Roane State Community College is an Institution of Higher Education of the Tennessee State Board of Regents; accredited by the Southern Association of Colleges and Schools; an institutional member of the American Association of Community and Junior Colleges, the Southern Association of Junior Colleges and the Tennessee College Association; approved by the State Department of Education. Courses are approved by the State Approving Agency for Veterans Training.

GENERAL CATALOG 1975-76

Roane State Community College began the first session of its educational operation on September 20, 1971.
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</tr>
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</table>
# ACADEMIC CALENDAR
for School Year 1975-76

## SPRING QUARTER 1975

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>March</td>
<td>20</td>
<td>Registration</td>
</tr>
<tr>
<td>March</td>
<td>21</td>
<td>Classes begin</td>
</tr>
<tr>
<td>March</td>
<td>27</td>
<td>Last day to add classes and register late</td>
</tr>
<tr>
<td>March</td>
<td>28</td>
<td>Good Friday (no classes)</td>
</tr>
<tr>
<td>April</td>
<td>30</td>
<td>Last day to change from audit to credit or credit to audit</td>
</tr>
<tr>
<td>May</td>
<td>26</td>
<td>Classes end: Last day to drop a class with grade of W assigned</td>
</tr>
<tr>
<td>May</td>
<td>27-29</td>
<td>Final Examinations</td>
</tr>
<tr>
<td>May</td>
<td>30</td>
<td>Commencement</td>
</tr>
</tbody>
</table>

## SUMMER QUARTER 1975*

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td>5</td>
<td>Registration</td>
</tr>
<tr>
<td>June</td>
<td>6</td>
<td>Classes begin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(See Summer Schedule)</td>
</tr>
<tr>
<td>July</td>
<td>4</td>
<td>Independence Day Holiday (no classes)</td>
</tr>
<tr>
<td>July</td>
<td>11</td>
<td>First Summer Term ends</td>
</tr>
<tr>
<td>July</td>
<td>14</td>
<td>Begin Second Summer Term</td>
</tr>
<tr>
<td>August</td>
<td>15</td>
<td>Summer Quarter ends</td>
</tr>
</tbody>
</table>

## FALL QUARTER 1975

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>10-12</td>
<td>Faculty Pre-Service Training</td>
</tr>
<tr>
<td>September</td>
<td>15-17</td>
<td>Freshman and New Student Orientation and Advisement</td>
</tr>
<tr>
<td>September</td>
<td>18</td>
<td>Registration</td>
</tr>
<tr>
<td>September</td>
<td>22</td>
<td>Classes begin</td>
</tr>
<tr>
<td>September</td>
<td>26</td>
<td>Last day to add classes and register late</td>
</tr>
<tr>
<td>October</td>
<td>31</td>
<td>Last day to change from audit to credit or credit to audit</td>
</tr>
<tr>
<td>November</td>
<td>27-28</td>
<td>Thanksgiving Holidays (no classes)</td>
</tr>
<tr>
<td>December</td>
<td>5</td>
<td>Classes end: Last day to drop a class with grade of W assigned</td>
</tr>
<tr>
<td>December</td>
<td>8-10</td>
<td>Final Examinations</td>
</tr>
</tbody>
</table>

## WINTER QUARTER 1976

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>2</td>
<td>Registration</td>
</tr>
<tr>
<td>January</td>
<td>5</td>
<td>Classes begin</td>
</tr>
<tr>
<td>January</td>
<td>9</td>
<td>Last day to add classes and register late</td>
</tr>
<tr>
<td>February</td>
<td>6</td>
<td>Last day to change from audit to credit or credit to audit</td>
</tr>
<tr>
<td>March</td>
<td>9</td>
<td>Classes end: Last day to drop a class with grade of W assigned</td>
</tr>
<tr>
<td>March</td>
<td>10-12</td>
<td>Final Examinations</td>
</tr>
</tbody>
</table>

*See page 17 for registration procedures and fees for Summer Quarter.
### SPRING QUARTER 1976

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>March</td>
<td>22</td>
<td>Registration</td>
</tr>
<tr>
<td>March</td>
<td>24</td>
<td>Classes begin</td>
</tr>
<tr>
<td>March</td>
<td>29</td>
<td>Last day to add classes and register late</td>
</tr>
<tr>
<td>April</td>
<td>16</td>
<td>Good Friday (no classes)</td>
</tr>
<tr>
<td>April</td>
<td>30</td>
<td>Last day to change from audit to credit or credit to audit</td>
</tr>
<tr>
<td>May</td>
<td>28</td>
<td>Classes end: Last day to drop a class with grade of W assigned</td>
</tr>
<tr>
<td>June</td>
<td>1-3</td>
<td>Final Examinations</td>
</tr>
<tr>
<td>June</td>
<td>5</td>
<td>Commencement</td>
</tr>
</tbody>
</table>

### SUMMER QUARTER 1976*

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td>10</td>
<td>Registration</td>
</tr>
<tr>
<td>June</td>
<td>14</td>
<td>Classes begin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(See Summer Schedule)</td>
</tr>
<tr>
<td>July</td>
<td>5</td>
<td>Independence Day Holiday (no classes)</td>
</tr>
<tr>
<td>July</td>
<td>16</td>
<td>First Summer Term ends</td>
</tr>
<tr>
<td>July</td>
<td>19</td>
<td>Begin second Summer Term</td>
</tr>
<tr>
<td>August</td>
<td>20</td>
<td>Summer Quarter ends</td>
</tr>
</tbody>
</table>

*See page 17 for registration procedures and fees for Summer Quarter.
ROANE STATE COMMUNITY COLLEGE
DIRECTORY FOR CORRESPONDENCE

Inquiries will receive attention if addressed to the administrative office below at Roane State Community College, Harriman, Tennessee 37748.

Admission.............................................Director of Admissions and Records
Career Education Programs...Chairman of Division of Career Education
Community Services .......................... Director of Community Services
Degree Requirements .......................... Dean of Instruction
Evaluation of Credits.........................Admissions and Records Officer
Financial and Business Affairs ..................Business Manager
Graduation Requirements ..................... Dean of Instruction
Guidance and Counseling Services ... Dean of Student Personnel Services
Pre-Professional Curricula ..................... Dean of Instruction
Public Information ............................ Director of Public Information
Registration ...................................Director of Admissions and Records
Scholarships and Loans .................... Director of Student Financial Aid
Student Organizations ....................... Dean of Student Personnel Services
Testing Services ......................... Director of Counseling and Guidance Services
Transcripts ..................................Admissions and Records Officer
Veterans’ Affairs .............................Veterans’ Affairs Coordinator
Withdrawal ....................................Admissions and Records Officer

Telephone: (615) 354-3000

A NOTE TO VISITORS
The College administration, faculty, and staff welcome visitors to the campus. The administrative offices are open Monday through Friday, 8:00 a.m. until 4:30 p.m.
STATE BOARD OF REGENTS

Statutory

Honorable Ray Blanton, Chairman
Governor of the State of Tennessee, ex-officio

Dr. Roy S. Nicks, Chancellor

Dr. Sam H. Ingram
The Commissioner of Education, ex-officio

Honorable Edward S. Porter
The Commissioner of Agriculture, ex-officio

Dr. John K. Folger, Executive Director
Tennessee Higher Education Commission, ex-officio

NAMED FROM CONGRESSIONAL DISTRICTS AND AT-LARGE

Mr. Ben Kimbrough, Vice-Chairman ........................................ Clarksville
Dr. Kenneth Ezell ............................................................ Murfreesboro
Mr. Dale Glover ............................................................ Obion
Mr. James H. Jones, Jr. ....................................................... Mt. Pleasant
Mr. J. Frank Taylor ......................................................... Huntingdon
Mrs. Johnella H. Martin ..................................................... Nashville
Dr. C. N. Berry ............................................................... Chattanooga
Miss Ella V. Ross ............................................................ Johnson City
Mr. Charles J. Liner ............................................................ Athens
Mr. George M. Klepper, Jr. ................................................ Memphs
Mr. J. Howard Warf ......................................................... Hohenwald
Mr. David White ............................................................ Knoxville

Seated, left to right: Johnella H. Martin; Ben Kimbrough, Vice Chairman; Governor Ray Blanton, Chairman; Roy S. Nicks, Chancellor; Dale Glover. Standing, left to right: C. N. Berry; Kenneth Ezell; John K. Folger, Executive Director of Tennessee Higher Education Commission; J. Howard Warf; Sam H. Ingram, Commissioner of Education; David V. White; James H. Jones, Jr.; Ella V. Ross; Charles J. Liner; Edward S. Porter, Commissioner of Agriculture. Not Pictured: J. Frank Taylor and George M. Klepper, Jr.
ROANE STATE COMMUNITY COLLEGE

COLLEGE PERSONNEL

Administrative Officers

President.................................................................CUYLER A. DUNBAR
Dean of Instruction........................................HAROLD L. UNDERWOOD
Dean of Student Personnel Services...............WALTER S. PATTON
Business Manager.....................................................J. ALTON JOHNSON

Administrative Staff

Director of Community Services .......................PAUL GOLDBERG
Director of Student Financial Aid ...................CURTIS WHALEN
Librarian.................................................................JOHN R. NEEDHAM
Director of Admissions and Records...............LOUISE R. GREENE
Director of Institutional Research..................FRED H. MARTIN
Director of Computer Operations....................WILLIAM MURRAY
Director of Athletics........................................PHILLIP ALLEN
Director of Affirmative Action and
Public Relations.................................................JUDY A. MCGILL
Director of Guidance and
Counseling ..........................................................GARY DUNFORD

Divisional Heads

Chairman, Division of Career Education......W. CARROLL MARSALIS
Chairman, Division of Education.....................JAMES C. PERRY
Chairman, Division of Humanities ..................NANCY A. FISHER
Chairman, Division of Mathematics and Science...ANNE MINTER
Chairman, Division of Social Science ..............GARY HEIDINGER
ADMINISTRATION AND FACULTY

ADAMS, SUSAN K................................................................. Physical Education
  B.S., Middle Tennessee State University — Health, Physical Education, Recreation
  M.Ed., Middle Tennessee State University — Health, Physical Education, Recreation

ALLEN, PHILLIP................................................................. Director of Athletics
  B.S., Western Kentucky University — Physical Education
  M.S., University of Tennessee — Recreation

ATKINSON, EDWARD R...................................................... Psychology
  B.A., Southwestern at Memphis — English
  M.A., George Peabody College — English
  M.A., Austin Peay State University — Psychology

