202** (3)  
**Intermediate German**  
3 hrs. Lec.  
*Prerequisite: German 201 or equivalent.* Continuation of German 201 with reading selections drawn more directly from contemporary literary sources. Composition.

**Government 201** (3)  
**American Government**  
3 hrs. Lec.  
*Prerequisite: Sophomore standing recommended.* An introduction to the study of political science; origin and development of constitutional democracy (United States and Texas); federalism and intergovernmental relations; local government; parties, politics and political behavior. Satisfies requirements for Texas State Teacher Certification. This course is offered on campus and via television.

**Government 202** (3)  
**American Government**  
3 hrs. Lec.  
*Prerequisite: Government 201 and sophomore standing recommended.* A study of the United States and Texas legislative process; the executive and the bureau structure; the judicial process, civil rights and liberties, domestic policies. Other topics include foreign relations and national defense. Satisfies requirements for Texas State Teacher Certification.

**History 101** (3)  
**History of the United States**  
3 hrs. Lec.  
A general presentation of United States history, commencing with the European background and first discoveries. The pattern of exploration, settlement and development of institutions is followed throughout the colonial period and the early national experience to 1877.

**History 102** (3)  
**History of the United States**  
3 hrs. Lec.  
*Prerequisite: History 101 recommended.* A survey of the unfolding of United States history from the Reconstruction Era to the present day. The study includes social, economic and political aspects of American life and follows the development of the United States as a world power.

**History 105****(3)****Western Civilization****3 hrs. Lec.**

A survey of the background for development of civilization in the West from ancient time through the Enlightenment; the Mediterranean world including Greece and Rome; the Middle Ages and the beginnings of modern history. Particular attention is paid to Renaissance, Reformation, the rise of the national state, the development of parliamentary government and the influences of European colonization.

**History 106****(3)****Western Civilization****3 hrs. Lec.**

The unfolding of the pattern of modern western civilization from the Enlightenment to current times. A study of the Age of Revolution and the beginnings of industrialism, the nineteenth century and the social, economic, and political factors of recent world history.

**History 110****(3)****The Heritage of Mexico****3 hrs. Lec.**

This course presents major historical developments and personalities which have shaped the Mexican nation, with emphasis on cultures and customs. Beginning with the peoples who inhabited the country before the Spanish conquest, the course leads to modern Mexico, emphasizing the historical relations between Mexico and the United States and the role of the Mexican-American in the contemporary United States. The student may register for either Anthropology 110 or History 110.

**History 112****(3)****Latin American History****3 hrs. Lec.**

This course presents major historical developments and personalities which have influenced the course of Latin American history, with examination of Indian cultures, the conquistadors, Spanish administration, the wars of independence, relations with the United States and concludes with a brief survey of relevant contemporary problems.

**History 120****(3)****Afro-American History****3 hrs. Lec.**

A study of the role of the Negro in American history; overview of the slave trade and slavery in the United States; focus on contributions of the Negro in the U. S. from colonial times. Emphasis on political, economic and sociological factors of the 20th century.

**History 204****(3)****American Minorities****3 hrs. Lec.**

*Prerequisite: Sociology 101 and/or six hours of U.S. history recommended.* The principle minority groups in American society; their sociological significance and historic contributions. An emphasis will be placed on problems of intergroup relations, social movements and related social changes occurring on the contemporary American scene. The student may register for either History 204 or Sociology 204.

**Horticulture Technology 131****(4)****Horticulture Science****3 hrs. Lec.****3 hrs. Lab.**

This course covers the science and practices underlying ornamental horticulture, stressing the culture and growth of plants as well as skills used in landscaping, plant production, and nursery propagation.

**Horticulture Technology 132****(2)****Landscape Plant Materials I****1 hr. Lec.****3 hrs. Lab.**

This course covers the identification and classification of landscape trees and the study of their characteristics and landscape uses. Laboratory fee required.

**Horticulture Technology 133 (2)****Landscape Plant Materials II****1 hr. Lec.****3 hrs. Lab.**

Emphasis in this course is on the identification and classification of landscape shrubs, vines and ground covers and the study of their characteristics and landscape uses.

**Horticulture Technology 136 (3)****Greenhouse Horticulture****2 hrs. Lec.****3 hrs. Lab.**

*Prerequisite: Horticulture Technology 131 or approval of the instructor.* This course covers the construction and operation of such ornamental horticulture production structures as greenhouses, plastic houses, lath houses, hotbeds, and coldframes. Emphasis is given to effective environmental control and efficiency in production operations. Laboratory fee required.

**Horticulture Technology 140 (3)****Herbaceous and Exotic Plants****2 hrs. Lec.****3 hrs. Lab.**

This course is concerned with identification, culture, and use of ornamental herbaceous plants grown in homes, gardens and conservatories. Laboratory fee required.

**Horticulture Technology 141 (4)****Floral Design****2 hrs. Lec.****6 hrs. Lab.**

A study of the basic principles of floral art, flowers and other design materials, and special and unusual floral designs. Laboratory fee required.

**Horticulture Technology 231 (4)****Landscape Design I****2 hrs. Lec.****6 hrs. Lab.**

*Prerequisite: Horticulture Technology 133 or approval of the instructor.* This course gives the basic principles of landscape design and plant selection as used in relation to residential landscapes. Laboratory fee required.

**Horticulture Technology 232 (4)****Landscape Planning and****Management****2 hrs. Lec.****6 hrs. Lab.**

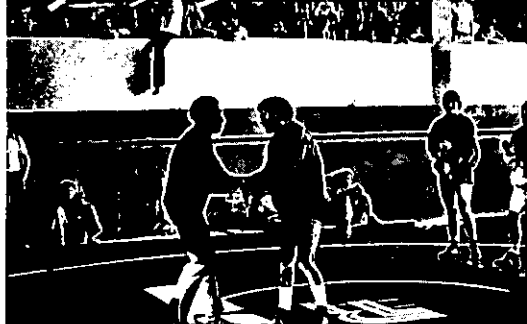
*Prerequisite: Horticulture Technology 231.* This course provides advanced study in landscape business operations and in the application of landscape principles. It is a study of the structure of the landscape horticulture industry, management practices, marketing methods and advanced skills in landscape planning. Laboratory fee required.

**Horticulture Technology 233 (3)****Nursery Operations****2 hr. Lec.****3 hrs. Lab.**

*Prerequisite: Horticulture Technology 136.* In this course emphasis is placed on the propagation of landscape plants, transplanting and proper care in the nursery row. Laboratory fee required.

**Horticulture Technology 234 (3)****Ornamental Crop Production****2 hrs. Lec.****3 hrs. Lab.**

*Prerequisite: Horticulture Technology 136.* The course stresses advanced methods in nursery and greenhouse crop production. Emphasis is given to container nursery production, turf grass production, cut flower and pot plant production and the field propagation and production of nursery stock. Laboratory fee required.



### **Horticulture Technology 235 (3)** **Landscape Development**

**1 hr. Lec.**

**6 hrs. Lab.**

*Prerequisite: Horticulture Technology 131 or approval of instructor.* This course covers the planning of landscape operations, the proper care of landscape plants, preparation of garden soil, and construction of landscape structures. It includes pruning and training of trees and shrubs, the culture of turf grass and installation of drainage and irrigation systems. Laboratory fee required.

### **Horticulture Technology 236 (4)** **Florist Management**

**2 hrs. Lec.**

**6 hrs. Lab.**

*Prerequisite: Horticulture Technology 141.* This course is an advanced study of business operations and design skills in the retail florist business. It is a study of the structure of the florist industry, management practices, marketing methods and advanced techniques in floral art. Laboratory fee required.

### **Horticulture Technology 239 (2)** **Applied Horticulture Training**

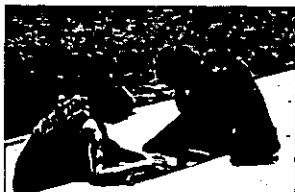
**10 hrs. Lab.**

*Prerequisites: Horticulture Technology 141 or 231 and concurrent enrollment in Horticulture Technology 240.* This course gives the student first hand experiences in the occupational aspects of ornamental horticulture. An internship in ornamental horticulture in such areas as park maintenance, landscape, construction, landscape maintenance, florist operations, and wholesale and retail sales is provided each student. An activity is selected by the student that will meet his future employment goals. All experiences are closely supervised and directed toward the attainment of significant occupational goals.

### **Horticulture Technology 240 (2)** **Seminar in Horticulture Occupations**

**2 hrs. Lec.**

*Prerequisite: Concurrent enrollment in Horticulture Technology 239.* This course presents the student with problems and problem-solving methods used in the performance of supervisory jobs in various fields of ornamental horticulture. Emphasis is placed on analysis of skills and the supervision and training of ornamental horticulture workers.



### **Human Development 102**

#### **Orientation**

**1 hr. Lec.**

This is a course to help the student be successful in college. The student will make an individual contract with the instructor. Student experiences will include appropriate subject "packages" such as "Improving Your Vocabulary," "How to Take Notes," "Study Skills," and "Listening Skills." Also, an evaluation session with a counselor is included. A "package" may be made up of programmed materials, filmstrips, tapes, slides, or other appropriate materials.

### **Human Development 104**

#### **Educational and Career Planning**

**3 hrs. Lec.**

A course in human development designed to identify problem areas of concern to the student who is entering college for the first time and to develop approaches to problem solving in relation to educational and career decisions through the process of group counseling. Activities are planned to promote mature interpersonal involvement within the group, the college, and the community through an understanding of the causes and effects of one's own behavior in relation to himself and others.

(1)

### **Human Development 105**

#### **Basic Processes of Interpersonal Relationships**

**3 hrs. Lec.**

A course in human development designed to explore interpersonal relations through a study of theory and concepts of small group processes and actual participation in the human experience. Students will be given an opportunity to participate in experiences planned to increase one's sensitivity to self and to others. A variety of activities are planned, partly by each class, designed to meet certain specific human needs of the students in the class. Open to freshmen and sophomores.

(3)

### **Human Development 106**

#### **Personal and Social Growth**

**3 hrs. Lec.**

A course which deals with human development from the standpoint of the interaction between a person and his society. Understanding of self, the influences of society contributing to the development of self, and the success of the individual within a society are investigated. Adjustment to family, school, and society is developed.

(3)

**Human Development 107 (3)**  
**Developing Leadership Behavior**  
**3 hrs. Lec.**

*Prerequisite: Consent of the instructor.* A course in human development designed to meet specific needs of students through participation in activities. The focus of this course will be on the development of group dynamics, leadership, and human relations skills. Students will be required to participate in the management experience of planning, execution, and evaluation of activities. The theoretical body of knowledge regarding leadership development and growth in group dynamics and management skills will be emphasized.

**Human Services 131 (3)**  
**Orientation to Human Services**  
**3 hrs. Lec.**

A brief survey of historical development of social services in our society. Emphasis is on current needs, practices and projected changes. Will involve contact with community agencies and give the student the opportunity to test his interest in people-to-people occupations.

**Human Services 134 (3)**  
**Human Services Seminar**  
**3 hrs. Lec.**

A continuation of Human Services 131 with an emphasis on class discussion, sharing of experiences. A problem-solving approach to individual, family, and community problems.

**Human Services 231 (3)**  
**Procedures in Social Work**  
**3 hrs. Lec.**

*Prerequisites: Sociology 101, Sociology 204, concurrent enrollment in Human Services 242 – field work.* The processes of social treatment used by social workers with individuals, groups, or communities. Concepts, principles, and ethics utilized by social service workers and questions of motivation, acceptance, and attitude. Techniques of listening, observing, and recording which aid the student in integrating his classroom and work experiences.

**Human Services 233 (3)**  
**Counseling for the**  
**Paraprofessional**  
**3 hrs. Lec.**

*Prerequisites: Permission of the coordinator, or concurrent enrollment in Human Services 242 – field work.* Introduction to the principles and practices of interviewing and counseling. Exploration of the effectiveness of these techniques as applied to paraprofessional experiences of counselor and group counselor aides, mental health or social worker associates, and other 'new careers' in people-to-people services.

**Human Services 235 (3)**  
**Introduction to Mental Health**  
**3 hrs. Lec.**

*Prerequisites: Psychology 105 or consent of coordinator, concurrent enrollment in Human Services 240 – field work.* Orientation to mental health, history, terminology, current concepts, ethical considerations. Analysis of behavior and environmental factors promoting mental health. Development of skills for identifying symptoms of maladjustment. Consideration of methods providing for emotional outlets and emotional control.