BERTHELOT, RONALD.......................................................... Engineering
  B.S., Southeastern Louisiana University — Industrial Technology
  M.S., University of Tennessee — Industrial Education
  Additional Graduate work, University of South Florida and University of Tennessee

BINKLEY, FREDERICK H., JR.............................................. Engineering
  B.S., Tennessee Tech — Civil Engineering
  M.S., Tennessee Tech — Civil Engineering

BILBREY, JUNE A............................................................... School Nurse
  R.N., Fort Sanders School of Nursing — Nursing

BOULDIN, CHARLES L....................................................... Mathematics
  B.A., David Lipscomb College — Mathematics
  M.S., Middle Tennessee State University — Mathematics
  Additional Graduate work, University of Tennessee

BREAZEALE, WAYNE L...................................................... Coordinator of Veterans’ Affairs
  B.S., University of Kentucky — Business Administration
  M.S., University of Tennessee — Guidance
  Additional Graduate work, University of Tennessee

BROWN, JAMES E.............................................................. Art
  B.A., Athens College — Art
  M.A., University of Alabama — Art
  Additional Graduate work, University of North Carolina

BRYANT, GAY................................................................. Business
  B.S., West Georgia College — Business Education
  M.S., University of Tennessee — Business Education

CALVERT, MARJORIE H.................................................... Assistant Librarian
  B.A., Skidmore College — Psychology
  M.L.S., Rutgers University — Library Service

CHARTON, FRANK L......................................................... Geography
  B.A., George Peabody College — Social Studies
  M.A., Michigan State University — Geography
  Ph.D., Michigan State University — Geography

CHRISTIAN, FLOYD.......................................................... Mathematics
  A.B., Birmingham Southern — Mathematics
  M.A., Samford University — Mathematics
  Ph.D., University of Mississippi (Pending) — Mathematics

DAVIS, BEULAH ANN....................................................... English
  B.A., Carson-Newman College — English
  M.A., East Tennessee State University — English
  Ed.S., George Peabody College — English

DAVIS, JAMES H.............................................................. English
  B.S., Middle Tennessee State University — Business Management
  M.A., Middle Tennessee State University — English
DUNBAR, CUYLER A. ................................................................. President
B.S., University of Tennessee — Agricultural Education
M.A., Austin Peay State University — Educational Administration/Counseling
Ed.D., Auburn University — Educational Administration

DUNFORD, GARY .......................................................... Director of Counseling and Guidance
B.S., Brigham Young University — Psychology
M.S., Brigham Young University — Counseling and Guidance
Ed.D., New Mexico State — Counseling and Guidance

EDWARDS, LINDA M. ............................................................... (Botany) Biology
B.S., University of Tennessee — Botany
M.S., University of Tennessee — Botany

FISHER, NANCY A. .......................................................... English and Chairman, Humanities Division
A.B., Woman's College, University of North Carolina — English
M.A., Florida State University — English
Ph.D., University of Tennessee — English

FREITZ, HARRY .......................................................... Music
A.B., Carson-Newman — Bible, Religious Education
M.S., University of Tennessee — Music Education

GOLDBERG, PAUL .............................................................. Director of Community Services
B.S., University of Tennessee — Economics
M.S., University of Tennessee — Geography
Ed.D., University of Tennessee — Educational Administration and Supervision

GREENE, LOUISE R. .......................................................... Director of Admissions and Records
B.S., University of Tennessee — History
M.S., University of Tennessee — Educational Administration and Supervision

HARMON, WILLIAM EDDIE .................................................. Counseling
B.A., University of Tennessee — Psychology
M.S., University of Tennessee — Counseling

HARRIS, KENNETH M. .......................................................... Physical Education
B.S., Middle Tennessee State University — Health, P.E. and Recreation
M.S., Middle Tennessee State University — Health, P.E. and Recreation

HEIDINGER, GARY .......................................................... Sociology and Chairman, Social Science Department
B.S., Bethel College — History
M.A., George Peabody College — History
Additional Graduate Work, University of Mississippi, Auburn University, Alabama A & M University, and University of Tennessee

HOAGLAND, JUDY KOWLES .................................................. Economics
B.S., Middle Tennessee State — Political Science
M.A., University of Tennessee — Political Science

HOAGLAND, WILLIAM .......................................................... Political Science
B.S., Lambuth College — History
M.S.S., University of Mississippi — History
Additional Graduate Work, University of Tennessee

HOLDER, MABRE M. .......................................................... Business
B.S., Middle Tennessee State University — Business (Marketing)
M.B.A., Middle Tennessee State University — Business Administration

HOWARD, BENJAMIN S......................................................... English, German
B.A., University of Tennessee — English
M.A., University of Tennessee — German
Ph.D., University of Georgia — Comparative Literature
Additional Graduate Work, University of North Carolina and Ludwig-Maximilians Universitat, Munich, Germany

JENNINGS, ROBERT ......................................................... Electronics
B.E.E.E., Vanderbilt University — Electrical Engineering
Ph.D., Vanderbilt University — Electrical Engineering

JOHNSON, J. ALTON .......................................................... Business Manager
B.S., North Georgia College — Business Administration
JOHNSON, JUDITH MAE ............................................... Coordinator of Learning Lab
B.S., University of Tennessee — Psychology
M.S., University of Tennessee — Adult and Continuing Education

JONES, KATHY R ...................................................... Reading
B.A., David Lipscomb College — Speech
M.Ed., Middle Tennessee State University — Reading

JORDON, BERNARD .................................................. Vocational Counselor
B.A., B.S., Syracuse University/University of Illinois — Mathematics
M.Ed., Northern University — Education
Additional Graduate work, George Peabody College

KEITH, C. JOHN .................................................... Music
B.M., Oberlin College — Music Education
M.M., University of Cincinnati

KIRKPATRICK, MELVIN A ........................................... Mathematics
B.S., Tennessee Technological University — Mathematics
B.S., Tennessee Technological University — Mathematics Secondary Education
M.S.T., Middle Tennessee State University — Mathematics
Additional Graduate work, University of Tennessee

KRING, JAMES B .................................................... Biology
B.S., Maryville College — Biology
M.S., University of Tennessee — Botany

MARSALIS, CARROLL .............................................. Chairman, Career Education Division
B.A., Mississippi College — Political Science — Constitutional Law
M.A., University of Mississippi — Political Science
Additional Graduate work, Auburn University

MARTIN, FREDRIC H .............................................. Director of Institutional Research
B.S., University of Tennessee — Science Education
M.S., University of Tennessee — Science Education
Ed.D., University of Tennessee — Curriculum and Instruction

McADAMS, H. VAL .................................................. Electronics
B.S., Mississippi State University — Electrical Engineering
M.S., Mississippi State University — Electrical Engineering

McGILL, JUDY ANN .............................................. Director of Affirmative Action and Public Relations
B.A., University of West Florida — English
M.S., University of Tennessee — Continuing and Higher Education

MINTER, ANNE P .................................................. Chemistry and Chairman, Division of Mathematics and Science
B.S., Georgia College at Milledgeville — Chemistry
M.A., Duke University — Microbiology
Ed.D., University of Tennessee — Science in Higher Education

MOORE, ALICE A .................................................. Medical Records
B.S., Indiana University — Medical Records Administration
R.R.A., Registered Record Administrator

MOORE, MICHAEL L ................................................ Business
B.S., Indiana University — Business Administration
M.B.A., University of Tennessee — Accounting
C.P.A., State of Tennessee

MURRAY, WILLIAM ................................................ Director of Computer Operations
B.S., University of Cincinnati — Chemical Engineering
M.S., University of Tennessee — Chemical Engineering, Mathematics
Additional Graduate work, University of Tennessee

NEEDHAM, JOHN R ................................................ Head Librarian
B.A., Tennessee Technological University — English
M.A., George Peabody College — Library Science

ORTON, THOMAS H ................................................ Physical Education
B.S., Valparaiso University — Physical Education, Geography
M.A., Wayne State University — Geography
Additional Graduate work, Southern Illinois University
PARSONS, STEVE .................................................. Accounting
        B.S., Tennessee Tech — Accounting
        M.B.A., University of Tennessee — Accounting
        C.P.A. — State of Tennessee

PATTON, WALTER S .................................................. Dean of Student Personnel Services
        B.S., New Mexico State University — American History
        M.A.T., New Mexico State University — History, Government
        Ed.D., New Mexico State University — Educational Administration

PERRY, JAMES C .................................................. Education, Division Chairman, Education
        B.S., Middle Tennessee State University — Biology
        M.S., Middle Tennessee State University — Biology
        Ph.D., George Peabody College — Higher Education

POLLARD, OWEN J .................................................. Philosophy
        B.A., Assumption College — Philosophy
        B.D., M.A., University of Montreal — Religion
        M.A., University of Tennessee — Philosophy
        Additional Graduate work, L'Université de Montréal, L'Université de Laval, Catholic University of America, Bellarmine, Bowling Green State University, University of Tennessee

POULIN, GERALD DAVID ............................................. English
        B.A., Middle Tennessee State University — French and English
        M.A.C.T., Middle Tennessee State University — English

POWERS, ANNE D .................................................. Coordinator of Printing
        B.F.A., University of Tennessee

RANDOLPH, HELEN .................................................. Chemistry
        A.B., Womans College UNC — Chemistry
        M.A., University of North Carolina — Physical Chemistry
        Additional Graduate work, Murray State College

SHELDON, MARTHA E .................................................. English
        A.B., University of Tennessee — English
        M.A., University of Tennessee — English
        Additional Graduate work, University of Tennessee

SIENKNECHT, MARTHA E ............................................. History
        B.A., University of North Carolina — History
        M.A., Vanderbilt University — English, History
        Additional Graduate work, University of Tennessee

SIMMONS, LINDA .................................................. History
        B.A., Blue Mountain College — Social Science, History
        M.S.S., University of Mississippi — History, Political Science

STEPHENS, KENNETH WAYNE ....................................... Business, Data Processing
        B.S., Middle Tennessee State University — Business Management
        M.B.A., Middle Tennessee State University — Business Management

THOMPSON, IRA JOANN ............................................. Guidance Counselor
        B.S., Tennessee Technological University — Health and Physical Education
        M.S., University of Tennessee — Guidance

VANCIL, CHRISTOPHER N ............................................. Mathematics
        B.S., Murray State University — Mathematics
        M.A., Murray State University — Mathematics

UNDERWOOD, HAROLD L ............................................. Dean of Instruction
        B.S., Mississippi State — Science Education
        M.S.C.S., University of Mississippi — Mathematics
        Ed.D., Auburn University — Educational Administration

WHALEN, CURTIS ............................................. Director of Student Financial Aid
        B.S., Memphis State University — Secondary Education
        M.Ed., Memphis State University — Educational Administration
        Additional Graduate work, University of Tennessee
WHALEY, LOWELL ............................................................. Assistant Business Manager  
B.S., Tennessee Technological University — Business Management  
M.B.A., Middle Tennessee State University — Business Management  

WINKLES, BILLY B............................................................. Physics, Mathematics  
B.S., University of Tennessee — Engineering Physics  
Ph.D., University of Tennessee — Physics  

WORKS, LARRY P............................................................. Psychology  
B.S., East Tennessee State University — Health and Physical Education  
M.S., University of Montana — Health, Physical Education and Psychology  

YATES, WILLIAM B............................................................. Speech and Theatre  
B.A., Tennessee Wesleyan College — History  
M.A., University of Tennessee — Public Address and Theatre Arts  

YORK, KINCH M ............................................................. Superintendent of Buildings and Grounds  
Memphis State University  

ZACHRY, JOEL GLEN ............................................................. Biology  
B.S., Tennessee Technological University — Education  
M.S., Middle Tennessee State University — Biology  
Additional Graduate work, Middle Tennessee State University and University of Tennessee
General Information
COLLEGE HISTORY

In 1957 the Pierce-Albright report on higher education in Tennessee was submitted to the Tennessee Legislative Council. This report emphasized the need for additional higher education to be available to the typical Tennessee resident.

In 1963 the Tennessee General Assembly appropriated $200,000 for use over a two-year period to implement the Pierce-Albright report. The State Department of Education, under the leadership of Commissioner J. Howard Warf, developed plans for the establishment of community colleges to service areas without access to higher education.

The 1965 Tennessee General Assembly authorized the establishment of the first three community colleges, one to be located in each of the State's three grand divisions. Sites of these institutions were Columbia, Cleveland, and Jackson. The cities of Dyersburg and Tullahoma were the locations of additional community colleges opened in 1969. In 1970 Morristown was the location of the sixth community college.

Acting upon the recommendation of Governor Buford Ellington and the State Department of Education, the 1969 Tennessee General Assembly authorized the establishment of three additional community colleges. These colleges were to be located in Sumner, Roane, and Shelby Counties. In July 1969, Commissioner J. Howard Warf and other State Department of Education officials visited various sites proposed for the new college in Roane County. After appropriate studies were made, a site on Patton Lane was chosen for the location of the institution.

In May of 1970, Dr. Cuyler A. Dunbar was selected as the first president of the College; and in the late summer, temporary offices were opened on Ruritan Road in South Harriman.

When bids for construction were opened in August 1970, the low bid was approximately $700,000 higher than the amount of available funds. Subsequently, a decision was made by State Department of Education officials and College administrative personnel to open in temporary quarters in the fall of 1971.

Bids for construction were opened again in June 1971, and construction was begun in July 1971. The building was occupied in August 1973.

Location

The campus of Roane State Community College consists of 104 acres located between the cities of Harriman, Kingston, and Rockwood in Roane County, Tennessee. The permanent site is near the intersection of Patton Lane and U.S. Highway 70. The campus is easily accessible from Interstate 40 and U.S. Highways 27 and 70.
PURPOSE

The educational offerings of Roane State Community College are based upon the belief that development of the individual for a useful and productive life in a democratic society is a primary obligation of the public educational system.

Roane State Community College accepts as its purpose the development of the cultural, intellectual, physical, and vocational resources of the people of the surrounding area through qualified teaching, professional counseling and guidance, and comprehensive services offered to students and community.

Roane State Community College offers day and evening programs combining general education and technical education sufficiently flexible to provide for the changing educational needs of the community. The program is three-fold: (1) To serve those who wish to transfer and complete a four-year college education; (2) To serve those who wish to complete their formal education upon graduation from Roane State Community College; and (3) To serve the entire community through an adult program based on community needs and demands.

Roane State Community College accepts the philosophy that a community college is not merely two years of continuing high school or just the first two years of college, but is a separate entity. Roane State recognizes that students have differing learning characteristics which require varied instructional techniques, and the college endeavors to provide the leadership which will enable each individual to develop and mature toward the realization of his potentialities. Thus, students are encouraged to actively participate in the social, cultural and intellectual activities of the college and its community.

Specifically, Roane State attempts to fulfill its role in the educational process by: (1) Promoting a liberal admissions policy; (b) Developing a broad curriculum of superior quality; (c) Supporting a position of low fees for its students; (d) Maintaining a fundamental orientation toward the area it serves; (e) Establishing adequate articulation with four year institutions; and (f) Development of reasonable vocational and occupational objectives.
Business Information and Expenses
IMPORTANT NOTICE

The State Board of Regents, at the June 1975 meeting, increased maintenance fees to $75.00 per quarter. The following fees are now applicable:

TUITION

Tuition is free to all residents of the State of Tennessee. Students classified as non-residents will be assessed tuition at the rate of $30.50 per quarter hour, not to exceed $359.00 per quarter.

MAINTENANCE FEES

All students, both resident and non-resident, will be assessed a maintenance fee of $6.50 per quarter hour, not to exceed $75.00 per quarter.

SUMMER QUARTER FEES

Students may register for the entire quarter, for the two separate terms, or for only one of the separate terms. Tuition and fees for the entire summer quarter are the same as for other quarters. Students are required to indicate at the initial enrollment for the summer quarter if they wish to be assessed for the full quarter at the rate of $6.50 per quarter hour not to exceed $75.00 or if they wish to be assessed at the rate of $6.50 per hour in which case a student taking a total of more than 11 quarter hours during the two separate terms would be required to pay more than the maximum of $75.00. The Business Office will assist a student in selecting a plan that is to the advantage of the student.
Business Regulations

Tuition and fees are assessed and payable at the beginning of each quarter. Registration is not considered to have been completed until all assessed tuition and fees have been paid. Students who have not met all financial obligations to the College will not be permitted to attend classes. No student will be permitted to re-enroll, graduate, or receive a transcript until all financial obligations to the College have been satisfied. All tuition and fees are subject to change by direction of the Tennessee State Board of Regents.

TUITION

Tuition is free to all residents of the State of Tennessee. Students classified as non-residents will be assessed tuition at the rate of $30.00 per quarter hour, not to exceed $280.00 per quarter. The definition of residency as determined by the State Board of Regents will apply. Information concerning residence classifications may be obtained from the Director of Admissions and Records. Non-resident students will be accepted, if space permits.

MAINTENANCE FEE

All students, both resident and non-resident, will be assessed a maintenance fee of six dollars per quarter hour, not to exceed $68.00 per quarter.

AUDIT FEE

Fees for courses being audited are the same as those taken for credit. Auditors are not required to take examinations and receive no credit.

COMMUNITY SERVICE COURSE FEES

Fees for Community Service courses will vary with the length of the course, cost of materials provided, equipment, or miscellaneous resources. Students enrolling for Community Service courses are not required to pay an application fee or late registration fee.

Fees charged for Community Service courses are refundable in the following manner: (1) 100% refund if the class is dropped prior to the first class meeting. (2) 70% refund if the class is dropped after the first class meeting, but prior to the second class meeting, and (3) no refund is made after the second class meeting, for individual classes missed, or for programs of fewer than 10 contact hours. All refunds will be made by mail during the fourth calendar week of the quarter.

SUMMER QUARTER FEES

The Summer quarter consists of a full-quarter term, or two separate terms of approximately five weeks each.

Students may register for the entire quarter, for the two separate terms, or for only one of the separate terms. Tuition and fees for the entire Summer quarter are the same as for other quarters. Students are required to indicate at the initial enrollment for the Summer quarter if they wish to be assessed
for the full quarter at the rate of $6.00 per quarter hour not to exceed $68.00 or if they wish to be assessed at the rate of $6.00 per hour in which case a student taking a total of more than 11 quarter hours during the two separate terms would be required to pay more than the maximum of $68.00. Once the student has indicated his election, he may not shift from one plan to the other. The Business Office will assist a student in selecting a plan that is to the advantage of the student.

Summer school refunds will follow a posted schedule different from the regular refund schedule.

OTHER FEES

Application Fee — Each student applying for admission to the College for credit courses for the first time will be assessed a $5.00 application fee. This fee is a one-time only fee, it is not applicable to the maintenance fee, and is not refundable.

Late Registration Fee — Students failing to complete the registration requirements on the appointed registration day will be assessed a late registration fee of $0.50 per quarter hour not to exceed $5.00. This fee is not refundable.

Change of Schedule Fee — Students changing schedules after registration day will be assessed a fee of $3.00. This fee is not refundable. No charge is made if the change is initiated by the College.

Replacement of Lost I.D. Card — $1.00

Laboratory Fee — A fee of $2.50 per quarter is assessed for all biological and physical science courses.

Physical Education Fees — A fee for certain physical education courses which are conducted in facilities not owned by the College will be assessed at the rate charged by the owner of the facility. This fee is refundable only to the extent allowed by the owner.

Individual Instruction in Music — Quarterly fees for individual instruction in music are assessed as follows:

<table>
<thead>
<tr>
<th></th>
<th>Full-time students</th>
<th>Part-time students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 lesson per week</td>
<td>$20.00</td>
<td>$30.00</td>
</tr>
<tr>
<td>2 lessons per week</td>
<td>$30.00</td>
<td>$60.00</td>
</tr>
</tbody>
</table>

Musical Instrument Rental Fee — $5.00 per quarter.

Locker Rental Fee — $1.00 per quarter.

Lock Replacement Fee — $3.00

Late Examination Fee A $5.00 fee is assessed for students taking examinations after the appointed time for the examination. Arrangements must have been made with the instructor of the class. No late examination will be administered without the presentation of a paid receipt from the Business Office to the instructor. This fee is not refundable.
Graduation Fee — Graduating students are assessed a fee of $10.00 to cover the cost of a diploma and other related costs. This fee must be paid at the beginning of the quarter in which a student is scheduled to graduate. This fee is not applicable to certificate graduates. This is a one time fee and is not refundable.

Returned Check Fee — A fee of $5.00 is assessed for each check returned to the College by the bank. A student may contest this fee successfully by presenting a letter from the bank in which it is clearly indicated that the check was returned through error by the bank.