**Human Services 240** (2)  
**Work Experience in Human Services (Field Work)**  
2 hrs. Lec.  
10 hrs. Lab.

*Prerequisites:* Permission of coordinator of human services program and concurrent enrollment in Human Services 141 or 243. Practical occupational experience in a social agency. Ten hours per week on-job experience is required during second year of the program. Human Services 240 will be offered first semester; Human Services 242 will be offered second semester.

**Human Services 241** (2)  
**Work Experience Seminar**  
2 hrs. Lec.

*Prerequisites:* Concurrent enrollment in Human Services 240 or 242. Problem analysis and discussion of on-job experiences in a seminar with other students working in human services program, meeting two hours per week with program coordinator on campus. Human Services 241 will be offered first semester; Human Services 243 will be offered second semester.

**Human Services 242** (2)  
**Work Experience in Human Services (Field Work)**  
2 hrs. Lec.  
10 hrs. Lab.

*Prerequisites:* Permission of coordinator of human services program and concurrent enrollment in Human Services 241 or 243. Practical occupational experience in a social agency. Ten hours per week on-job experience is required during second year of the program. Human Services 240 will be offered first semester; Human Services 242 will be offered second semester.

**Human Services 243** (2)  
**Work Experience Seminar**  
2 hrs. Lec.

*Prerequisites:* Concurrent enrollment in Human Services 240 or 242. Problem analysis and discussion of on-job experiences in a seminar with other students working in human services program, meeting two hours per week with program coordinator on campus. Human Services 241 will be offered first semester; Human Services 243 will be offered second semester.

**Humanities 101** (3)  
**Introduction to the Humanities**  
3 hrs. Lec.

Through an examination of interrelated examples of man's creative achievements, the humanities course attempts to enlarge awareness and increase understanding of the nature of man and the values of human life.

**Journalism 101** (3)  
**Introduction to Mass Communications**  
3 hrs. Lec.

A survey course designed to provide students with a panoramic view of the field of mass communications and an understanding of the role of mass media in modern society. Not restricted to journalism majors.

**Journalism 102** (3)  
**News Gathering and Writing**  
2 hrs. Lec.  
3 hrs. Lab.

*Prerequisite:* Typing ability. Beginning reporting, study of types of news, leads, body treatment of story, feature in lead, facts, background, and practice in writing straight news story. Required for all journalism majors.

**Journalism 103** (3)  
**News Gathering and Writing**  
2 hrs. Lec.  
3 hrs. Lab.

*Prerequisite:* Journalism 102. Required for all journalism majors. A continuation of Journalism 102. The writing of more complex types of news stories. Specialized writing in the fields of sports, police news, markets, finance, society, amusements, government, and news of interest to women. Additional laboratory work on the student newspaper.

**Journalism 104**  
**Student Publications**  
**3 hrs. Lab.**

Individual staff assignments on the student newspaper in one of the following journalistic fields: writing, advertising, photography, cartooning, editing. Students are required to work at prescribed periods under supervision and must attend staff meetings. This course may not be taken for credit concurrently with Journalism 102 or 103. Credit limited to one unit per semester. **MAY BE REPEATED FOR A TOTAL OF THREE UNITS CREDIT.**

**Journalism 202**  
**Student Publications**  
**3 hrs. Lab.**

*Prerequisite: Permission of instructor.* Individual staff assignments on the student newspaper in one of the following journalistic fields: writing, advertising, photography, cartooning, editing. Students are required to work at prescribed periods under supervision and must attend staff meetings. This course may not be taken for credit concurrently with Journalism 102 or 103. Credit limited to one unit per semester.

**Journalism 204**  
**News Editing and Copyreading**  
**3 hrs. Lec.**

*Prerequisite: Journalism 102.* A detailed course in editing news for presentation in the newspaper and on radio and television. Special emphasis on writing headlines and laying out pages.

(1)

**Mathematics 101**  
**College Algebra**  
**3 hrs. Lec.**

*Prerequisite: Developmental Mathematics 093 or two years of high school algebra and satisfactory score on proficiency examination.* (Students registering for Mathematics 101 will be counseled individually by their instructors on the basis of background and the results of a proficiency examination given at the beginning of the semester. Every effort will be made to register the student in a mathematics course commensurate with his background, ability, and educational goals.)

Introduction to set operations, real and complex numbers, and operations on them. A study of the functions and relations most commonly needed, especially absolute value, polynomial functions, and rational functions, together with equations obtained from these functions. Includes linear, quadratic, and higher degree equations, and systems of equations. Accompanying these will be appropriate auxiliary topics such as determinants, Cramer's rule, some elementary aspects of the theory of equations, progressions, the binomial theorem, and algebraic proof.

**Mathematics 102**  
**Plane Trigonometry**  
**3 hrs. Lec.**

*Prerequisite: Mathematics 101.* Angular measure, functions of angles, derivation of formulae, identities, solution of triangles, equations, inverse trigonometric functions, logarithms, and complex numbers.

**Mathematics 106**  
**Elementary Functions and Coordinate Geometry**  
**5 hrs. Lec.**

*Prerequisite: Two years of high school algebra and one semester of trigonometry.* Study of the algebra of functions and coordinate geometry to include the following: polynomial and rational, exponential, logarithmic, trigonometric, functions of two variables, and analytical geometry which includes conics, transformation of coordinates, polar coordinates, and parametric equations.

(3)

(3)

(5)

**Mathematics 111 (3)****Math For Business and Economics I****3 hrs. Lec.**

*Prerequisite:* Two years of high school algebra or Developmental Mathematics 093. A study of equations and inequalities; functions to include: linear, quadratic, polynomial, rational, exponential, and logarithmic functions; and linear programming. Applications to business and economics problems are emphasized.

**Mathematics 112 (3)****Math for Business and Economics II****3 hrs. Lec.**

*Prerequisite:* Mathematics 111. Study of sequences and limits, differential calculus, integral calculus, optimization, and appropriate applications.

**Mathematics 115 (3)****College Mathematics I****3 hrs. Lec.**

*Prerequisite:* Developmental Mathematics 093 or one year of high school algebra and one year of high school geometry or two years of high school algebra. A course designed for liberal arts students which includes the study of logic, mathematical patterns, mathematical recreations, systems of numeration, mathematical systems, sets and statements, and sets of numbers. Historical aspects of the above topics will also be emphasized.

**Mathematics 116 (3)****College Mathematics II****3 hrs. Lec.**

*Prerequisite:* Mathematics 115. A course designed for liberal arts students which includes the study of algebra, linear programming, permutations, combinations, probability, and geometry. Historical aspects of the above topics will also be emphasized.

**Mathematics 117 (3)****Fundamental Concepts of  
Mathematics for Elementary  
Teachers****3 hrs. Lec.**

*Prerequisite:* Developmental Mathematics 093 or equivalent. The content of the course includes a study of the structure of the real number system, geometry, and mathematical analysis with emphasis on the development of basic concepts in mathematical thinking needed for elementary teachers.

**Mathematics 121 (3)****Analytic Geometry****3 hrs. Lec.**

*Prerequisite:* Mathematics 102. Introduction to real numbers, distance, the straight line, the circle, conics, transformation of coordinates, polar coordinates, parametric equations and three-dimensional space. The sequence Mathematics 121-122-223-224 is equivalent to the sequence Mathematics 126-227-228.

**Mathematics 126 (5)****Introductory Calculus****5 hrs. Lec.**

*Prerequisite:* Mathematics 105 or Mathematics 106 or Mathematics 121 with consent of instructor. Study of limits, continuity, derivatives, slopes, tangents, chain rule, implicit differentiation, higher derivatives, differentials, integration, applications of differential and integral calculus, and trigonometric and inverse trigonometric functions.

**Mathematics 130 (3)****Business Mathematics****3 hrs. Lec.**

*Prerequisite:* Developmental Mathematics 091 or the equivalent. Skill in arithmetic essential. Simple and compound interest, bank discount, payrolls, taxes, insurance, markup and markdown, corporate securities, depreciation, and purchase discounts. This course is intended primarily for specialized occupational programs.

- Mathematics 195** (3)  
**Technical Mathematics**  
**3 hrs. Lec.**  
*Prerequisite: Developmental Mathematics 091 or the equivalent.* A course designed for technical students covering a general review of arithmetic; a treatment of the basic concepts and the fundamental facts of plane and solid geometry, computations with the slide rule, units and dimensions, a treatment of the terminology and concepts of elementary algebra, functions, coordinate systems, simultaneous equations, stated problems, determinants, progression, and the binomial theorem.
- Mathematics 196** (3)  
**Technical Mathematics**  
**3 hrs. Lec.**  
*Prerequisite: Mathematics 195.* A course for technical students which includes a study of the following: the trigonometric functions of angles, trigonometric identities, inverse trigonometric functions, trigonometric equations, complex numbers, logarithms, vectors, and the solution of triangles.
- Mathematics 202** (3)  
**Introductory Statistics**  
**3 hrs. Lec.**  
*Prerequisite: Two years of high school algebra, Mathematics 101 or Mathematics 104 or Mathematics 111 or equivalent.* Study of collection and tabulation of data, bar charts, graphs, sampling, averages, dispersion, correlation, index numbers, normal curve, probability, and applications to various fields.
- Mathematics 221** (3)  
**Linear Algebra**  
**3 hrs. Lec.**  
*Prerequisite: Mathematics 227 or equivalent.* Study of matrices, linear equations, dot products, cross products, geometrical vectors, determinants, dimensional space, and linear transformation.
- Mathematics 227** (4)  
**Mathematical Analysis I**  
**4 hrs. Lec.**  
*Prerequisite: Mathematics 126 or equivalent.* A continued study of techniques of differentiation and integration, including logarithmic and exponential functions, parametric equations, polar coordinates, hyperbolic functions and vectors.
- Mathematics 228** (3)  
**Mathematical Analysis II**  
**3 hrs. Lec.**  
*Prerequisite: Mathematics 227 or equivalent.* A continued study of vectors, introduction to functions of several variables, multiple integrals, indeterminate forms, and infinite series.
- Mathematics 230** (3)  
**Differential Equations**  
**3 hrs. Lec.**  
*Prerequisite: Mathematics 224 or Mathematics 228.* A course in ordinary differential equations concerned with first order equations, singular solutions, and miscellaneous methods of solving and analyzing differential equations of first and higher order.
- Music 101** (4)  
**Freshman Theory**  
**3 hrs. Lec.**  
**3 hrs. Lab.**  
 Development and cultivation of musicianship skills, especially in the areas of tonal and rhythmic perception and articulation. Presentation of the essential elements of music; introduction to sight-singing, keyboard, and notation.
- Music 102** (4)  
**Freshman Theory**  
**3 hrs. Lec.**  
**3 hrs. Lab.**  
*Prerequisite: Music 101 or consent of instructor.* Introduction to part-writing and harmonization with triads and their inversions; classification of chords; seventh chords, sight-singing, dictation, and keyboard harmony.

- Music 104** (3)  
**Music Appreciation**  
**3 hrs. Lec.**  
 A concise survey of the basic elements of music and their application in the music literature of Western civilization, particularly from the Baroque to the present. Relevant cultural influences upon the music of each era are observed.
- Music 105** (1)  
**Italian Diction**  
**2 hrs. Lab.**  
 A study of the phonetic sounds of the Italian language, with selected vocabulary and little or no conversation. Primarily for voice majors.
- Music 106** (1)  
**French Diction**  
**2 hrs. Lab.**  
 A study of the phonetic sounds of the French language, with selected vocabulary and little or no conversation. Primarily for voice majors.
- Music 110** (3)  
**Music Literature**  
**3 hrs. Lec.**  
 A course dealing with the characteristics of sound, the elements of music, performance media, and musical texture as seen in the music of recognized composers in the major periods of music history. Special emphasis is given to the music of the late Gothic, Renaissance, and Baroque eras.
- Music 111** (3)  
**Music Literature**  
**3 hrs. Lec.**  
*Prerequisite: Music 110.* A continuation of the studies introduced in Music 110. A study of the compositional procedures and forms employed by the creators of music. Attention is focused upon the music of the Classical, Romantic, and Modern periods.
- Music 113** (3)  
**Foundations in Music I**  
**3 hrs. Lec.**  
 Emphasis upon participation and the necessary skills for satisfactory performance in singing, playing an instrument, listening, creating rhythmic responses. Development of increasing ability to manage notation (music reading). Course designed specifically for the non-music major.
- Music 114** (3)  
**Foundations in Music II**  
**3 hrs. Lec.**  
*Prerequisite: Music 113.* A continuation of Music 113.
- Music 117** (1)  
**Piano Class I**  
**2 hrs. Lab.**  
 Class instruction in the areas of basic musicianship and piano skills designed primarily for those with no knowledge in piano skills. Open to all students.
- Music 118** (1)  
**Piano Class II**  
**2 hrs. Lab.**  
 Includes techniques, skills, harmonization, transposition, improvisation, accompanying, sightreading and performing various styles of repertoire. Open to all students.
- Music 119** (1)  
**Guitar Class I**  
**2 hrs. Lab.**  
 Class instruction covering the basics of guitar skill, designed primarily for those with limited knowledge in the reading of music or playing the guitar. Open to all students.
- Music 121-141** (1)  
**Applied Music-Minor**  
**1 hr. Lec.**  
 Private instruction in the student's secondary area. One half hour lesson a week. Open to students registered in music theory, ensembles, and other music major or minor courses. Fee required.
- Music 150** (1)  
**Chorus**  
**3 hrs. Lab.**  
*Prerequisite: Consent of instructor.* Open to all students of the college, the chorus studies and performs a wide variety of music representing the literature of the great eras of music history.