REFUNDS

Students withdrawing from class are entitled to a partial refund according to the following schedule:

<table>
<thead>
<tr>
<th>Period of Enrollment</th>
<th>Percentage of Refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seven calendar days or less</td>
<td>80%</td>
</tr>
<tr>
<td>Eight through fourteen days</td>
<td>60%</td>
</tr>
<tr>
<td>Fifteen through twenty-one days</td>
<td>40%</td>
</tr>
<tr>
<td>Twenty-two through twenty-eight days</td>
<td>20%</td>
</tr>
<tr>
<td>After twenty-eight days</td>
<td>No Refund</td>
</tr>
</tbody>
</table>

Summer school refunds follow a posted schedule different from the regular schedule.

No refund is due on courses which are dropped unless the sum of the remaining hours calculated at the hourly rate is less than the total amount paid or the maximum quarterly tuition and/or maintenance fee.

When classes are cancelled by the College, students are entitled to a full refund subject to the limitation in the immediately preceding paragraph. Refunds are calculated from the date of the official notification by the student to the Office of Admissions and Records that he is withdrawing. Students failing to notify the Office of Admissions and Records of withdrawal will forfeit all rights to a refund.

BOOKS AND SUPPLIES

The cost of books and supplies will vary from one program to another. The College Bookstore sells both new and used books. Students are encouraged to take advantage of savings which result when purchasing used books. The cost of books and supplies will probably range from $35-$70 per quarter. The College Bookstore will buy back used books in good usable condition in quantities limited to the anticipated needs for ensuing quarters. Book buy back periods are announced at the end of each quarter.
Admissions

ADMISSIONS AND RECORDS

Roane State Community College subscribes to the "open-door" policy for admission. Prospective students seeking admission to complete courses for college credit must meet the following requirements.

ADMISSION REQUIREMENTS

1. Graduate from high school or receive a GED high school equivalency diploma and file with the Office of Admissions an official high school transcript or an official copy of G.E.D. scores.

2. File an application for admission and submit a non-refundable application fee of $5.00

3. File the signed Health Information Report and/or evidence of a recent physical examination. Students who have special health problems must file this information with the college clinic. Part-time students shall have the option of signing the medical waiver, and students who enroll only in courses taught at off-campus locations are exempt from any health information requirement.

4. All freshmen applicants are strongly urged to take the American College Testing Program (ACT) battery and have their scores certified directly to the Admissions and Records Office, Roane State Community College, Harriman, Tenn. 37748. This test should be taken preferably on one of the fall testing dates during the senior year of high school. Information on the ACT may be obtained from the high school counselor, the Counseling Office at RSCC or by writing to American College Testing Inc., P. O. Box 168, Iowa City, Iowa 52242. Roane State Community College's ACT Code Number is 3985. This number should be used when requesting that scores be sent to RSCC. Students may enter without having taken the ACT but they may be required to take the ACT battery during their first quarter of attendance. The sole purpose of these tests is to assist the student in choosing the best academic schedule.

5. Any applicant who is under indictment in a criminal court may not be considered for admission to Roane State Community College until some disposition has been made of all charges.

TRANSFER STUDENTS FROM OTHER COLLEGES AND UNIVERSITIES

1. Any applicant who has attended another college or university will be considered a transfer student and will be required to furnish transcripts of all previous college work from each institution he has attended.
2. Transcripts are not accepted from students. A certified copy must be mailed directly to the Office of Admissions, Roane State Community College.

3. Each student must have a Transfer Evaluation Form completed by the Dean of Students of each college the applicant has attended or is currently attending. This form must be received by the Director of Admissions and Records at Roane State Community College before final acceptance will be granted. Students who enroll only in courses taught in off-campus locations are not required to include the Transfer Evaluation Form in the Admissions credentials if the college experience occurred five years or more prior to application for admission to Roane State Community College.

4. Transfer students will be admitted if they meet the minimum scholastic standards required by the College. Special cases will be evaluated by the Admissions Office.

5. The application for admission, transfer evaluation form, and official transcripts must be received in sufficient time prior to registration to be evaluated.

6. Credits for courses not corresponding with the curriculum at Roane State will be entered on the transcript as elective credit.

7. If a transfer student has accumulated less than 36 quarter hours, an official high school transcript is also required.

8. Freshmen transfer students must furnish the college with certified ACT scores. If the transfer student has not taken the ACT, then he may be required to take the ACT Battery during his first quarter of attendance at Roane State Community College.

When all requirements have been met, the applicant may be admitted to the College as a candidate for a degree and receive college credit for courses completed.

**HOW TO APPLY FOR ADMISSION**

All correspondence concerning admissions should be addressed to:

Director of Admissions and Records
Roane State Community College
Harriman, Tennessee 37748

A candidate for admission should request application blanks early enough to allow ample time for required materials to be forwarded to the Director of Admissions and Records.

When all admissions papers have been received in the Office of Admissions and Records, the applicant will be sent a letter indicating that he has been accepted for admission or he will be advised by letter than further action is necessary in order to establish eligibility for admission. Applicants will be advised when to appear for testing, counseling, pre-registration and registration.
READMISSION OF FORMER STUDENTS

Former students who wish to return to the College must file a formal application for readmission. Application forms, available from the Office of Admissions and Records, must be completed in ink or by typewriter and returned to the Director of Admissions & Records. If the student has enrolled at another college since last attending Roane State Community College, he must have a transcript from the other college submitted and approved before he may reenter. Applications will receive favorable consideration only if the applicant is eligible for readmission under all college regulations.

CLASSIFICATION

For administration purposes, a student will be classified as a freshman until the completion of 42 quarter hours; a student who has completed 42 quarter hours or more will be classified as a sophomore. Those not accepted as Degree Students will be classified as Special Students.

Special Student — Credit

Persons desiring college credit but who are not working toward a degree at Roane State Community College may be admitted as special students. These students must submit an application form, the required medical form, and evidence of high school graduation or a G.E.D. diploma. If such students have already earned a degree, or have completed some work toward a degree at another institution of higher education, a college transcript in lieu of the high school transcript or G.E.D. diploma may fulfill this requirement.

Special Student — Non-Credit

Persons desiring to take courses offered in the College program for audit, or who do not meet all of the admission requirements, will be admitted as Special Students. Students seeking admission to the College for the purpose of attending special courses, seminars, or other non-credit offerings will be admitted as Special Students.

Transfer Student

Admission as a transfer student will be based upon the student's high school record and his success in college. Critical consideration will be given to the conditions under which he is withdrawing or has withdrawn from another institution. Normally, transfer students will be admitted who can show evidence of honorable withdrawal or dismissal. These students must be eligible for readmission at the institution or be recommended for admission by the institution where they matriculated. Special cases will be evaluated by the Admissions Office.

Transient Student

The person seeking to be admitted as a transient student must complete the application form for transient students. The transient application is in addi-
tion to the regular form. The form contains a provision for written approval and prior commitment from the student's college to accept the credit earned at Roane State Community College.

Transfer students who are residents of Tennessee will be given first consideration. Out-of-state transfer students will be considered if space is available. The conditions resulting in their request for transfer will be studied and recommendation made by the appropriate committee.

Special Student — Adult
A student who has passed his twenty-first birthday and who does not meet requirements for a regular student may be admitted as an adult-special student subject to the following guidelines:

1. The applicant must submit an application for admission and a five dollar application fee.
2. The applicant may not enroll as a full-time student.
3. The applicant may not accumulate more than 24 hours of credit while enrolled as an adult-special student.
4. If after 24 quarter hours have been successfully completed (2.00 GPA or better), the student may apply to the Director of Admissions for reclassification as a regular degree student. If the reclassification request is granted, up to 24 hours of credit may be applied toward a degree program at Roane State Community College.
5. If the student applies for reclassification to a regular degree student prior to the successful completion of 24 quarter hours (2.00 GPA or better), the student must submit evidence of high school graduation or successful GED scores (a composite score of 45 or better).

An adult who presents evidence of having passed his sixtieth birthday will be admitted as an adult-special student subject to the following guidelines:

1. The applicant must submit a completed application form and a five dollar application fee.
2. The student may be permitted to enroll in courses on an audit basis when class space permits. No course fees are required for Tennessee residents under these circumstances.
3. Regular fees must be paid for all community service courses.

Foreign Student
An applicant who is not a citizen of the United States is classified as a foreign student. Those applicants whose native language is not English shall, in addition to the requirements for a regular student, submit TOEFL scores and evidence of capability of paying all college and living expenses for one year.
ADMISSION WITH ADVANCED STANDING

Advanced Placement
Under certain conditions advanced placement may be granted. Roane State Community College may grant advanced placement and credit for courses in which the student has demonstrated satisfactory achievement. Each applicant under this plan is to show satisfactory achievement on the College Level Examination Program (CLEP). CLEP scores may be accepted for departmental credit where applicable on a pass/fail basis, using the CLEP Center’s recommended cut off scores. Credit earned through the College Level Examination Program is posted on the student’s permanent academic record. Students must register for any course for which credit is granted as a result of departmental proficiency examination.

These examinations are scored by CEEB and forwarded to the College. Upon receipt of tests showing satisfactory achievement scores, the College may, with the recommendation of the department concerned, evaluate the results and grant advanced placement with credit.

Individual Departments may recommend Advanced Placement based upon the level of achievement attained on departmentally designed examinations together with an evaluation of the student’s background.

Advanced placement in foreign language classes will be based upon the student’s previous studies. Those who have completed two years of high school language with “C” or better must enroll in the intermediate level of that language. A student may, however, enroll in beginning courses for audit or enroll in the beginning courses of a different language.

Placement in mathematics may be made at a level decided by the Mathematics Department in consultation with the student. Consideration will be given to the student’s background in specific courses and available test scores.

All advanced placement must be approved by the Dean of Instruction.

Course Exemption
High School graduates with exceptional scholastic records or those who have been enrolled in high school accelerated or honor sections may apply to take exemption tests in beginning English, history, mathematics, science, or other subjects where exemption may be justified. Applications to take exemption tests in one or more of the subject areas must be received in letter form by the Office of Admissions at least four weeks prior to the date specified for registration in the college calendar.

Students submitting USAFI courses for credit or for exemption from curriculum requirements may be required to take substantiating tests at the College before credit or exemption will be granted. Students who achieve satisfactory scores on such tests may be enrolled in advanced courses. These exemptions may permit a reduction in the number of credit hours and points essential for the Associate Degree.