- Music 151** (1)  
**Voice Class I**  
**2 hrs. Lab.**  
 A course teaching the principles of breathing, voice production, tone control, enunciation and phrasing. Two group lessons a week. Open to all non-voice majors.
- Music 152** (1)  
**Voice Class II**  
**2 hrs. Lab.**  
 A continuation of Music 151 with emphasis on solo singing, appearance in studio recital, stage deportment, personality development. Open to all non-voice majors. Two group lessons a week.
- Music 155** (1)  
**Vocal Ensemble**  
**3 hrs. Lab.**  
 A select group for mixed voices concentrating upon excellence of performance. Membership is open only to members of the chorus through an audition with the director.
- Music 156** (1)  
**Madrigal Singers**  
**3 hrs. Lab.**  
 Select group of vocalists offering experience in the reading and performing of literature for small ensembles. Membership through audition with the appropriate director.
- Music 160** (1)  
**Band**  
**3 hrs. Lab.**  
*Prerequisite: Non-wind instrument majors, consent of the instructor.* The band studies and performs a wide variety of music in all areas of band literature. Required of all wind instrument majors.
- Music 171** (1)  
**Woodwind Ensemble**  
**3 hrs. Lab.**  
 Select group of instrumentalists offering experience in the reading and performing of literature for small ensembles. Membership through audition with the appropriate director.
- Music 172** (1)  
**Brass Ensemble**  
**3 hrs. Lab.**  
 Select group of instrumentalists offering experience in the reading and performing of literature for small ensembles. Membership through audition with the appropriate director.
- Music 173** (1)  
**Percussion Ensemble**  
**3 hrs. Lab.**  
 Select group of instrumentalists offering experience in the reading and performing of literature for small ensembles. Membership through audition with the appropriate director.
- Music 175** (1)  
**String Ensemble**  
**3 hrs. Lab.**  
 Select group of instrumentalists offering experience in the reading and performing of literature for small ensembles. Membership through audition with the appropriate director.
- Music 177** (1)  
**Chamber Ensemble**  
**3 hrs. Lab.**  
 Select group of instrumentalists or vocalists offering experience in the reading and performing of literature for small ensembles. Membership through audition with the appropriate director.
- Music 185** (1)  
**Stage Band**  
**3 hrs. Lab.**  
*Prerequisite: Consent of instructor.* The stage band studies and performs a wide variety of music with emphasis on the jazz oriented big-band styles of the 1960's.

**Music 199** (1)  
**Recital**  
**1 hr. Lab.**  
 One period per week designed to allow students of private lessons an opportunity to perform before an audience. Required of all music majors and open to all other students. Credit for this course does not apply to the associate degree.

**Music 201** (4)  
**Sophomore Theory**  
**3 hrs. Lec.**  
**3 hrs. Lab.**  
*Prerequisite: Music 101-102 or consent of instructor.* A continuation of freshman theory, including a study of larger forms, thematic development, chromatic chords including the neapolitan sixth and augmented sixth chords, diatonic seventh chords with advanced sight-singing, keyboard harmony and ear training.

**Music 202** (4)  
**Sophomore Theory**  
**3 hrs. Lec.**  
**3 hrs. Lab.**  
*Prerequisite: Music 201 or equivalent or by consent of instructor.* A continuation of Music 201, including a study of sonata-allegro form, ninth, eleventh and thirteenth chords, exploration of new key schemes, Impressionism, melody, harmony, tonality, and formal processes as they apply to twentieth century music with a comparable advance in sight-singing, keyboard harmony and ear training.

**Music 221-241** (2)  
**Applied Music-Concentration**  
**1 hr. Lec.**  
 Private instruction in the area of the student's concentration. Two half hour lessons a week. Open to students registered in music theory, ensembles, and other music major or minor courses. Fee required.

**Music 251-270** (3)  
**Applied Music-Major**  
**1 hr. Lec.**  
 Private instruction in the area of the student's major instrument. Primarily for music performance majors. Two half hour lessons a week. Open to students registered in music theory, ensembles, and other music major or minor courses. Fee required.

**Office Machines**  
 (See Business 161)

**Organizational Behavior**  
 (See Business 237)

**Philosophy 102** (3)  
**Introduction to Philosophy**  
**3 hrs. Lec.**

A survey course designed to acquaint the student with some of the fundamental problems in philosophy and with methods used to deal with them. Some principle views, both ancient and modern, are examined as possible solutions.

**Philosophy 105** (3)  
**Logic**  
**3 hrs. Lec.**

An analysis of the principles of logical thinking. An effort is made to apply logic's methods and tools to real life situations. Fallacies, definitions, analogies, syllogisms, Venn diagrams, and other topics are discussed.

**Philosophy 202** (3)  
**Introduction to Social and Political Philosophy**  
**3 hrs. Lec.**

*Prerequisite: Three hours of philosophy or consent of instructor.* An examination of the relationships of philosophical ideas to the community with emphasis on concepts of natural rights, justice, education, freedom and responsibility.

**Philosophy 203** (3)  
**Ethics**  
**3 hrs. Lec.**

*Prerequisite: Three hours of philosophy or consent of instructor.* A survey of the classical and modern theories of the moral nature of man, posing alternative views of his responsibilities to self and society. The course is designed to verify the ethical issues and their metaphysical and epistemological bases so as to assist the student toward sound application of ethical principles in his own life.



**Philosophy 207 (3)**  
**History of Ancient Philosophy**  
 3 hrs. Lec.

*Open to sophomores only.* This course is an historical examination of philosophy from Presocratic times to the Renaissance. Connections between the Presocratics, Plato, and Aristotle will be drawn. Stoicism, Epicureanism, and Scholasticism will be considered.

**Philosophy 208 (3)**  
**History of Modern Philosophy**  
 3 hrs. Lec.

*Open to sophomores only.* A continuation of Philosophy 207. Starting with the Renaissance, it examines western philosophic thought through the 19th century. Special emphasis will be given Continental Rationalism, British Empiricism, Kantian metaphysics and epistemology, and the Hegelian system as it is related to 20th century philosophies. Emphasis will be placed on the historical relationship existing between these schools of thought.

**Physical Education 100 (1)**  
**Lifetime Sports Activities**  
 3 hrs. Lab.

Students are provided an opportunity for participation and instruction in various lifetime sports. Selections may be made from archery, badminton, bowling, golf, handball, racquetball, softball, swimming, tennis, and other sports. Activities may be offered singularly or in combinations. Instruction shall be presented at the beginner and advanced-beginner levels. The course is designed for male and female students and may be repeated for credit providing students select different activities. Laboratory fee required.

**Physical Education 101 (3)**  
**Fundamentals of Health**  
 3 hrs. Lec.

A study of personal and community health. Emphasis is placed on causative factors of mental and physical health and the means of disease transmission and prevention. For majors, minors, and students with specific interest.



### **Physical Education 110**

#### **Community Recreation**

**3 hrs. Lec.**

Principles, organization, and the function of recreation in American society. Designed for students planning a major or minor in health, physical education or recreation.

### **Physical Education 111**

#### **Beginning Wrestling**

**2 hrs. Lab.**

Basic wrestling fundamentals, techniques, rules and strategy will be taught. Emphasis will also be placed upon spectator appreciation. Uniform required. Laboratory fee required.

### **Physical Education 112**

#### **Softball and Soccer**

**2 hrs. Lab.**

Designed to provide the student an opportunity for instruction and participation in softball and soccer. Uniform required. Laboratory fee required.

(3)

### **Physical Education 113**

#### **Handball and Racketball**

**2 hrs. Lab.**

Designed to provide the student an opportunity for basic skills development in handball and racketball. Uniform required. Laboratory fee required.

### **Physical Education 114**

#### **Beginning Badminton**

**2 hrs. Lab.**

This course is designed to teach the history, rules, and beginning skills involved in the playing of badminton. Uniform required. Laboratory fee required.

### **Physical Education 115**

#### **Physical Performance**

**3 hrs. Lab.**

This course is designed to diagnose and measure the student's physical condition and prescribe a program of exercise to carry with him through life. Much of the course work will be carried on in the physical performance laboratory. Coeducational. Uniform required. Laboratory fee required.

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**Physical Education 116 (1)**  
**Intramural Athletics**  
**2 hrs. Lab.**  
A coeducational activity class designed to offer intramural competition in a variety of coeducational activities. Uniform required. Laboratory fee required.

**Physical Education 117 (1)**  
**Beginning Archery**  
**2 hrs. Lab.**  
A coeducational class in beginning archery. Equipment furnished. No uniform required. Laboratory fee required.

**Physical Education 118 (1)**  
**Beginning Golf**  
**2 hrs. Lab.**  
A coeducational class in beginning golf. Equipment furnished. No uniform required. Laboratory fee required.

**Physical Education 119 (1)**  
**Beginning Tennis**  
**2 hrs. Lab.**  
A coeducational class designed for the beginner. Basic tennis fundamentals will be stressed. Uniform required. Laboratory fee required.

**Physical Education 120 (1)**  
**Beginning Bowling**  
**2 hrs. Lab.**  
A coeducational class in beginning bowling. Equipment furnished. No uniform required. Laboratory fee required.

**Physical Education 122 (1)**  
**Gymnastics and Tumbling**  
**2 hrs. Lab.**  
Skills in tumbling, horizontal bar, parallel bars, rings and trampoline. Uniform required. Laboratory fee required.

**Physical Education 123 (1)**  
**Beginning Swimming**  
**2 hrs. Lab.**  
A coeducational course designed to teach a non-swimmer to survive in the water. Uniform required. Laboratory fee required.

**Physical Education 125 (1)**  
**Figure Training and Conditioning Exercise**  
**3 hrs. Lab.**  
A course for women designed to develop an understanding of controlling body weight and muscular development through vigorous rhythmical activities. Uniform required. Laboratory fee required.

**Physical Education 127 (1)**  
**Basketball and Volleyball**  
**2 hrs. Lab.**  
Techniques, rules, and strategy of the game will be taught and the emphasis will be on playing the game. Uniform required. Laboratory fee required.

**Physical Education 128 (1)**  
**Social and Folk Dance**  
**2 hrs. Lab.**  
A coeducational, beginning class in social and folk dance. No uniform required. Laboratory fee required.

**Physical Education 129 (1)**  
**Modern Dance**  
**2 hrs. Lab.**  
A coeducational, beginning class in modern dance. Uniform required. Laboratory fee required.

**Physical Education 144 (3)**  
**Introduction to Physical Education**  
**3 hrs. Lec.**  
Designed for professional orientation in physical education, health and recreation. Brief history, philosophy and modern trends of physical education, teacher qualification, vocational opportunities, expected competencies, and skill testing comprise the contents of the course. For students majoring in physical education.

**Physical Education 147** (3)  
**Sports Officiating I**  
 2 hrs. Lec.  
 2 hrs. Officiating  
 This course is especially designed for those students who would like to choose sports officiating for an avocation and/or to increase knowledge in and appreciation of sports. Sports covered in this course will be football and basketball. As part of the course requirement students will be expected to officiate intramural games.

**Physical Education 148** (3)  
**Sports Officiating II**  
 2 hrs. Lec.  
 2 hrs. Officiating  
 This course is especially designed for those students who would like to choose sports officiating for an avocation and/or to increase knowledge in and appreciation of sports. Sports covered in this course will be softball, track and field, and baseball.

**Physical Education 217** (1)  
**Intermediate Archery**  
 2 hrs. Lab.  
 This course is designed for the student who has had previous experience in archery and who would like to engage in target shooting and field archery. The student furnishes equipment, and no uniform is required. Laboratory fee required.

**Physical Education 218** (1)  
**Intermediate Golf**  
 2 hrs. Lab.  
*Prerequisite: Permission of instructor.* A course designed to develop skills and techniques beyond the "beginner" stage. Laboratory fee required.

**Physical Education 219** (1)  
**Intermediate Tennis**  
 2 hrs. Lab.  
*Prerequisite: Permission of instructor.* A course designed to develop skills and techniques beyond the "beginner" stage. Uniform required. Laboratory fee required.

**Physical Education 222** (1)  
**Intermediate Gymnastics**  
 2 hrs. Lab.  
*Prerequisite: Physical Education 122.* A course designed to develop skills and techniques beyond the "beginner" stage. Uniform required. Laboratory fee required.

**Physical Education 223** (1)  
**Intermediate Swimming**  
 2 hrs. Lab.  
*Prerequisite: Deep water swimming.* Coeducational course designed to qualify students for Red Cross life saving card. Stroke analysis and diving will be included. Uniform required. Laboratory fee required.

**Physical Education 224** (1)  
**Skin & Scuba Diving**  
 2 hrs. Lab.  
*Prerequisite: Deep water swimmer.* Instruction and practice in use of equipment, techniques, and fundamentals of skin and scuba diving. Coeducational. Arrangements will be made regarding equipment. Laboratory fee required.

**Physical Education 233** (1)  
**Water Safety Instructor**  
 2 hrs. Lab.  
*Prerequisite: Current senior life saving card.* Principles and techniques for instructors in water safety and life saving classes. Satisfactory completion of course qualifies the student to test for certification by the Red Cross as water safety instructor. Uniform required. Laboratory fee required.

**Physical Education 257** (3)  
**Standard and Advanced First Aid**  
 3 hrs. Lec.  
 Theory and practice in the standard and advanced courses of the American National Red Cross in first aid and safety.

**Physical Science 118 (4)**  
**Physical Science**  
**3 hrs. Lec.**  
**2 hrs. Lab.**

A study of the basic principles and concepts of physics, chemistry and nuclear science. The course relates these basic sciences to man's physical world at an introductory level. This course is intended primarily for the non-science major. Laboratory fee required.

**Physical Science 119 (4)**  
**Physical Science**  
**3 hrs. Lec.**  
**2 hrs. Lab.**

The course encompasses the interaction of the earth sciences and man's physical world. Geology, astronomy, meteorology and space science are emphasized through the application of selected principles and concepts of the applied sciences. The course is directed toward the non-science major. Laboratory fee required.

**Physics 111 (4)**  
**Introductory General Physics**  
**3 hrs. Lec.**  
**3 hrs. Lab.**

*Prerequisite:* Two years high school algebra, including trigonometry or equivalent. The first semester of a two semester course designed for pre-dental, pre-nursing, pre-pharmacy, and pre-architecture majors and other students who require a two-semester technical course in physics. The first half is a study of mechanics and heat. The laboratory includes a one hour problem session. Laboratory fee required.

**Physics 112 (4)**  
**Introductory General Physics**  
**3 hrs. Lec.**  
**3 hrs. Lab.**

*Prerequisite:* Physics 111. A continuation of Physics 111 which includes the study of electricity, magnetism, light, and sound. Laboratory includes a one hour problem session. Laboratory fee required.

**Physics 115 (4)**  
**Physics for the Liberal Arts**  
**3 hrs. Lec.**  
**3 hrs. Lab.**

An introduction to the various areas of physics as they relate to the world in which we live. Accomplished through the study of selected topics including mechanics; thermodynamics, acoustics, electrodynamics, optics, and atomic physics. This course is intended primarily for the non-science major. Laboratory includes a one hour problem session. Laboratory fee required.

**Physics 116 (4)**  
**Physics for Liberal Arts**  
**3 hrs. Lec.**  
**3 hrs. Lab.**

*Prerequisite:* Physics 115. A continuation of Physics 115. Laboratory includes a one hour problem session. Laboratory fee required.

**Physics 131 (4)**  
**Applied Physics**  
**3 hrs. Lec.**  
**3 hrs. Lab.**

*Prerequisite:* Mathematics 195 or concurrent enrollment in Mathematics 195. The first half of a one year course designed to explain the basic concepts of the property of matter, mechanics, heat, sound, light, electricity, magnetism, and atomic theory with emphasis on applications and problem solving. Designed primarily for students enrolled in technical programs. Laboratory includes a one hour problem session. Laboratory fee required.

**Physics 132 (4)**  
**Applied Physics**  
**3 hrs. Lec.**  
**3 hrs. Lab.**

*Prerequisite:* Physics 131. A continuation of Physics 131. Laboratory includes a one hour problem session. Laboratory fee required.

**Physics 201 (4)**

**General Physics**

**3 hrs. Lec.**

**3 hrs. Lab.**

*Prerequisite:* Credit for or concurrent registration in Mathematics 126. Principles and application of mechanics, wave motion, and sound emphasizing fundamental concepts, problem solving, notation, and units. Designed primarily for physics, chemistry, mathematics, premed and engineering majors. Laboratory includes a one hour problem session. Laboratory fee required.

**Physics 202 (4)**

**General Physics**

**3 hrs. Lec.**

**3 hrs. Lab.**

*Prerequisite:* Physics 201 and credit or concurrent registration in Mathematics 227. Principles and applications of heat, electricity, magnetism and optics emphasizing fundamentals, concepts, problem solving, notation and units. Laboratory includes a one hour problem session. Laboratory fee required.

**Physics 203 (4)**

**Introduction to Modern Physics**

**3 hrs. Lec.**

**3 hrs. Lab.**

*Prerequisite:* Physics 202. Principles of relativity, atomic and nuclear physics with emphasis on fundamental concepts, problem solving, notation, and units. Laboratory includes a one hour problem session. Laboratory fee required.

**Psychology 105 (3)**

**Introduction to Psychology**

**3 hrs. Lec.**

A study of basic problems and principles of human experience and behavior, heredity and environment, the nervous system, motivation, learning, emotions, thinking and intelligence. This course is offered on campus and via television.

**Psychology 131 (3)**

**Human Relations**

**3 hrs. Lec.**

A study involving the direct application of psychological principles to human relations problems in business and industry. Consideration is given to group dynamics and adjustment factors related to employment and advancement. The presentation will be tailored to fit the needs of the students enrolled in each section.

**Psychology 201 (3)**

**Developmental Psychology**

**3 hrs. Lec.**

*Prerequisite:* Psychology 105. A study of human growth, development and behavior, emphasizing the psychological changes which occur during the life pattern. The processes of life from prenatal beginnings to adulthood are treated in an integrated manner. Due attention is given to aging and its place in the developmental sequence.

**Psychology 202 (3)**

**Applied Psychology**

**3 hrs. Lec.**

*Prerequisite:* Psychology 105. A course designed for the application of psychological facts and principles to problems and activities of life. Special emphasis will be placed on observing, recording and modifying human behavior. Some off-campus work will be required.

**Psychology 205 (3)**

**Psychology of Personality**

**3 hrs. Lec.**

*Prerequisite:* Psychology 105. A consideration of the important factors involved in successful human adjustment including child-parent relationships, adolescence, anxiety states, mechanisms of defense and psychoanalytic concepts. The course includes a survey of methods of personality measurement.

**Psychology 207 (3)**

**Social Psychology**

**3 hrs. Lec.**

*Prerequisite:* Psychology 105 and/or Sociology 101. A survey of the research and theories dealing with individual behavior in the social environment. Topics include socio-psychological process, attitude formation and change, interpersonal relations, and group processes. The student may register for either Psychology 207 or Sociology 207.

**Psychology 209 (3)****General Psychology****3 hrs. Lec.**

*Prerequisite: Psychology 105.* An in-depth survey of behavior, including learning, motivation, perception, and emotion. An introduction to behavioral research, data collecting and analysis will be included. Recommended for psychology majors.

**Quality Control Technology 121 (3)****Introduction to Quality Control****3 hrs. Lec.**

This course traces the elements of quality control through the product life-cycle from research, to development, to purchasing, to production, to testing and finally to customer use. A study of the scope and function of quality will be made, including quality control procedures and specifications, including government publications. Fundamentals of engineering as applied to quality control problems will be emphasized.

**Quality Control Technology 122 (3)****Dimensional Measurement****2 hrs. Lec.****2 hrs. Lab.**

This course provides an opportunity to obtain a practical and theoretical understanding of many types of mechanical and optical measuring devices which are used in dimensional inspection.

**Quality Control Technology 133 (4)****Statistical Quality Control I****3 hrs. Lec.****2 hrs. Lab.**

First course of a two-semester sequence devoted to the interpretation and use of reliability and quality control data. A study is made of the laws of probability as related to sampling inspection and process control. The development of fundamental statistical techniques will be emphasized by the plotting of frequency distributions and operating characteristic curves, the calculation and interpretation of location and dispersion and the manipulation of other basic statistical tools.

**Quality Control Technology 220 (3)****Physical and Environmental Testing****2 hrs. Lec.****2 hrs. Lab.**

This course introduces the student to a variety of tests and evaluations which are performed on raw materials and fabricated parts. Such areas as tensile and hardness testing, metallurgical cross-sectioning, temperature-humidity cycling and corrosion resistance testing are covered.

**Quality Control Technology 221 (2)****Quality Control Systems****2 hrs. Lec.**

A detailed study will be made of the control and information systems and decision procedures necessary to effectively operate the quality control function. Topics will include design review, qualification procedures, control of vendor quality, failure analysis procedures and corrective action systems.

**Quality Control Technology 224 (2)****Industrial Organizations****2 hrs. Lec.**

Gives the student an overall view of the manufacturing company. Topics are from such areas as process planning, costs and budgets, contracts, marketing, economics and personnel.

**Quality Control Technology 227 (3)****Non-Destructive Evaluation****2 hrs. Lec.****2 hrs. Lab.**

This course provides a basic background in such areas as industrial radiography, magnetic particle and penetrant inspection, eddy current and ultrasonic testing.

**Quality Control Technology 235 (4)****Statistical Quality Control II****3 hrs. Lec.****2 hrs. Lab.**

*Prerequisite: Quality Control 133.* A study is made of such areas as product reliability prediction, reliability evaluation, process capability analysis, statistical tolerancing, design of experiments and analysis of variance. The mastery of these more advanced statistical tools will be achieved by application to actual design and manufacturing situations.

**Reading 101** (3)  
**Effective College Reading**  
3 hrs. Lec.

Reading 101 emphasizes comprehension techniques in reading fiction and non-fiction. Improved critical reading skills including analysis, critique and evaluation of written material are explored. Reading comprehension and flexibility of reading rate are stressed. In addition, advanced learning techniques in listening, note-taking, underlining, concentration, and reading in specialized academic areas are developed.

**Religion 101** (3)  
**Religion in American Culture**  
3 hrs. Lec.

A systematic examination of religion in American culture. Emphasis will be upon the interaction of religion with politics, economics, the military, education, the arts and other cultural phenomena.

**Religion 102** (3)  
**Contemporary Religious Problems**  
3 hrs. Lec.

An analysis of the background and present expression of basic problems in religion, e.g. the problem of belief, the nature of religious literature, the existence of God, evil, human destiny and the relation of religion to society and the arts. Both Western and Eastern traditions will be considered.

**Religion 201** (3)  
**Major World Religions**  
3 hrs. Lec.

*Prerequisite: Sophomore standing or consent of instructor recommended.* A survey of major world faiths, the course will concentrate on the basic texts of Eastern and Western religions and on the creative personalities of their founders. There will be some consideration of the problems of "objective" study of religions, of primitive religions, and of alternatives to major world religions such as astrology and atheism.

**Salesmanship**  
(See Business 230)

**Secretarial Training**  
(See Business 162)

**Shorthand**  
(See Business 163, 164, 263, 264)

**Social Science 131** (3)  
**American Civilization**  
3 hrs. Lec.

A course designed to provide the student with some historical perspective for understanding the economic, political, and social institutions of modern society. In this context, emphasis will be placed upon U.S. and Texas history and constitutional development. It is advised that these courses be taken in order: 131, 132.

**Social Science 132** (3)  
**American Civilization**  
3 hrs. Lec.

A continuation of Social Science 131.