All course exemption requests must be approved by the Dean of Instruction.
TRANSFER OF CREDIT
Roane State Community College will accept credits transferred from accredited colleges. Certified transcripts of all previous records must be sent to the College at the time of application. Credits for courses not corresponding with the curriculum at Roane State Community College will be entered on the transcript as elective credits. Credit from an institution of higher education which is not fully accredited may be accepted provisionally if the institution is in the process of attaining accreditation.
No academic credit may be transferred to Roane State Community College from a non-accredited institution (an acceptable accrediting agency for an institution would be the Southern Association of Colleges and Schools).
Veteran grades have no bearing on the required average for graduation. Veteran students who have more than one year of military service may be awarded six hours of physical education and nine hours of military service credit.

CORRESPONDENCE AND EXTENSION CREDIT
A student may not be enrolled at another college for correspondence or extension work while enrolled at Roane State unless special permission has been granted. All extension or correspondence work in progress upon admission must be reported to the Office of Admissions and Records at the time of the student's first registration. A maximum of 25 quarter hours correspondence and/or extension work may be applied toward degree credit. All correspondence or extension work must have the documented approval of the Director of Admissions and Records.

ADMISSION TO SPECIAL PROGRAMS
Admission to some programs requires additional testing and counseling. The requirements may be found in the catalog section dealing with program descriptions.

ENTRANCE PLACEMENT
The placement of a student in any given college level course will depend upon his having met certain prerequisites for the particular course. Prerequisites for any given course will be established on the basis of achievement in high school courses, the achievement on the related section of the ACT test, the College Level Examination Program (CLEP), and/or achievement on other tests administered by the College during registration procedures for applicants. The placement procedures are designed to help guide the enrolling student into courses commensurate with his ability. Students who fail to achieve the required level of proficiency in high school courses, and/or tests, will be required to enroll in appropriate courses. Other students may elect to take any Developmental Studies Program Course. The Developmental
Studies Program includes reading improvement, communications, mathematics, science, and study skills.

RECORDS

Records of each student's grades are kept on permanent file in the Office of Admissions and Records. Since these records are permanent and are frequently referred to for the purpose of supplying information to legitimate sources, each student should be acutely conscious that he is building his future and that his good attitude and diligent study will stand him in good stead after graduation.

TRANSCRIPT OF CREDITS

In all cases, obligations to the College must be fulfilled before a transcript will be issued.

CANCELLATION OF SCHEDULED CLASSES

Any scheduled class may be discontinued by the College. The right is reserved to cancel when the number enrolled is deemed insufficient.

ADVANCED STUDIES

(for seniors in high school)

Upon completion of the junior year in high school a student may enroll in courses under the Advanced Studies plan. Conditions of this plan are as follows:

1. The student must have a cumulative average of "B" or above or rank in the upper 25% of the class, and the student must be nominated by the high school principal and/or counselor.

2. The course load may not exceed 10 quarter hours except in cases where a sequence may be 12 quarter hours.

Courses taken will count as credit for those who submit a high school transcript showing evidence of high school graduation.

Exceptionally qualified students may continue in advanced studies during their senior year of high school if recommended by the high school principal. Courses for such students should be selected by the College, and the student given released time at the high school to attend classes at the College.

PROBATION AND RETENTION STANDARDS

A minimum quality point average of 2.00 is required for graduation from Roane State Community College.

Academic Deficiency

A student will be notified of academic deficiency if after attempting 24 hours at Roane State Community College that student's cumulative GPA is less than 1.5. A student having attempted 60 hours or more at Roane State
Community College must maintain a cumulative GPA of 1.75 to avoid academic deficiency status.

**Academic Suspension**

After one quarter on academic deficiency, a student who does not show improvement in his GPA may be placed on academic suspension for one quarter.

Any student who is placed on academic suspension will be notified by the Admissions Office and has the right to appeal to the Admissions and Retentions Committee (composed of faculty, staff, and student representatives) for reinstatement. The student should notify the Admissions Office if he wishes to process an appeal.

**Grounds for Dismissal**

A student may be dismissed from the College for any one or more of the following reasons:

1. Failure to meet minimum academic standards as stated in the above section.
2. Conduct of an unacceptable nature (see student handbook).
3. Failure to attend classes regularly.

**WITHDRAWALS AND HONORABLE DISMISSALS**

Student finding it necessary to withdraw from the College should do so officially to maintain good standing and to assure readmission or honorable dismissal. Withdrawal procedures are as follows:

1. Initiate form in Admissions and Records Office.
2. Secure clearance signatures (in sequence) from (1) Adviser (2) Instructor of each course for which student is registered (3) Student Financial Aid Office (4) Library (5) Admissions Office and (6) Business Office.
3. Return forms to Admissions Office.

All equipment belonging to the College must be accounted for or paid for and all financial obligations met. If it is impossible for the student to take these steps in person, they should be taken by a parent or a person acting as an agent for the student. The student may withdraw from the College with the grade of "W." A student who stops attending classes and fails to follow the proper withdrawal procedure will be carried on the roll until the end of the quarter and a grade of "F" assigned.

**REGISTRATION FOR COURSES**

A student whose application is filed before the application deadline for any given quarter should, prior to registration, receive notification of registration procedures. The student will be assigned an adviser who will continue to assist with his education program. Students are expected to complete reg-
istration on the dates announced. They must observe the procedure specified at the time. The student is not officially enrolled until he has completed all the requirements of registration. Registration after dates established on the calendar may be completed by presenting an acceptable reason for delay and by payment of the late registration fee. Registration delayed beyond the period established as the last date to register or add a class requires special permission from the Dean of Instruction and may result in reduction of course load for the quarter.

**CHANGE OF REGISTRATION**

A student is allowed to change registration during the “Drop-Add” period at the beginning of each quarter. The following procedures are to be followed in adding or dropping courses:

1. Secure a schedule adjustment form from the Admissions and Records Office;
2. Obtain adviser’s signature;
3. Present the complete form to the Business Office and pay appropriate fees;
4. Return two (2) copies of form to the Admissions and Records Office and receive one copy which must be given to the instructor whose course is being added.

Failure to follow these procedures will result in an “F” in the course the student did not attend, or the student taking a course without receiving credit.

**SOCIAL SECURITY ADMINISTRATION**

The Admissions and Records Office cooperates with the Social Security Administration by certifying that students eligible to receive Social Security benefits are enrolled at Roane State.

**VETERANS’ AFFAIRS**

Roane State Community College cooperates with the Veterans Administration in providing educational opportunities for veterans. The Veterans Affairs Coordinator at Roane State is available for help in determining eligibility, selection of a major, preparing the required forms for VA benefits, or any other matters pertaining to college attendance under the “G.I. Bill.” Veterans who have not completed high school or who do not have a high school equivalency should contact the Veterans’ Affairs Coordinator for help in planning their program of study for admission to Roane State.
Veterans desiring to attend Roane State under any of the educational assistance laws administered by the Veterans Administration should contact:

Veterans' Affairs Coordinator
Room C-9
Roane State Community College
Harriman, TN 37748, or
Veterans Administration Regional Office
801 Broadway
Nashville, TN 37203

The Admissions and Records Office reports to the Veterans Administration on all persons receiving benefits under federal laws.

**GED TEST**

Adults who have not received a high school diploma and wish to apply for a certificate of equivalency may take the General Educational Development Test at Roane State Community College, which has been established as an official center for this test. A counselor will explain requirements for taking the test and will assist applicants in the preparation of necessary application forms.

Satisfactory scores on the test enable the person to apply to his high school for an equivalency diploma. Persons who feel inadequately prepared to take the GED test can obtain assistance by taking a course titled G.E.D. Preparation for High School Equivalency Diploma at the college.

**ACT TEST**

Roane State Community College serves as an area test center of The American College Testing Program (ACT). Tests are given on each of the national testing dates.
Student Services

Student Services comprise all the non-instructional services which Roane State Community College provides for its students. These services include academic, social, vocational and personal counseling, as well as financial aid, health services, and transfer assistance.

ORIENTATION FOR STUDENTS

All new students meet at the time indicated in the calendar for the orientation program. One purpose of orientation is to introduce students to administrative officers, and other student leaders. Another purpose is to help acquaint students with the campus and its facilities. The orientation activities are coordinated by the Student Personnel Services Office and are executed with the assistance of faculty members and Student Government Personnel.

COUNSELING AND TESTING CENTER

The Counseling and Testing Center is established to aid students in successfully completing their college work and establishing good foundations for future growth. The Center is staffed by professionally trained counselors who provide services for a wide range of problems — educational, vocational and personal.

All discussions are confidential, thus allowing students to explore freely any problems or feelings which are of concern to them. Anything causing a student to be upset or disturbed may affect his academic work. Therefore, all students desirous of a free atmosphere to air these problems are encouraged to contact a member of the Counseling Staff. Students interested in forming small discussion groups may do so by contacting someone in the Center. These would be scheduled at times chosen by the interested students. Counseling may include aptitude, interest, achievement or personality tests. The Counseling Staff may also assist the student in securing services outside the College.

A collection of occupational information materials and catalogs from various institutions is available in the Center for student use.

HEALTH SERVICES

The health and safety of students is a concern of the Student Personnel Services Office, and the requirement of a health examination prior to entrance is enforced. A clinic is maintained for student use in case of illness or accident occurring during the school day. A registered nurse is in charge to administer first aid and palliative treatment in minor illnesses. A local physician, designated as the College Doctor will be available for major problems. Since the College does not collect a medical fee, each student is responsible for his medical bills. Appointments with the director of the clinic can be made for interviews concerning special health problems. Instruction in personal health is given in appropriate health courses.
STUDENT ACCIDENT AND SICKNESS INSURANCE PLAN
This plan provides protection 24 hours per day during the term of the policy for each student insured. Students are covered on and off campus, at home, and while traveling between home and school during interim vacation periods. Coverage is extended to provide up to 48 hours of actual travel time while enroute between home and school prior to the opening of school. Application and claim forms may be obtained in the office of the Dean of Student Personnel Services.

TRAFFIC REGULATIONS
Registration of vehicles. All motor vehicles operating on the Roane State Community College campus must be properly registered. Vehicle registration should be completed during the process of academic registration and the sticker procured prior to payment of fees. This campus sticker must be displayed in the manner prescribed in the instructions given each registrant. If late registration is necessary, details may be obtained from the Office of the Dean of Students.

Detailed regulations are contained in the “Student Handbook.” It shall be the student’s responsibility to familiarize himself with these regulations and to abide by them.