**Sociology 101** (3)  
**An Introduction to Sociology**  
3 hrs. Lec.

An inquiry into the nature of society and the foundations of group life, including institutions, with a broad presentation of the bases of social change, processes and problems.

**Sociology 102** (3)  
**Social Problems**  
3 hrs. Lec.

*Prerequisite: Sociology 101.* A study of the background, emergence and scope of current group relationships in our society, emphasizing topics as they apply to social adjustment in the family and the total community environment.

**Sociology 203** (3)  
**Marriage and Family**  
3 hrs. Lec.

*Prerequisite: Sociology 101 recommended.* An analysis of courtship patterns, marriage and family forms, relationships and functions and socio-cultural differences in family behavior.

**Sociology 204** (3)  
**American Minorities**  
**3 hrs. Lec.**  
*Prerequisite: Sociology 101 and/or six hours of U.S. history recommended.* The principal minority groups in American society; their sociological significance and historic contributions. An emphasis will be placed on problems of intergroup relations, social movements and related social changes occurring on the contemporary American scene. The student may register for either History 204 or Sociology 204.

**Sociology 206** (3)  
**Introduction to Social Work**  
**3 hrs. Lec.**  
*Prerequisite: Consent of instructor required.* Development of the philosophy and practice of social work in the United States; survey of the fields and techniques of social work; attention given to requirements for training in social work.

**Sociology 207** (3)  
**Social Psychology**  
**3 hrs. Lec.**  
 Same as Psychology 207. The student may elect the subject area heading appropriate to his major. The student may not receive credit for both Psychology 207 and Sociology 207.

**Sociology 231** (3)  
**Urban Social Problems**  
**3 hrs. Lec.**  
 The sociology of urban groups and institutions; urbanization as a process; the inner city; the aspect of the neighborhood. Emphasis is placed on case studies, enabling the student to identify and understand the types of social problems inherent in the metropolitan environment.

**Spanish 101** (4)  
**Beginning Spanish**  
**3 hrs. Lec.**  
**2 hrs. Lab.**  
 Essentials of grammar, easy idiomatic prose, stress on pronunciation, comprehension, and oral expression. Laboratory fee required.

**Spanish 102** (4)  
**Beginning Spanish**  
**3 hrs. Lec.**  
**2 hrs. Lab.**  
*Prerequisite: Spanish 101 or equivalent.* Continuation of Spanish 101 with emphasis on idiomatic language and complicated syntax. Laboratory fee required.

**Spanish 201** (3)  
**Intermediate Spanish**  
**3 hrs. Lec.**  
*Prerequisite: Spanish 102 or equivalent or consent of the instructor.* Reading, composition, grammar review and intense oral practice.

**Spanish 202** (3)  
**Intermediate Spanish**  
**3 hrs. Lec.**  
*Prerequisite: Spanish 201 or equivalent.* Continuation of Spanish 201 with reading selections drawn more directly from contemporary literary sources. Composition.

**Spanish 203** (3)  
**Introduction to Spanish Literature**  
**3 hrs. Lec.**  
*Prerequisite: Spanish 202 or equivalent or consent of the instructor.* Readings in Spanish literature, history, culture, art and civilization.

**Spanish 204** (3)  
**Introduction to Spanish Literature**  
**3 hrs. Lec.**  
*Prerequisite: Spanish 202 or equivalent or consent of the instructor.* Readings in Spanish literature, history, culture, art and civilization.

**Speech 100** (1)  
**Speech Laboratory**  
**3 hrs. Lab.**  
 A laboratory course for the preparation of speeches, reading of dialogue from literature, and debate propositions which will be presented throughout the community. May be repeated for one additional hour of credit each semester.

**Speech 105** (3)  
**Fundamentals of Public Speaking**  
**3 hrs. Lec.**  
 An introductory course in public speaking. Principles of reasoning. Emphasis upon the delivery of carefully prepared speeches. Special attention to audience analysis, collection of materials, and outlining.

**Speech 109 (3)**

**Voice and Articulation**

**3 hrs. Lec.**

A study of the mechanics of speech applied to improvement of the individual's voice and pronunciation.

**Speech 110 (1)**

**Reader's Theatre Workshop**

**2 hrs. Lab.**

A laboratory course for the preparation and presentation of scripts, readings, and book reviews. Collecting and arranging all types of literature for group interpretation and performance. May be repeated once for credit.

**Speech 206 (3)**

**Oral Interpretation**

**3 hrs. Lec.**

A study of fundamental techniques of analyzing various types of literature, and practice in preparing and presenting selections orally. Emphasis on individual improvement.

**Speech 207 (3)**

**Advanced Oral Interpretation**

**3 hrs. Lec.**

*Prerequisite: Speech 105 and 206.*  
Application of basic principles of interpretation to longer selections of literature; more detailed analysis and arranging of poetry and prose for various types of multiple reading situations including choral speaking and reader's theatre. Investigation of all types of literature which are suited to group interpretation work.

**Teacher Aide 129 (3)**

**Communication Skills for Teacher Aides**

**3 hrs. Lec.**

This course is designed to test and enhance the teacher aide's basic communication skills in reading, writing, speaking, and listening. It will also include a survey of techniques and methods for encouraging the development of these language skills in the students with whom the aide works. Creative writing, storytelling, and appreciation of literature, tutoring techniques for reading and writing, cursive and manuscript handwriting will be included in the language skills emphasized.

**Teacher Aide 131 (3)**

**Teacher Aide Techniques I**

**3 hrs. Lec.**

The primary purpose of this course is to define the role of the teacher aide within the school structure and to develop an understanding of the organization and administration of the public school system. Special attention will be given to the development of effective interpersonal relationships. Through direct experiences with students on a one-to-one basis, the teacher aide trainee will observe and study the developmental patterns of students. A study will be made of the general principles of human growth and development.

**Teacher Aide 132 (3)**

**Introduction to Media**

**2 hrs. Lec.**

**4 hrs. Lab.**

An introduction to basic skills associated with the preparation of graphic and projected materials and the operation of selected audiovisual equipment.

**Teacher Aide 133 (3)**

**Teacher Aide Techniques II**

**3 hrs. Lec.**

This course is designed to further develop the teacher aide trainee's understandings, skills and attitudes in providing a wholesome learning environment in the classroom. The facilitation of learning with small groups of students will be emphasized through didactic and field experiences. The unique factors affecting the growth and development of inner-city students will be emphasized along with a study of the teacher aide responsibilities as a member of the educational team.



### **Teacher Aide 135**

(3)

#### **Arts and Crafts for Teacher Aides 3 hrs. Lec.**

The course acquaints the student with the variety of creative art materials and methods appropriate for use in programs for children as well as opportunities for participation in the use of these materials. Creating an attractive classroom environment with the use of classroom displays, charts, poster art, and bulletin boards will be incorporated in the course.

### **Teacher Aide 231**

(2)

#### **Teacher Aide Seminar I 2 hrs. Lec.**

The first seminar section is designed to provide an opportunity for the teacher aide trainees to discuss their experiences as trained observers and participants in the classroom strategies and procedures, supervision techniques and instructional skills.

### **Teacher Aide 232**

(2)

#### **Teacher Aide Practicum I 20 hrs. Lab.**

The practicum section will include supervised laboratory experiences in inner-city classrooms under the direct supervision of a teacher. Basic principles of learning and motivation will be applied to the teaching.

### **Teacher Aide 235**

(2)

#### **Teacher Aide Seminar II 2 hrs. Lec.**

This section of the seminar will provide the teacher aide trainee an opportunity to continue his experiences in the classroom while obtaining professional consultation and group experiences with his classmates. Small group interaction will enable the trainee to share experiences, demonstrate specific skills and techniques, participate in simulated classroom situations and clarify hypotheses developed in the supporting educational activities. The overall objective will be to provide a means for integrating and relating the total individual and collective experiences of the curriculum into a meaningful pattern.



**Teacher Aide 236**  
**Teacher Aide Practicum II**  
**20 hrs. Lab.**

This section of the practicum will continue to provide the teacher aide trainee supervised laboratory experiences in classrooms under the supervision of a teacher. Basic principles of learning and motivation will be applied to the teaching-learning situation.

**Theatre 100** (1)  
**Rehearsal and Performance**

*Prerequisite: Acceptance as a member of the cast or crew of a major production.* Participation in the class includes the rehearsal and performance of the current theatrical presentation of the division. Students will be enrolled by the director upon being accepted for participation in a major production. Credit limited to one hour per semester.

**Theatre 101** (3)  
**Introduction to the Theatre**  
**3 hrs. Lec.**

A general survey designed to acquaint the student with the various aspects of theatre, plays and playwrights, directing and acting, theatres, artists, and technicians.

**Theatre 102** (3)  
**Contemporary Theatre**  
**3 hrs. Lec.**

A study of the modern theatre and cinema as art forms, with attention to the historical background and traditions of each. Emphasis is placed on a better understanding of the social, cultural, and aesthetic significance of these media in today's life. Includes the reading of a number of modern plays and the viewing of specially selected films.

**Theatre 103** (3)  
**Stagecraft I**  
**2 hrs. Lec.**  
**3 hrs. Lab.**

A study of the technical aspects of play production including set design and construction, stage lighting, make-up, costuming, and related areas.

**Theatre 104** (3)  
**Stagecraft II**  
 2 hrs. Lec.  
 3 hrs. Lab.  
*Prerequisite:* Theatre 103 or consent of instructor. A continuation of Theatre 103 with emphasis on individual projects in set and lighting design and construction, including further exploration of the technical aspects of play production.

**Theatre 106** (3)  
**Acting I**  
 2 hrs. Lec.  
 3 hrs. Lab.  
 Individual and group activity with theory and exercises in bodily control, voice, pantomime, interpretation, characterization, and stage movement. Analysis and study of specific roles for stage presentation.

**Theatre 107** (3)  
**Acting II**  
 2 hrs. Lec.  
 3 hrs. Lab.  
*Prerequisite:* Theatre 106 or consent of instructor. Continuation of Theatre 106 with emphasis on problems of complex characterization, ensemble acting, stylized acting and acting in period plays.

**Theatre 108** (3)  
**Movement for the Stage**  
 2 hrs. Lec.  
 3 hrs. Lab.  
 A study of movement as both a pure form as well as its relation and integration with the theatre arts. The course will include movement as a technique to control balance, rhythm, strength, and flexibility. Movement will be explored as it is used in all the theatrical forms and in development of characterization. May be repeated for credit.

**Theatre 109** (3)  
**Voice and Articulation**  
 3 hrs. Lec.  
 Same as Speech 109. The student may not receive credit for both Theatre 109 and Speech 109.

**Theatre 110** (3)  
**History of Theatre I**  
 3 hrs. Lec.  
 Survey of theatre from its beginning through the sixteenth century. Study of the theatre in each period as a part of the total culture of the period.

**Theatre 111** (3)  
**History of Theatre II**  
 3 hrs. Lec.  
 Development of the theatre from the seventeenth century through the twentieth century.

**Theatre 112** (3)  
**Beginning Dance Technique in Theatre**  
 2 hrs. Lec.  
 3 hrs. Lab.  
 Course designed to promote body balance, improve manipulation of trunk and limbs, and facilitate the rhythmic flow of physical energy. Exploration of basic movements of the dance with emphasis on swing movements, circular motion, fall and recovery, contraction and release, and contrast of literal and abstract movements.

**Theatre 115** (2)  
**Mime**  
 1 hr. Lec.  
 2 hrs. Lab.  
*Prerequisite:* Stage movement, Theatre 106. Exploration of the expressive significance and techniques of mime.

**Theatre 205** (3)  
**Scene Study (Theatre)**  
 2 hrs. Lec.  
 3 hrs. Lab.  
*Prerequisite:* Theatre 106, 107. Continuation of Acting II with emphasis on developing character through detailed study of the playscript. Students will deal with the stylistic problems presented by the staging of period plays, concentrating primarily on Ibsen, Chekov, and the development of early realism.

**Theater 206** (3)

**Intermediate Dance  
Technique in Theatre**

**2 hrs. Lec.**

**3 hrs. Lab.**

*Prerequisite: Theatre 105 or permission of instructor.* A general survey to acquaint the student with the various aspects of dance and its role in total theatre, including the evolution of dance styles. Exploration of jazz style emphasizing flow of movement, body placement, dynamic intensity, level, focus, and direction.