HOUSING
Under State Board of Regents policy, Roane State Community College assumes no responsibility for student housing. This institution is primarily a commuting college and has no dormitories, fraternity or sorority houses. The local news media and real estate agencies are able to provide comprehensive listings of rental housing available. Individual students are responsible for making arrangements to rent these facilities from owners or their agents.

Students are required to register local addresses in the Admissions and Records Office for location purposes. Any change of address must be reported to the Admissions and Records Office. Failure to report a change of address subjects the student to disciplinary action.

SOCIAL RETENTION STANDARDS
A student who fails to conduct himself in an acceptable way may receive disciplinary dismissal; or, if the proper committee sees fit, he may be placed on disciplinary probation for an indefinite period of not less than one quarter. A student on disciplinary probation must meet stated requirements of his probation and be again reviewed by the committee before being removed from disciplinary probation standing.

STUDENT FINANCIAL AID
The Student Financial Aid Program at Roane State Community College is designed to aid students who would find it difficult or impossible to attend
college without financial assistance. Roane State offers a comprehensive program of financial aid in the form of scholarships, part-time employment, grants and loans. Major emphasis is placed upon financial need, academic achievement, character and promise of future success.

When determining financial need the evaluating committee will consider all the financial resources of the student and the family as well as any special problems. Although the College will assist all qualified students as resources permit, this aid should be viewed only as supplementary to the efforts of the family and student.

SCHOLARSHIPS

State Board Work Scholarships

State Board Work Scholarships are authorized by the Tennessee State Board of Regents, the governing body of the state community colleges. These scholarships pay the registration fee for the academic year and are awarded on the basis of scholastic achievement and need. Students ranking in the upper 5% of their high school graduating class will be given priority in awarding these scholarships. Students ranking in the upper 25% of their graduating class are eligible to apply. Recipients of scholarships as freshmen may qualify annually for renewal provided they maintain a grade point average of 2.8 for the academic year.

Since State funds are used for State Board Scholarships recipients are required to work three hours per week. In general, students are given work assignments related to their major academic interest.

Only residents of Tennessee are eligible for the State Board Work Scholarships. Applications should be submitted after the close of the first semester of the senior year of high school and before the following June 1.

Private Scholarships

Roane State has established a limited number of private scholarships. In selecting recipients for these scholarships, emphasis is placed on scholastic achievement, character, future promise and financial need.

These scholarships are:
- Roane State Community College Scholarship Fund
- Kingston Rotary Club Scholarship
- Harriman Rotary Club Scholarship
- Beta Sigma Phi Scholarship (Kingston Xi Beta Beta Chapter)
- American Contract Bridge League Scholarship (Tennessee Valley Unit 165)
- Rockwood Business & Professional Women’s Club
- Mrs. Joe Bernard Memorial Scholarship
- Roane County Council of Home Demonstration Clubs Scholarship
- Phil Ressegie Memorial Scholarship-Loan
- Roane State Veterans’ Club Scholarship
Additional scholarships will be established as interested groups and individuals make arrangements with the College. Individuals or groups interested in establishing a scholarship fund are advised to contact the Director of Student Financial Aid.

**Athletic Scholarships**
The College annually awards a number of athletic scholarships. For detailed information contact coordinator of athletics.

**Army ROTC Scholarships**
The Army ROTC scholarship program offers financial assistance to outstanding young men and women in the ARMY ROTC program who are interested in the Army as a career. Each scholarship provides for free tuition, textbooks, and laboratory fees in addition to a subsistence allowance of $100 per month for the period that the scholarship is in effect. Scholarships may be awarded for either one, two, three or four years. High school seniors should contact their guidance counselors early in November or December of their senior year to apply for the four-year scholarship. One, two and three year scholarship applicants should contact the Director of Student Financial Aid or the ROTC Instructor for further information. Certain other privately financed scholarships and grants are available to ROTC cadets.

**GRANTS**

**Basic Educational Opportunity Grants**
This is a direct grant (no repayment or work requirement) from the federal government based primarily on the family's financial situation. The amount of the grant ranges between $112 and $850 for the school year and may be used for expenses related to attending Roane State. Such expenses include fees, books, transportation, room and board, and other related expenses. Application forms are available from the College or from high school guidance offices.

**Supplemental Educational Opportunity Grants**
Federal funds are available to colleges and universities for the purpose of providing grant assistance to undergraduate students of exceptional financial need who would not, except for the grant, be financially able to attend college.

Supplemental Educational Opportunity Grants must be matched in equal amounts by other financial aid provided by the college. The grant will be matched with other scholarship aid, loans, or student employment. Applicants for Supplemental Educational Opportunity Grants must be enrolled or accepted for enrollment as full-time students and show evidence of academic or creative promise and capability of maintaining good standing.
Grants may be renewed from year to year for the first four years of undergraduate study provided the student continues to make satisfactory academic progress. All students who apply for financial assistance are automatically considered to determine if they meet the requirements to receive a Supplemental Educational Opportunity Grant.

Tennessee Tuition Grants
In 1971, the Tennessee Student Assistance Corporation was created to administer the Tennessee Tuition Grant Program. Under this program, Tennessee residents who need financial assistance may receive a grant to cover tuition and fees at the college of their choice in the State.

Application forms may be obtained from high school guidance offices, college financial aid offices, or by contacting:
Tennessee Student Assistance Corporation
707 Main Street
Nashville, TN. 37206

LOANS

National Direct Student Loans
National Direct Student Loans, previously known as National Defense Student Loans, are available to students through funds provided jointly by Roane State Community College and the Federal Government. These are long term, low interest loans on which repayment does not begin, and interest does not accrue, while the borrower is enrolled as a student, on at least a one-half time basis, at a college or university. Repayment of principal and 3% annual interest begins 12 months after the student leaves college.

There are cancellation provisions of the National Direct Student Loan by which a student may have up to the total amount of the loan cancelled by teaching in special education, in certain schools with a high enrollment of students from low-income families, or in Head Start programs.

Federally Insured Student Loans
Under this program, sponsored jointly by the Federal Government and the State of Tennessee, a Tennessee resident may receive long-term, low-interest loans from a participating bank or other lending institution to apply toward expenses related to education.

Repayment, at 7% simple interest, begins 12 months after graduation or withdrawal from school. During school, the interest is paid by the federal government if the family’s annual adjusted gross income is less than $15,000. Loans are usually made by the student’s hometown bank. For application forms and information concerning the names of lending institutions which
participate in the program, contact the Financial Aid Office of the College or the Tennessee Student Assistance Corporation, 707 Main Street, Nashville, TN. 37206.

**RSCC Short-Term Loans**
Under this program, a student may borrow up to $40 for unexpected kinds of expenses to be repaid within 30, 60, or 90 days.

**PART-TIME EMPLOYMENT**

**College Work-Study Program**
Under the College Work-Study Program, funded jointly by College and Federal Government funds, students may work on a part-time basis in order to help finance their education.

Students who qualify for participation in this program may work up to 15 hours per week during the academic year and up to 40 hours per week during holiday or vacation periods, at a minimum of $2.00 per hour.

Types of employment cover work opportunities in areas such as the library, laboratories, maintenance, faculty and administrative offices. Opportunities are also available off-campus in schools, hospitals, recreational facilities and other non-profit organizations.

**Other Employment Opportunities**
The College maintains contact with a number of businesses and industries in the area for the purpose of assisting students in locating part-time employment outside the College Work-Study Program.

**HOW TO APPLY FOR FINANCIAL AID**
All federal financial aid programs require the assessment of financial need, which is based on the parental ability to contribute toward educational expenses. In addition to the College's application, a student should complete either the Parents' Confidential Statement of College Scholarship Service or the Family Financial Statement of the American College Testing Program. These two forms are available from the College or from high school guidance offices. In addition, students should obtain the application for the Tennessee Tuition Grant and the Basic Educational Opportunity Grant from the College or from high school guidance offices.

June 1st is the priority date for applying for aid. After this date money will be awarded on a first come, first served basis as long as there is money available. A student must be fully admitted to the College before aid will be awarded.

Information regarding student financial aid may be obtained by contacting the Student Financial Aid Office. Renewal of aid is not automatic. Each student must file a new application each year.
Activities

STUDENT ORGANIZATIONS AND ACTIVITIES

A well-rounded, integrated program of student activities are provided through student organizations. Students may choose from a variety of organizations depending upon their individual interests. These organizations include scholastic honoraries, departmental groups, service organizations, and special interest groups.

Fine Arts
Concerts, lectures and special cultural events are sponsored by the College and the community for the enrichment of the college and community.

College Publications
A college newspaper will be published during the college year, and will be under the advisement of the College Publications Committee, with a faculty advisor working closely with the staff of the newspaper. The Publications Committee will select the Editor and Assistant Editor from applicants desiring to work in those positions.

Clubs
BSU — To promote the inter faith as a way of life among college students. To provide a ministry to individuals in the campus community who have need for a personal relationship with Jesus Christ or who have a need for Christian growth.
CHESS CLUB — To meet together in friendship to play chess.
DRAMA CLUB — Objective is to present plays at Roane State.
FORENSIC CLUB — Objective is to promote competition in areas of debate, impromptu, extemporaneous, and after dinner speaking.
LITERARY CLUB — Objective is to organize and help finance a literary magazine, and to promote interest in the literary efforts of the students of Roane State and the surrounding community.
VETERANS CLUB — To provide a means whereby veterans can meet for social purposes and keep abreast of current legislation and regulations affecting veterans educational benefits but, especially, to provide a means for veterans to continue serving their college, community and nation.
STUDENT GOVERNMENT ASSOCIATION — Objective of SGA will be to provide opportunities for students to offer constructive opinions, promoting cooperation among students, faculty and administration, and working for the common good of Roane State.
VETERANS AFFAIRS
Roane State Community College cooperates with the Veterans Administration in providing educational opportunities for veterans. Persons desiring information as to eligibility and programs of instruction should contact the Veterans Affairs Coordinator in Room C9 at Roane State Community College.

INTRAMURAL PROGRAM
The department of Physical Education conducts a wide and varied program of activities to provide each student an opportunity to participate in organized individual and team activities. The program does not require the intensified training and high degree of skills associated with varsity athletics. An individual's playing ability is not considered as important as his desire to enter into the true spirit of competition and good sportsmanship.

The intramural program includes such activities as volleyball, badminton, basketball, softball and touch football.