**Typing**

**(See Business 173, 174, 273)**

# TECHNICAL OCCUPATIONAL PROGRAMS

## Technical-Occupational Programs Offered On The Four Campuses Of The Dallas County Community College District

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### Eastfield College

Accounting Technician  
Air Conditioning and  
Refrigeration Technology  
Auto Body  
Automotive Technology  
Child Development  
Diesel Mechanics  
Digital Electronics Technology  
Drafting and Design Technology  
Graphic Arts  
Human Services  
Mid-Management  
Recreational Leadership  
Secretarial Careers  
Training Para-Professionals for the Deaf  
Transportation Technology

### El Centro College

Accounting Technician  
Apparel Design  
Associate Degree Nursing  
Data Processing Programmer  
Dental Assisting Technology  
Drafting and Design Technology  
Fire Protection Technology  
Food Service — Dietetic Technician  
Food Service Operations  
Interior Design  
Medical Assisting Technology  
Medical Laboratory Technician  
Program  
Medical Transcriptionist  
Mid-Management  
Office Skills and Systems  
Pattern Design  
Police Science  
Radiologic Technology  
Respiratory Therapy Technology  
Secretarial Careers  
Teacher Aide  
Television and Radio Servicing  
Vocational Nursing

### Mountain View College

Accounting Technician  
Aviation Administration  
Avionics Technology  
Drafting and Design Technology  
Electronics Technology  
Horology (Watch Repair)  
Machine Shop  
Mid-Management  
Pilot Technology  
Secretarial Careers  
Welding Technology

### Richland College

Accounting Associate  
Accounting Technician  
Construction Management  
and Technology  
Electro-Mechanical Technology  
Fluid Power Technology  
Human Services  
Mid-Management  
Ornamental Horticulture  
Quality Control Technology  
Secretarial Careers  
Administrative  
Educational  
Executive  
Professional  
Office Skills and Systems  
Teacher Aide

**Technical-Occupational Programs Offered  
by Tarrant County Junior Colleges  
Available to Dallas County Residents**

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Dallas County residents may enroll in the programs listed below at the appropriate Tarrant County Junior College at the Tarrant County resident's tuition rate. This reciprocal arrangement does not apply to programs of instruction which are filled to capacity with Tarrant County students.

**Northeast Campus Courses**

- Civil Technology
- Dental Hygiene
- Fashion Merchandising
- Food Marketing
- General Clerical (one year)
- General Office Occupations
- Instructional Media
- Legal Secretarial
- Technical Illustration

**South Campus Courses**

- Aviation Technology  
(aircraft mechanic)
- Appliance Service
- Broadcast Communications  
Technology
- General Clerical (one year)
- General Office Occupations
- Legal Secretarial
- Medical Secretarial

## Accounting Associate

This two-year program is designed for persons interested in pursuing careers as junior accountants in business, industry, and government. Emphasis will be placed on internal accounting procedures and generally accepted accounting principles as they relate to external reporting with selected electives in cost accounting and tax accounting. Successful completion of the program leads to the associate in applied arts and sciences degree.

### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
BUS 201—Principles of Accounting _____	3	0	3
BUS 105—Introduction to Business _____	3	0	3
CS 175—Introduction to Computer Science _____	3	0	3
COM 131—Applied Composition and Speech or ENG 101—Composition and Expository Reading _____	3	0	3
SS 131—American Civilization or HST 101—History of the United States _____	3	0	3
			—
			15
<b>Spring Semester</b>			
BUS 202—Principles of Accounting _____	3	0	3
BUS 136—Principles of Management _____	3	0	3
BUS 161—Office Machines _____	1	2	2
BUS 173—Beginning Typing _____	1	2	2
COM 132—Applied Composition and Speech or ENG 102—Composition and Literature _____	3	0	3
SS 132—American Civilization or HST 102—History of the United States _____	3	0	3
			—
			16
<b>Fall Semester</b>			
BUS 203—Intermediate Accounting _____	3	0	3
BUS 238—Cost Accounting or BUS 239—Income Tax Accounting _____	3	0	3
BUS 237—Organizational Behavior _____	3	0	3
ECO 201—Principles of Economics _____	3	0	3
*Elective _____	3	0	3
			—
			15
<b>Spring Semester</b>			
BUS 204—Managerial Accounting _____	3	0	3
BUS 234—Business Law _____	3	0	3
BUS 231—Business Correspondence _____	3	0	3
ECO 202—Principles of Economics _____	3	0	3
*Elective _____	3	0	3
			—
			15

### \*Recommended Electives:

BUS 230—Salesmanship  
BUS 233—Advertising and Sales  
BUS 143—Personal Finance

BUS 238—Cost Accounting or  
BUS 239—Income Tax Accounting  
MTH 130—Business Mathematics

## Accounting Technician (1-year program)

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The objective of this program is to provide the student with a working knowledge of bookkeeping procedures currently in use in business; to introduce the student to accounting principles supporting bookkeeping procedures; and to give the student practical bookkeeping experience by the use of problem solving. Certificate awarded upon completion.

### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
BUS 105—Introduction to Business _____	3	0	3
BUS 131—Bookkeeping _____	3	0	3
BUS 161—Office Machines _____	1	2	2
COM 131—Applied Composition and Speech _____	3	0	3
MTH 130—Business Mathematics _____	3	0	3
			—
			14
<b>Spring Semester</b>			
BUS 132—Bookkeeping _____	3	0	3
BUS 173—Beginning Typing or BUS 174—Intermediate Typing _____	1	2	2
CS 175—Introduction to Computer Science _____	3	0	3
COM 132—Applied Composition and Speech _____	3	0	3
*Elective _____			3
			—
			14

### \*Recommended Electives:

BUS 162—Secretarial Training  
PSY 105—Introduction to Psychology  
PSY 131—Human Relations

## Construction Management and Technology

This program prepares the student for employment as a technician in a wide range of construction industry applications. Course content is designed to provide meaningful experiences in the construction industry at the management and site coordination level. Successful completion of this program leads to the associate in applied arts and sciences degree.

### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
CMT 130—Building Materials and Properties _____	3	3	4
CMT 132—Construction Industry _____	3	0	3
COM 131—Applied Composition and Speech _____	3	0	3
MTH 195—Technical Mathematics _____	3	0	3
HD 105—Human Development _____	3	0	3
			<hr/> 16

### Spring Semester

CMT 133—Electrical and Mechanical Equipment for Buildings _____	2	3	3
CMT 134—Construction Methods and Equipment _____	2	3	3
DFT 185—Architectural Drafting _____	2	6	4
EGR 188—Statics _____	3	0	3
*Elective _____			3
			<hr/> 16

### Fall Semester

CMT 231—Contracts and Specifications _____	2	3	3
CMT 136—Surveying and Measurements _____	2	6	4
CMT 138—Construction Management I _____	3	3	4
CMT 239—Building Codes and Safety _____	3	0	3
EGR 189—Strength of Materials _____	3	0	3
			<hr/> 17

### Spring Semester

CMT 233—Estimating _____	2	4	3
CMT 238—Construction Management II _____	3	3	4
CMT 230—Quality Control and Cost Control _____	3	3	4
CMT 237—Soils, Foundations, and Reinforced Concrete _____	3	3	4
			<hr/> 15

\*Choose one course from the following:

ANT 100—Introduction to Anthropology	PHY 131—Applied Physics
BUS 131—Bookkeeping	PSY 131—Human Relations
BUS 234—Business Law	
COM 132—Applied Composition and Speech	

## Electro — Mechanical Technology

This two-year program is designed to prepare the student for entry into industrial manufacturing or service work at the technician level. Emphasis is placed on an understanding of electro-mechanical systems, as well as practical experience in a laboratory setting. Successful completion of the program leads to the associate in applied arts and sciences degree.

### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
ET 190—D C Circuits and Measurements _____	3	3	4
EGR 186—Manufacturing Processes _____	1	2	2
COM 131—Applied Composition and Speech _____	3	0	3
MTH 195—Technical Mathematics _____	3	0	3
PHY 131—Applied Physics _____	3	3	4
			16

### Spring Semester

ET 191—A C Circuits _____	3	3	4
ET 193—Active Devices _____	3	3	4
EMT 136—Mechanisms and Linkages _____	2	3	3
DFT 182—Technical Drafting _____ (DFT 183 Optional)	1	3	2
*CS 175—Introduction to Computer Science _____	3	0	3
			16

### Fall Semester

EMT 138—Mechanisms and Drives _____	2	3	3
EMT 229—Analog and Digital Circuits _____	3	3	4
EMT 230—Electro-Mechanical Transducers and Systems _____	2	3	3
EMT 233—Electrical Machinery _____	2	3	3
*FLP 131—Fluid Power Fundamentals _____	3	3	4
			17

### Spring Semester

EMT 231—Automatic Control Systems _____	2	3	3
EMT 236—Instrumentation and Testing _____	2	3	3
EMT 237—Electro-Mechanical Systems _____	2	3	3
PSY 131—Human Relations _____	3	0	3
EGR 187—Manufacturing Processes _____	1	2	2
**Elective _____			3
			17

\*Alternate courses may be chosen from the recommended electives list upon approval of appropriate division chairman.

### \*\*Recommended Electives:

ANT 100—Introduction to Anthropology  
CHEM 115—General Chemistry  
CMT 133—Electrical and Mechanical  
Equipment for Buildings  
COM 132—Applied Composition  
and Speech  
EGR 188—Statics  
EGR 189—Strength of Materials

FLP 132—Applied Fluid Mechanics  
FLP 231—Fluid Power Circuitry  
FLP 232—Fundamentals of Pneumatics  
MTH 196—Technical Mathematics  
PHY 132—Applied Physics  
QCT 224—Industrial Organizations  
and Operations

## Fluid Power Technology

This program is designed to prepare the student for entry-level employment into various industrial applications of fluid power. Both hydraulic and pneumatic systems are studied in a theory and laboratory setting. Successful completion of this two-year program leads to the associate in applied arts and sciences degree.

### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
FLP 131—Fluid Power Fundamentals	3	3	4
ET 190—D C Circuits and Measurements	3	3	4
DFT 182—Technician Drafting	1	3	2
MTH 195—Technical Mathematics	3	0	3
PHY 131—Applied Physics	3	3	4
			—
			17
<b>Spring Semester</b>			
FLP 132—Applied Fluid Mechanics	3	3	4
EGR 186—Manufacturing Processes	1	2	2
ET 191—A C Circuits	3	3	4
COM 131—Applied Composition and Speech	3	0	3
CS 175—Introduction to Computer Science	3	0	3
			—
			16
<b>Fall Semester</b>			
FLP 221—Fluid Power Circuitry	2	3	3
FLP 222—Fundamentals of Pneumatics	2	3	3
EGR 187—Manufacturing Processes	1	2	2
PSY 131—Human Relations	3	0	3
*Elective			3
*Elective			3
			—
			17
<b>Spring Semester</b>			
FLP 223—Fluid Power Circuit Design	2	3	3
FLP 224—Fluid Power Systems Analysis	2	3	3
FLP 235—Instrumentation and Testing	2	3	3
*Elective			3
*Elective			3
			—
			15

\*Electives are to be selected from one of the following options:

**Electronics Option**

ET 193—Active Devices

EMT 229—Analog and Digital Circuits

EMT 234—Electro-Mechanical Transducers and Systems

EMT 236—Instrumentation and Testing

**Electro-Mechanical Option**

EMT 136—Mechanisms and Linkages

EMT 138—Mechanisms and Drives

EMT 233—Electrical Machinery

EMT 231—Automatic Control Systems

**Sales Option**

BUS 105—Introduction to Business

BUS 206—Principles of Marketing

BUS 230—Salesmanship

BUS 233—Advertising and Sales Promotion

**Quality Control Option**

QCT 121—Introduction to Quality Control

QCT 122—Quality Control Measurements I

QCT 133—Statistical Quality Control

QCT 221—Quality Control Systems I

## Human Services

This two-year program will develop competencies for students to enter employment in para-professional positions as social service assistants in various social and mental health agencies. The first year of the program consists of a basic "core curriculum" followed by a "branching" into either social worker assistant or mental health assistant options in the second year of the program.

### Curriculum Pattern

#### First Year Core

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Semester I</b>			
ENG 101—Composition and Expository Reading or COM 131—Applied Composition and Speech_____	3	0	3
PSY 105—Introduction to Psychology or HD 105—Basic Processes of Interpersonal Relationships_____	3	0	3
HST 101—History of the United States or SS 131—American Civilization or SOC 101—Introduction to Sociology_____	3	0	3
HS 131—Orientation to Human Services_____	3	0	3
*Elective_____	3	0	3
			<hr/> 15

#### Semester II

ENG 102—Composition and Literature or COM 132—Applied Composition and Speech_____	3	0	3
PSY 105—Introduction to Psychology or HD 105—Basic Processes of Interpersonal Relationships_____	3	0	3
SOC 101—Introduction to Sociology or SOC 102—Social Problems_____	3	0	3
HS 134—Human Services Seminar_____	3	0	3
*Elective_____	3	0	3
			<hr/> 15

#### \*Recommended electives for first year:

HD 106	PEH 110
SS 132	PEH 257
BUS 173	PEH 101
BIO 116	DM 090
HUM 101	DM 091
SPE 105	RD 101
SPA 101	

**Human Services (Mental Health Assistant Option)**  
**Curriculum Pattern**  
**Second Year**

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Semester III</b>			
SOC 204—American Minorities _____	3	0	3
HD 107—Developing Leadership Behavior _____	3	0	3
HS 235—Introduction to Mental Health _____	3	0	3
HS 240—Work Experience in Human Services (Field Work) _____	0	10	2
HS 241—Work Experience Seminar _____	2	0	2
*Elective _____	3	0	<u>3</u>
			16

**Semester IV**

SOC 203—Marriage and the Family _____	3	0	3
PSY 205—Psychology of Personality _____	3	0	3
HS 233—Counseling for the Para-Professional _____	3	0	3
HS 242—Work Experience in Human Services (Field Work) _____	0	10	2
HS 243—Work Experience Seminar _____	2	0	2
*Elective _____	3	0	<u>3</u>
			16

\*Recommended electives for second year Mental Health Option:

Available at Richland			Available at Eastfield	
PEH 101	PSY 203	ANT 101	SOC 205	REC 132
PEH 257	PSY 207	SPA 101	CD 136	REC 231
	SPE 105			REC 235
	CVT 201			

**Human Services (Social Worker Assistant Option)**  
**Curriculum Pattern**  
**Second Year**

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Semester III</b>			
SOC 204—American Minorities _____	3	0	3
SOC 206—Introduction to Social Work _____	3	0	3
HD 107—Developing Leadership Behavior _____	3	0	3
HS 240—Work Experience in Human Services (Field Work) _____	0	10	2
HS 241—Work Experience Seminar _____	2	0	2
*Elective _____	3	0	<u>3</u>
			16

**Semester IV**

SOC 203—Marriage and the Family _____	3	0	3
GVT 231—Municipal and County Government or GVT 201—American Government _____	3	0	3
HS 231—Procedures in Social Work _____	3	0	3
HS 242—Work Experience in Human Services (Field Work) _____	0	10	2
HS 243—Work Experience Seminar _____	2	0	2
*Elective _____	3	0	<u>3</u>
			16

\*Recommended electives for second year Social Worker Option:

Available at Richland		Available at Eastfield	Available at Mountain View
PEH 101	HS 233	CD 136	SOC 231
PSY 205	ANT 101	SOC 205	
PSY 207	PEH 257	REC 235	
	SPA 101		

## Mid-Management

This program in business management is designed to develop the fundamental skills, knowledge, attitudes and experiences which enable men and women to function in decision-making positions as supervisors or junior executives. Successful completion of the program leads to the associate in applied arts and sciences degree.

### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
BUS 136—Principles of Management _____	3	0	3
***BUS 150—Management Training _____	0	20	4
***BUS 154—Management Seminar _____	2	0	2
COM 131—Applied Composition and Speech or ENG 101—Composition and Expository Reading _____	3	0	3
HUM 101—Introduction to Humanities or ART 104, MUS 104, THE 101 _____	3	0	3
			15
<b>Spring Semester</b>			
BUS 105—Introduction to Business _____	3	0	3
BUS 151—Management Training _____	0	20	4
BUS 155—Management Seminar _____	2	0	2
COM 132—Applied Composition and Speech or ENG 102—Composition and Literature _____	3	0	3
*Elective _____			3
			15
<b>Fall Semester</b>			
BUS 201—Principles of Accounting or BUS 131—Bookkeeping _____	3	0	3
BUS 250—Management Training _____	0	20	4
BUS 254—Management Seminar _____	2	0	2
SS 131—American Civilization or HST 101—History of the United States _____	3	0	3
*Elective _____			3
			15
<b>Spring Semester</b>			
BUS 251—Management Training _____	0	20	4
BUS 255—Management Seminar _____	2	0	2
ECO 201—Principles of Economics _____	3	0	3
*Elective _____			3
**Elective _____			3
			15

### \*Recommended Electives:

BUS 161—Office Machines  
BUS 206—Principles of Marketing  
BUS 230—Salesmanship

BUS 234—Business Law  
BUS 237—Organizational Behavior  
CS 175—Introduction to Computer Science

\*\*This elective must be chosen from the social or behavioral sciences.

\*\*\*Preliminary interview by mid-management coordinator required.

## **Ornamental Horticulture Technology (Greenhouse Florist Option)**

This option prepares a student to enter the wholesale florist industry. The student may direct his training toward his own goals through the selection of appropriate electives and occupational experience. The program places emphasis on those skills required for success in wholesale greenhouse flower production, retail floral design and sales, and retail greenhouse florist production and sales. Upon graduation, a student is qualified to enter a wide number of positions in crop production, sales and distribution, floral design and flower shop management. Successful completion of this option will lead to an associate in applied arts and sciences degree.

### **Curriculum Pattern**

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
HLN 131—Horticultural Science	3	3	4
HLN 132—Landscape Plant Material I	1	3	2
BIO 115—Biology	3	3	4
COM 131—Applied Composition and Speech	3	0	3
MTH 195—Technical Mathematics	3	0	3
			—
			16
<b>Spring Semester</b>			
HLN 133—Landscape Plant Materials II	1	3	2
HLN 140—Herbaceous and Exotic Plants	2	3	3
CHM 115—General Chemistry	3	3	4
ART 110—Basic Design I	2	4	3
BUS 105—Introduction to Business	3	0	3
			—
			15
<b>Fall Semester</b>			
HLN 136—Greenhouse Horticulture	2	3	3
HLN 141—Floral Design	2	6	4
PSY 131—Human Relations or BUS 230—Salesmanship	3	0	3
HLN 233—Nursery Operations	2	3	3
Elective	3	0	3
			—
			16
<b>Spring Semester</b>			
HLN 234—Ornamental Crop Production	2	3	3
HLN 236—Florist Management	2	6	4
HLN 239—Applied Horticulture Training	0	10	2
BUS 131—Bookkeeping	3	0	3
HLN 240—Seminar in Horticulture Occupations	2	0	2
Elective	3	0	3
			—
			17

## Ornamental Horticulture Technology (Landscape Nursery Option)

This option prepares a student to enter both the landscaping industry and the nursery industry at a technician level. The student may direct his training toward his own goals through the selection of electives and occupational experiences. The course places emphasis on those skills required for success in landscape service, nursery production and sales, and landscaping planning and contracting business. A student who completes this training is also well prepared for work in park and recreation departments, shopping center malls and industrial parks and gardens. The successful completion of this option leads to an associate in applied arts and sciences degree.

### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
HLN 131—Horticulture Science _____	3	3	4
HLN 132—Landscape Plant Materials I _____	1	3	2
BIO 115—Biology _____	3	3	4
COM 131—Applied Composition and Speech _____	3	0	3
MTH 195—Technical Mathematics _____	3	0	3
			—
			16
<b>Spring Semester</b>			
HLN 133—Landscape Plant Material II _____	1	3	2
HLN 140—Herbaceous and Exotic Plants _____	2	3	3
HLN 235—Landscape Development _____	1	6	3
CMT 136—Surveying and Measurements I or DFT 183—Basic Drafting _____	2	6	4
CHM 115—General Chemistry _____	3	3	4
			—
			16
<b>Fall Semester</b>			
HLN 136—Greenhouse Horticulture _____	2	3	3
HLN 231—Landscape Design I _____	2	6	4
HLN 233—Nursery Operations _____	2	3	3
BUS 105—Introduction to Business _____	3	0	3
Elective _____	3	0	3
			—
			16
<b>Spring Semester</b>			
HLN 232—Landscape Planning and Management _____	2	6	4
HLN 234—Ornamental Crop Production _____	2	3	3
HLN 239—Applied Horticulture Training _____	0	10	2
BUS 131—Bookkeeping _____	3	0	3
HLN 240—Seminar in Horticulture Occupations _____	2	0	2
Elective _____	3	0	3
			—
			17

## **Ornamental Horticulture Technology (Florist Certificate)**

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This program prepares the student to enter positions in floral design, retail flower shop operations, and sales and distribution of flowers and florist supplies. Through the selection of electives and occupational experiences the student can guide his training toward specific jobs. Upon successful completion of the required courses the student will be eligible to receive a florist certificate.

### **Curriculum Pattern**

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
HLN 141—Floral Design _____	2	6	4
HLN 132—Landscape Plant Materials I _____	1	3	2
ART 110—Basic Design I _____	2	4	3
BUS 105—Introduction to Business _____	3	0	3
Elective _____	3	0	3
			—
			15

### **Spring Semester**

HLN 236—Florist Management _____	2	6	4
HLN 133—Landscape Plant Materials II _____	1	3	2
HLN 140—Herbaceous and Exotic Plants _____	2	3	3
HLN 239—Applied Horticulture Training _____	0	10	2
BUS 131—Bookkeeping _____	3	0	3
HLN 240—Seminar in Horticulture Occupations _____	2	0	2
			—
			16

## **Ornamental Horticulture Technology (Landscape Gardener Certificate)**

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This program prepares the student to enter positions in landscape construction, park maintenance, home landscape and garden services and garden center and nursery sales. Through the selection of electives and occupational experiences the student can guide his training toward specific jobs. Upon successful completion of the required courses the student will be eligible to receive a landscape gardener certificate.

### **Curriculum Pattern**

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
HLN 136—Greenhouse Horticulture _____	2	3	3
HLN 132—Landscape Plant Materials I _____	1	3	2
HLN 231—Landscape Design I _____	2	6	4
BUS 105—Introduction to Business _____	3	0	3
Elective _____	3	0	3
			—
			15

### **Spring Semester**

HLN 133—Landscape Plant Materials II _____	1	3	2
HLN 140—Herbaceous and Exotic Plants _____	2	3	3
HLN 235—Landscape Development _____	1	6	3
HLN 236—Florist Management _____	2	6	4
HLN 239—Applied Horticulture Training _____	0	10	2
HLN 240—Seminar in Horticulture Occupations _____	2	0	2
			—
			16

## Quality Control Technology

This program prepares the student with no previous experience in quality control for an entry level position as a quality control technician. A student having previous quality control experience will be able to upgrade his skills and knowledge in order to qualify himself for advancement in his chosen field. Successful completion of the program leads to the associate in applied arts and sciences degree.

### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
QCT 121—Introduction to Quality Control _____	2	0	2
QCT 122—Dimensional Measurement _____	2	2	3
MTH 195—Applied Mathematics _____	3	0	3
*DFT 182—Technical Drafting _____	1	3	2
**Elective _____			3 or 4
			—
			14
<b>Spring Semester</b>			
QCT 133—Statistical Quality Control I _____	3	2	4
QCT 227—Non-Destructive Evaluation _____	2	2	3
QCT 224—Industrial Organizations and Operations _____	2	0	2
EGR 186—Manufacturing Processes _____	1	2	2
**Elective _____			3 or 4
			—
			15
<b>Fall Semester</b>			
QCT 235—Statistical Quality Control II _____	3	2	4
QCT 138—Physical & Environmental Testing _____	2	2	3
EGR 187—Manufacturing Processes _____	1	2	2
PSY 131—Human Relations _____	3	0	3
**Elective _____			3 or 4
			—
			15
<b>Spring Semester</b>			
QCT 231—Quality Control Systems _____	2	0	2
COM 231—Applied Composition & Speech _____	3	0	3
*EMT 236—Instrumentation & Testing _____	2	3	3
**Elective _____			4
**Elective _____			3 or 4
			—
			16

\*Alternate courses may be chosen upon approval of appropriate division chairman.