In order to be eligible each participant must (1) be a bonafide student at RSCC; (2) not have won a varsity letter within the last two years at any college in the sport he selects; and (3) not be a professional athlete in the sport in which he is participating.

ATHLETICS
Roane State competes in men and women's basketball, baseball, golf, and tennis as a member of the Eastern Division Tennessee Junior College Athletic Association.

In order for a student to participate in Athletics, he must meet the eligibility requirements of the National Junior College Athletic Association. Any inquiries about athletics should be directed to the Department of Athletics whose offices are located in the gymnasium.

All RSCC students will be admitted to athletic contests upon presentation of a validated student identification card. Adults will be charged $1.00 and school age students (through high school) will be charged $.50 for admission.
PLANNING AN EDUCATIONAL PROGRAM

The responsibility for selecting an educational program rests with each student. The faculty and counselors at Roane State Community College take pride in assisting the student in program planning and course selection. Each student will be assigned a faculty adviser to assist him in his program of study.

Some students may be required to meet further prerequisites to enter the program they select. In the best interest of the student, admission to a particular curriculum or to specific courses should be based upon evidence which would indicate a fair chance of satisfactory performance in the program or course.

A student who is planning to transfer from Roane State at the conclusion of two years work to a four-year institution should secure a copy of the catalog of the institution selected for use in planning his transfer program.

ATTENDANCE REGULATIONS

1. Attendance of classes and other official appointments is required.
2. An explanation of absences should be given to Instructors. This information should be presented in advance if possible.
3. Absences are counted from the first scheduled meeting of the class.

IMPORTANT: Non-attendance does not constitute a withdrawal from classes or from the College. Procedures to follow to formally drop a course (see page 30) or to withdraw from the College (see page 29) must be followed. IT MAY PREVENT YOUR RECEIVING AN UNDESERVED "F" ON YOUR TRANSCRIPT.

STUDENT LOAD

The average quarter hour load for a student should be 16 quarter hours of credit per term. Individual programs may require more or fewer quarter hours load for a particular term. The maximum load is 18 quarter hours of credit. Any student desiring to take more than 18 quarter hours of credit must make application to the Dean of Instruction and be approved prior to registration. A full-Time Student is one who is carrying 12 or more quarter hours of credit.

GRADING SYSTEM

The following grading system is used at Roane State Community College:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Quality Points Awarded Per Quarter Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Outstanding 4</td>
</tr>
<tr>
<td>B</td>
<td>Above Average 3</td>
</tr>
<tr>
<td>C</td>
<td>Average 2</td>
</tr>
</tbody>
</table>

41
The scholastic standing of a student is expressed in terms of quality point ratio. A quality point ratio is the total number of quality points divided by the total number of quarter hours attempted, less the number of hours repeated. To meet degree requirements a student must maintain an over-all quality point average of 2.00.

Other markings which may appear on the grade report and/or transcript are as follows:

- D: Passing but below average
- F: Failing

I

The grade "I" indicates that the student was passing at the end of the quarter but has not completed all the work of the course as required by the instructor. The student is thus on notice that he should contact the instructor immediately in an effort to complete course requirements. This "incomplete" must be removed during the succeeding quarter. Courses attempted which are incomplete are reflected on the academic record as hours attempted for which there is no credit established. This in turn affects the quality point average in the same manner as a failing grade. Should the "incomplete" not be removed, the quality point average will continue to reflect the "I" as a failing mark and will be interpreted as such.

Repeated Courses

A student may repeat a course upon approval of his faculty adviser. The grade received in repeating the course supersedes all previous grades and is credited in the quarter in which the course is repeated.

OBJECTIVES OF THE CURRICULUMS

The two-year programs of study available at Roane State Community College are described in the following pages. The four objectives of the curriculums are: (1) to prepare students for advanced standing in other colleges and universities after successfully pursuing a Roane State Community College program; (2) to prepare students for entrance to certain professional schools whose admission requires one or two years of college experience prior to enrollment; (3) to offer a continuity of courses to give the student an opportunity to explore his interests and abilities in several fields of study so that he may plan more realistically for a continuation of his education; and (4) to prepare students to enter technological areas which require additional education beyond high school.
Students planning to transfer into special programs at senior institutions should work with the faculty adviser, using the appropriate check sheet of the institution to which they will be transferring.

DEGREES OFFERED
Roane State Community College awards the Associate of Arts Degree and the Associate of Science Degree. (A Certificate of Proficiency may be awarded to a student who completes any certain specifically prescribed program of less than an Associate Degree.)

GENERAL DEGREE REQUIREMENTS
The general requirements for an Associate Degree at Roane State Community College are as follows:

1. Not less than 99 quarter hours of credit, including 3 quarters of physical education activity. (Students who complete at least 60% of their degree requirements during the evening or at off campus locations may be excused from physical education activity courses. However, the total number of hours for graduation will not be reduced.)

2. A minimum of the final 36 quarter hours of course work completed in residence at Roane State Community College.

3. A minimum over-all quality point average of 2.00 ("C") on all work attempted at Roane State Community College. (In no case may transferred grades be used to raise the students quality point average on courses taken at Roane State Community College; his average on all courses here must be "C" (2.00 or better.)

4. Completion of specific course requirements as given in outlined Programs of Study. (Substitutions in programs must be approved by the Dean of Instruction.)

CORE CURRICULUMS
The general (transfer education) core curriculum below is for students primarily planning to transfer to senior institutions immediately upon graduation from Roane State Community College. The career education core curriculum below is primarily for students planning immediate employment upon graduation. The minimum expectation for graduation in a particular program is outlined on the following pages of the Degree and Certification Programs section.

The establishment of two core curriculums for Roane State Community College provides flexibility for the "undecided major" student to change course objectives and to redirect his academic pursuits without undue penalty and hardship. The two cores are as follows:
### GENERAL CORE CURRICULUM

<table>
<thead>
<tr>
<th>Area of Study</th>
<th>Minimum Quarter Hours Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>15</td>
</tr>
<tr>
<td>Mathematics*</td>
<td>5</td>
</tr>
<tr>
<td>Natural Science</td>
<td>8</td>
</tr>
<tr>
<td>Social Science</td>
<td>15</td>
</tr>
<tr>
<td>Related Courses</td>
<td>50</td>
</tr>
<tr>
<td>Physical Education Activities</td>
<td>3</td>
</tr>
</tbody>
</table>

*Mathematics requirement of three (3) hours for Music Education majors.

### CAREER EDUCATION CORE CURRICULUM

<table>
<thead>
<tr>
<th>Area of Study</th>
<th>Minimum Quarter Hours Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>9</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education Activities</td>
<td>3</td>
</tr>
<tr>
<td>Related Courses</td>
<td>27</td>
</tr>
</tbody>
</table>

### GRADUATION

All students must complete the general requirements as prescribed by the College and specific requirements set forth for the Associate Degree sought. Each student must file an Intention to Graduate form before the beginning of the quarter in which the student expects to graduate.

Graduation exercises are held only at the end of the spring quarter. Students who anticipate completing their work at this time, whose grade point average is sufficient for graduation, and whose names appear on the official graduation roster may take part in graduation exercises.

### DEFERRED GRADUATION

A student is ordinarily allowed to graduate under the requirements of the catalog of the year in which he enters the College. If a student begins work on a degree and fails to complete the requirements, he must, after five years from the date he entered, reorganize his degree plan to conform to the current catalog. Time spend on active military duty is not considered a part of this five-year period.

### GRADUATION WITH DISTINCTION

Students who have fulfilled all graduation requirements, who have completed a minimum of forty-five quarter hours at Roane State Community College prior to their final quarter, and who have been in residence for a minimum of three quarters prior to their final quarter are eligible for designation as honor graduates. Those who have a quality point average of 3.25 and
less than 3.50 will be graduated Cum Laude; those who have a quality point average of 3.50 and less than 3.80 will be graduated Magna Cum Laude; those who have a quality point average of 3.80 or above will be graduated Summa Cum Laude.

A transfer student, in order to be eligible, must have made the required average on all work taken at Roane State Community college and must, in addition, have an over-all average which meets the honors requirements; the final average may in no instance be higher than that made at Roane State Community College.

DEAN'S LIST
The Dean’s List is the official medium for the institution to recognize outstanding academic accomplishment by students. Provision is made for recognizing Full-Time students who obtain the required quality point average for this honor.
Full-Time — 12 Credit Hours or more with 3.25-4.00 average.

LIBRARY
The library serves, primarily, the students and faculty of the college and, secondarily, members of the surrounding communities. In its collection of books, periodicals, microfilm, recordings, and other audio/visual material the library makes available resources to support the curriculum and to provide for recreational reading.

Hours are 7:45 a.m. to 10:00 p.m. Monday through Thursday and 7:45 a.m. to 5:00 p.m. on Friday. Members of the library staff are available whenever assistance is needed.

The Library of Congress classification system is used and books are shelved in open stacks for self-service. Books may be checked out for a two-week period with renewal privilege. No fines are charged for overdue books, but all books are subject to recall at any time by the Librarian. Borrowers are responsible for replacement of lost or damaged materials.

Interlibrary loan service is available to all patrons so that material not owned by the Roane State library may be borrowed from another library. Information is available from any member of the library staff.

Gifts to the library are welcomed. However, the library staff reserves the right to (1) evaluate the usefulness of the gift prior to its acceptance, (2) use the gift in any manner that will be most beneficial to the library and (3) at the discretion of the librarian, discard any gift that is no longer useful.

The librarian welcomes recommendations on the purchase of new material from both students and faculty.
DIVISIONS OF INSTRUCTION

Education
Developmental Studies
Education
Health
Physical Education

Humanities
Art
English
Journalism
Language

Mathematics and Science
Biology
Chemistry
General Science

Social Science
Geography
History

Career Education
Accounting Technology
Business and Commerce
Computer Science Technology
Dietetic Technology
Economics
Electrical and Electronics
Engineering Technology
Fire Science Technology
General Business Administration
General Clerical

Continuing Education and Community Services
Degree Programs
Seminars
Conferences

EVENING PROGRAM
Roane State Community College offers courses during the evening for the convenience of students who are unable to attend day classes. Courses
offered in the evening program may also be taken by day students with schedule conflicts or by students who for one reason or another cannot attend school during the day. All courses offered regularly in the day school may be offered in the evening upon sufficient demand. Two full years of college training can be completed at night and the requirements can be met for many of the Associate of Arts or Associate of Science Degrees. Evening students must meet the same degree requirements as those attending day classes with the exception of physical education which may be waived under certain conditions. An experienced counselor is available to those students desiring help in planning a degree or a certificate program.