\*\*Electives to be selected from one of the following options:

#### Electro-Mechanical Products Option

ET 190—D C Circuits and Measurements  
ET 191—A C Circuits  
ET 193—Active Devices  
EMT 229—Analog and Digital Circuits  
PHY 131—Applied Physics

BUS 206—Principles of Marketing

BUS 234—Business Law

ECO 201—Principles of Economics I

ECO 202—Principles of Economics II

#### Materials Testing Option

CHM 101—General Chemistry

CHM 102—General Chemistry

CHM 203—Quantitative Analysis

CHM 201—Organic Chemistry

CHM 202—Organic Chemistry

#### Management and Supervision Option

BUS 136—Principles of Management  
BUS 201—Principles of Accounting  
BUS 202—Principles of Accounting

## Secretarial Careers

### Educational Secretary (Two Years)

This program is designed to provide a sound educational basis for persons already employed or for persons desiring to enter employment in the field of education. Special emphasis will be placed on practical business methods, record-keeping, psychology of education and human relations. Upon completion of the courses in the curriculum pattern listed below, the student receives an associate in applied arts and sciences degree.

#### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
BUS 131—Bookkeeping _____	3	0	3
BUS 161—Office Machines _____	1	2	2
BUS 163—Beginning Shorthand _____	2	3	3
BUS 140—Educational Processes _____	3	0	3
BUS 174—Intermediate Typing _____	1	2	2
COM 131—Applied Composition and Speech or ENG 101—Composition and Expository Reading _____	3	0	3
			16
<b>Spring Semester</b>			
BUS 160—Machine Transcription _____	3	0	3
BUS 162—Secretarial Training _____	3	0	3
BUS 164—Intermediate Shorthand _____	2	3	3
HUM 101—Introduction to Humanities or PSY 105—Introduction to Psychology or SOC 101—Introduction to Sociology _____	3	0	3
*Elective _____			3
			15
<b>Fall Semester</b>			
BUS 231—Business Correspondence _____	3	0	3
BUS 263—Advanced Shorthand or MTH 130—Business Mathematics _____	2	3	3
COM 132—Applied Composition and Speech or ENG 102—Composition and Literature _____	3	0	3
SS 131—American Civilization or HST 101—History of the United States _____	3	0	3
BUS 273—Advanced Typing _____	1	2	2
			14
<b>Spring Semester</b>			
BUS 141—Current Practical Problems _____	3	0	3
PSY 131—Human Relations _____	3	0	3
SS 132—American Civilization or HST 102—History of the United States _____	3	0	3
CS 175—Introduction to Computer Science _____	3	0	3
*Elective _____			3
			15
<b>*Recommended Electives:</b>			
BUS 105—Introduction to Business			
TA 132—Introduction to Media			
BUS 264—Shorthand Transcription			
PEH 257—Standard and Advanced First Aid			

## Professional Secretary (Two Years)

The purpose of this program is to prepare students to become alert and responsive secretaries capable of performing the tasks required of them in the modern business office. Suggested electives are such that students may take courses which will allow specialties in secretarial areas such as law, selling, advertising, and accounting. Successful completion of the program leads to the associate in applied arts and sciences degree.

### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
BUS 105—Introduction to Business _____	3	0	3
BUS 131—Bookkeeping _____	3	0	3
BUS 161—Office Machines _____	1	2	2
BUS 163—Beginning Shorthand _____	3	2	3
BUS 174—Intermediate Typing _____	1	2	2
COM 131—Applied Composition & Speech or ENG 101—Composition & Expository Reading _____	3	0	3
			<hr/> 16
<b>Spring Semester</b>			
BUS 160—Machine Transcription _____	3	0	3
BUS 162—Secretarial Training _____	3	0	3
BUS 164—Intermediate Shorthand _____	2	3	3
BUS 231—Business Correspondence _____	3	0	3
BUS 273—Advanced Typing _____	1	2	2
			<hr/> 14
<b>Fall Semester</b>			
BUS 263—Advanced Shorthand _____	2	3	3
CS 175—Introduction to Computer Science _____	3	0	3
COM 132—Applied Composition & Speech or ENG 102—Composition and Literature _____	3	0	3
SS 131—American Civilization or HST 101—History of the United States _____	3	0	3
Elective _____			3
			<hr/> 15
<b>Spring Semester</b>			
BUS 264—Shorthand Transcription _____	2	3	3
HUM 101—Introduction to Humanities _____	3	0	3
PSY 131—Human Relations or PSY 105—Introduction to Psychology _____	3	0	3
SS 132—American Civilization or HST 102—History of the United States _____	3	0	3
Elective _____			3
			<hr/> 15

### Recommended Electives:

- BUS 230—Salesmanship
- BUS 233—Advertising and Sales Promotion
- BUS 234—Business Law
- MTH 130—Business Mathematics

## Secretarial Careers

### Administrative Secretary (One Year)

This program is designed for the person interested in being an assistant to the office administrator. Emphasis will be placed on developing the ability to make decisions and solve complex problems. The program is primarily designed for the office worker already working or for those who had prior office work experience, such as file clerk, typist, stenographer, or secretary.

#### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
BUS 273—Advanced Typing _____	1	2	2
BUS 263—Advanced Shorthand _____	2	3	3
BUS 136—Principles of Management _____	3	0	3
BUS 201—Principles of Accounting or BUS 234—Business Law _____	3	0	3
BUS 233—Advertising & Sales Promotion _____	3	0	3
			14
<b>Spring Semester</b>			
BUS 264—Shorthand Transcription _____	2	3	3
BUS 275—Secretarial Procedures _____	3	0	3
BUS 231—Business Correspondence _____	3	0	3
BUS 237—Organizational Behavior _____	3	0	3
SPE 105—Public Speaking _____	3	0	3
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### Executive Secretary (One Year)

This program is for those students who are entering college with high level skills in typing (50 WPM) and shorthand (90 WPM), and who are striving to become employable at the executive secretarial level after one year of post-high school training.

#### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
BUS 131—Bookkeeping or BUS 201—Accounting _____	3	0	3
BUS 162—Secretarial Training _____	3	0	3
BUS 231—Business Correspondence _____	3	0	3
BUS 263—Advanced Shorthand _____	2	3	3
BUS 273—Advanced Typing _____	1	2	2
ENG 101—Composition and Expository Reading or COM 131—Applied Composition and Speech _____	3	0	3
			17
<b>Spring Semester</b>			
BUS 132—Bookkeeping or BUS 202—Accounting _____	3	0	3
BUS 160—Business Machines Transcription _____	3	0	3
BUS 275—Secretarial Procedures _____	3	0	3
BUS 264—Shorthand Transcription _____	2	3	3
ENG 102—Composition and Literature or COM 132—Applied Composition and Speech _____	3	0	3
			15

## General Secretary (One Year)

The purpose of this program is to prepare students with the basic skills necessary to enter the secretarial field. A certificate is issued upon completion of the program.

### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
BUS 105—Introduction to Business _____	3	0	3
BUS 131—Bookkeeping _____	3	0	3
BUS 161—Office Machines _____	1	2	2
BUS 163—Beginning Shorthand _____	2	3	3
BUS 173—Beginning Typing _____	1	2	2
COM 131—Applied Composition and Speech _____	3	0	3
			—
			16
<b>Spring Semester</b>			
BUS 160—Machine Transcription _____	3	0	3
BUS 162—Secretarial Training _____	3	0	3
BUS 164—Intermediate Shorthand _____	2	3	3
BUS 174—Intermediate Typing _____	1	2	2
BUS 231—Business Correspondence _____	3	0	3
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			14

## Office Skills and Systems (One Year)

This program is designed to meet the needs of those students who desire to enter a business career in a minimum of time. Intensive training in the basic office skills and systems is provided — including office machines, communications systems, and other related business subjects. A general orientation to business is given.

### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
COM 131—Applied Composition and Speech or ENG 101—Composition and Expository Reading _____	3	0	3
BUS 105—Introduction to Business _____	3	0	3
BUS 131—Bookkeeping or BUS 201—Accounting _____	3	0	3
BUS 161—Office Machines _____	1	2	2
BUS 162—Secretarial Training _____	3	0	3
BUS 174—Intermediate Typing _____	1	2	2
			—
			16
<b>Spring Semester</b>			
COM 132—Applied Composition and Speech or ENG 102—Composition and Expository Reading _____	3	0	3
BUS 160—Machine Transcription _____	3	0	3
BUS 231—Business Correspondence _____	3	0	3
BUS 273—Advanced Typing _____	1	2	2
Elective _____			3
			—
			14

**NOTE:** In all secretarial careers programs, students with previous training in shorthand and typing will be placed according to ability. The last semester of typewriting and shorthand must be taken at Richland College.

## Teacher Aide

This is a two-year program designed to prepare aides to assist teachers. Graduates of the program will be able to perform the wide range of supportive duties common to educational processes. Special courses will prepare students in the use of instructional media and enhance understanding of learning processes and stages of development.

### Curriculum Pattern

	Lec. Hrs.	Lab. Hrs.	Credit Hrs.
<b>Fall Semester</b>			
RD 101—Advanced Reading or SPE 105—Fundamentals of Public Speaking _____	3	0	3
DW 090—Developmental Writing or COM 131—Applied Composition and Speech or ENG 101—Composition and Expository Reading _____	3	0	3
TA 131—Teacher Aide Techniques I _____	3	0	3
BUS 173—Beginning Typing or BUS 174—Intermediate Typing _____	1	2	2
HD 105—Basic Processes of Interpersonal Relationships _____	3	0	3
DM 090—Pre-Algebra Mathematics _____	3	0	3
			17
<b>Spring Semester</b>			
TA 129—Communication Skills for Teacher Aides _____	3	0	3
BUS 174—Intermediate Typing or Elective _____	1	2	2
TA 133—Teacher Aide Techniques II _____	3	0	3
TA 132—Introduction to Media _____	1	4	3
TA 135—Arts and Crafts for Teacher Aides _____	3	0	3
			14
<b>Fall Semester</b>			
COM or ENG—Communication or English _____	3	0	3
BUS 161—Office Machines _____	1	2	2
TA 231—Teacher Aide Seminar I _____	2	0	2
TA 232—Teacher Aide Practicum I _____	0	20	4
PSY 105—Introduction to Psychology _____	3	0	3
SOC 101—Introduction to Sociology _____	3	0	3
			17
<b>Spring Semester</b>			
*COM 132—Applied Composition and Speech or ENG 102—Composition and Literature _____	3	0	3
TA 235—Teacher Aide Seminar II _____	2	0	2
TA 236—Teacher Aide Practicum II _____	0	20	4
PSY 201—Developmental Psychology _____	3	0	3
SOC 231—Urban Social Problems _____	3	0	3
PEH 101—Fundamentals of Health _____	3	0	3
			18

### Recommended Electives:

PEH 257	HUM 101
SPE 105	PHI 102
HD 107	

\*If COM 132 or ENG 102 was taken previously, an elective may be chosen.

# FACULTY

- Acree, Patricia \_\_\_\_\_ Secretarial Science  
*Texas Christian Univ., B.S.C.; North Texas State Univ., M.B.E.*
- Aguren, Carolyn \_\_\_\_\_ Counselor  
*Univ. of Texas, Austin, B.S.; Southern Methodist Univ., M.A.*
- Albertson, Harold D. \_\_\_\_\_ Fluid Power  
*Univ. of Houston, B.S.; Southern Methodist Univ., M.S.; Univ. of Texas, Austin, Ph.D.*
- Allen, Floyd A. \_\_\_\_\_ English  
*Univ. of Michigan, B.A.; M.A.*
- Alther, Robert C. \_\_\_\_\_ History  
*Indiana Univ., B.A.; M.A.*
- Arasim, Theresa M. \_\_\_\_\_ Biology  
*Univ. of New Mexico, B.S.; Texas Woman's Univ., M.S.*
- Baker, William E. \_\_\_\_\_ Counselor  
*Florida Atlantic Univ., B.A.; M.Ed.*
- Beck, Larry A. \_\_\_\_\_ Mid-Management  
*Drake Univ., B.S.; North Texas State Univ., M.B.E.*
- Bell, David \_\_\_\_\_ Business  
*Stephen F. Austin State Univ., B.B.A.; M.B.A.*
- Biggerstaff, Ed \_\_\_\_\_ President  
*North Texas State Univ., B.S.; M.S.; Ed.D.*
- Bindseil, Kenneth Ray \_\_\_\_\_ English  
*Southwest Texas State Univ., B.A.; M.A.*
- Bird, Sharon W. \_\_\_\_\_ Developmental Mathematics  
*Univ. of Texas, Austin, B.S.; Southern Methodist Univ., M.Ed.*
- Bishop, Vicky \_\_\_\_\_ Community Services Associate  
*Texas Technological Univ., B.A.*
- Black, Jane M. \_\_\_\_\_ Developmental Writing  
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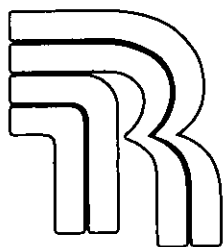
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