CONTINUING EDUCATION AND COMMUNITY SERVICES

Continuing Education
Roane State Community College is dedicated to the philosophy that education is a never-ending process. Thus, the college makes every effort to offer the advantages of at least a part of its total program to every person in the community who is capable of benefiting from the experience. The Continuing Education program is designed primarily for adults in the community who desire to take courses for credit toward a college degree or who desire non-credit courses for their personal enrichment.

Community Services Program
In addition to credit courses, special non-credit courses reflecting community interest may be organized at the request of a sufficient number of interested persons. Individuals may pursue these special offerings for personal enrichment, to comply with business or industrial opportunities and/or requirements, for specific technological information and for general cultural benefits. Students taking courses for non-credit are not required to follow the same admissions procedures as those students in degree courses.

The Community Services Program of the college includes a variety of activities which are offered in cooperation with community groups and agencies. The program offerings are in accord with the public's needs and interest and include such activities as lectures, clinics, short courses, conferences, forums, concerts, fine art festivals, workshops, institutes, community utilization of college facilities, self-development functions and community development functions. The college welcomes the opportunity to meet with representatives in our community (e.g. educational, governmental, industrial and business organizations) to plan special types of training or activities that might be beneficial to their organization or to our community.

All inquiries in the area of community service non-credit courses should be directed to:

Director of Community Services
Roane State Community College
Harriman, Tennessee 37748
Career Education
The expanding economy and the increased emphasis upon scientific research and development have brought about an ever increasing demand for the well educated person to work with and under the supervision of the scientist, the engineer, the doctor, and the management of the business world. The responsibilities of this person, educated in the broad spectrum of the technologies, will continually be confronted with the acquisition of new competencies as this nation becomes more industrialized and new job classifications emerge. These new jobs are requiring education at the college level.

The gap between the skilled craftsman and the professionally trained person has become more pronounced. Communication between these two areas is becoming more and more difficult. The semi-professional person, educated in the technologies, will bridge the existing gap. He may work with the scientist or engineer as a laboratory assistant or on some special assignment involving the skills of the skilled craftsman. He may work with the medical profession as a technically trained person in the many areas that now exist in medical science. He may work as a specialist in the complex business areas.

The career education programs at Roane State Community College are in the areas of accounting technology, computer science technology, dietetic technology, electronics technology, fire science technology, general business administration, general clerical, hotel-motel-restaurant management, medical record technology, secretarial science, recreation management and administration technology, management and supervision technology, and police science. The programs are constructed so that the student may seek employment at the completion of his program or transfer to a four year institution for upper level training.

TRANSFER PROGRAMS
College transfer curriculums are designed for students who intend to transfer to senior institutions. A student who is planning to transfer from Roane State Community College to a four-year institution should secure a copy of the catalog of the four-year institution selected and have it available during the registration period for use in planning his transfer program. The degrees and programs include the following:

- Associate of Arts — General
- Associate of Arts — Art
- Associate of Arts — Music
- Associate of Arts — Pre-Law
CAREER EDUCATION PROGRAMS

Career education curriculums are designed as terminal and they are recommended for students who desire to enter into the world of work after two years of training. Roane State Community College takes no responsibility for the transfer of work in its career education programs to four-year institutions. This policy should in no way be interpreted as to cause doubt concerning the merit or academic value of the career education programs. They are academically equal to any program offered by the College, but are not in all cases specifically designed as transferable work. They include:

- Associate of Science — Accounting Technology
- Associate of Science — Computer Science Technology
- Associate of Science — Dietetic Technology
- Associate of Science — Electrical and Electronics Technology
- Associate of Science — Engineering Technology
- Associate of Science — Fire Science Technology
- Associate of Science — General Business Administration
- Associate of Science — General Clerical
- Associate of Science — Hotel-Motel-Restaurant Management
- Associate of Science — Management and Supervision Technology
- Associate of Science — Medical Records Technology
- Associate of Science — Operating Engineering Technology
- Associate of Science — Police Science and Criminology Technology
- Associate of Science — Recreation Management and Administration Technology
- Associate of Science — Secretarial Science

COOPERATIVE EDUCATION PROGRAM

Cooperative education assumes the concept that work experience should be an integral part of the student's total education. The opportunity to engage in productive employment under the competitive conditions of life in a realistic adult environment can provide the students with insights that enrich
the educational experiences. Practical experience offered at a time when the individual is at the peak of learning capacity adds relevance to education. Cooperative education integrates classroom learning and work experiences into a total learning program.

Cooperative education applies to both the transfer curricula and the Career Education curricula. The only difference is the time phasing of the work experiences into the learning program and some administrative details. In both cases the student must complete the same course work as the non-cooperative learning student and the work experiences are related as closely as possible to the student's curriculum.

CERTIFICATE OF PROFICIENCY PROGRAMS

Certificate — Design and Drafting
Certificate — Electronics Technology
Certificate — General Clerical
Certificate — Surveying

DEGREE AND CERTIFICATION PROGRAMS

The following pages contain, in outline form, the degree and certificate programs of study and the summaries of required hours for all of the programs mentioned above.
Degree Programs
and
Courses of Study
TRANSFER PROGRAMS

ASSOCIATE OF ARTS
(GENERAL)

This program is designed for students who desire to transfer to a four-year college or university but who have not decided on a major. It meets the requirements for the first two years of most liberal arts curriculums leading to the Bachelor of Arts Degree.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>SPE 2410</td>
<td>Basic Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Fine Arts</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Foreign Languages</td>
<td>9-18</td>
</tr>
<tr>
<td></td>
<td>History</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Natural Science</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Physical Education Activity</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Electives</td>
<td>33-24</td>
</tr>
<tr>
<td><strong>TOTAL HOURS</strong></td>
<td><strong>99</strong></td>
<td></td>
</tr>
</tbody>
</table>

1Student preference or senior institution requirement.
2Senior Institution requirement.

ASSOCIATE OF ARTS
(ART)

The art curriculum is designed primarily for the general enrichment of the student as well as providing professional art and liberal arts course work for transfer to a four-year college or university. The program is designed to develop fundamental skills in technique and creative expression. An art major planning to transfer to a senior institution should plan a program to meet specific requirements of the lower division at the chosen institution. The art department reserves the right to retain student work for exhibition.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1110, 20, 30</td>
<td>Basic Studio I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>ART 2010, 20, 30</td>
<td>Art History Survey I, II, III</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Art Electives</td>
<td>12</td>
</tr>
<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>SPE 2410</td>
<td>Basic Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Sophomore English</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Western Civilization or American History</td>
<td>9</td>
</tr>
</tbody>
</table>
Foreign Language .................................................. 9
Physical Education Activity .................................. 3
Math ................................................................. 6
Natural Science ...................................................... 8
Social Science ........................................................ 6
Electives .............................................................. 9

TOTAL HOURS 101

ASSOCIATE OF ARTS (MUSIC)

The music curriculum is designed primarily for the general enrichment of the student as well as providing professional music and liberal arts course work for transfer to a four-year college or university. A music major planning to transfer to a senior institution should become familiar with the specific lower division requirements at that individual senior institution. The music department reserves the right to request qualified students to participate in recitals and other musical programs for the benefit of the College and community. Non-music majors are invited to participate in as many of the music courses as possible, particularly chorus, band, and choir. Class piano or class voice is offered for secondary, applied or non-music majors. Majors must take individual instruction in voice or their chosen instrument.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>MAT 1110, 20</td>
<td>Introduction to Analysis I, II</td>
<td></td>
</tr>
<tr>
<td>MAT 2310, 20</td>
<td>Concepts of Mathematics I, II</td>
<td>6</td>
</tr>
<tr>
<td>MUS 1110, 20, 30</td>
<td>Beginning Theory I, II, III</td>
<td>12</td>
</tr>
<tr>
<td>MUS 2110, 20, 30</td>
<td>Advanced Theory I, II, III</td>
<td>12</td>
</tr>
<tr>
<td>MUS 2010, 20, 30</td>
<td>Introduction to Music Literature I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>History</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Music Electives²</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Natural Science</td>
<td></td>
<td>8</td>
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<tr>
<td>Physical Education Activity</td>
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<td>3</td>
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<tr>
<td>Social Science</td>
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<td>6</td>
</tr>
<tr>
<td>Humanities Electives</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

TOTAL HOURS 101

¹Student preference or senior institution requirement.
²Or Individual Music Instruction.
ASSOCIATE OF ARTS
ASSOCIATE OF SCIENCE
(PRE LAW)

The first two years of the Memphis State University or The University of Tennessee baccalaureate degree program in pre-law may be met by the completion of the Associate of Arts Degree (General) or the Associate of Science Degree (General) curriculum at Roane State Community College.

ASSOCIATE OF SCIENCE
(GENERAL)

With an appropriate choice of electives, a student can, in following this program, earn an Associate of Science Degree at Roane State Community College and also complete the lower division requirements for the Bachelor of Science Degree at a four-year college or university.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Humanities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III ............................. 15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics .................................................................. 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Natural Science .................................................. 12</td>
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<tr>
<td></td>
<td></td>
<td>Social Science ................................................... 15</td>
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<td></td>
<td></td>
<td>Physical Education Activity .................................. 3</td>
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<td></td>
<td></td>
<td>Electives .................................................................. 48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOTAL HOURS 99</td>
</tr>
</tbody>
</table>

1American History is required of students who have not taken it in high school.

ASSOCIATE OF SCIENCE
(ART EDUCATION)

The art education curriculum is designed for a student who plans to complete a baccalaureate degree in art and who desires to receive a certificate to teach art in elementary or secondary school.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1110</td>
<td>Basic Studio I .........................................</td>
<td>3</td>
</tr>
<tr>
<td>ART 1810</td>
<td>School Art ..............................................</td>
<td>3</td>
</tr>
<tr>
<td>ART 2010, 20, 30</td>
<td>Art History Survey I, II, III ...................</td>
<td>9</td>
</tr>
<tr>
<td>EDU 2010</td>
<td>Introduction to Education ................................</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III ................................</td>
<td>9</td>
</tr>
<tr>
<td>HEA 2210</td>
<td>Sophomore English ......................................</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Personal Health ..........................................</td>
<td>3</td>
</tr>
<tr>
<td>Catalog Number</td>
<td>Course Title</td>
<td>Quarter Hours</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>BUS 1010</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2210, 20, 30</td>
<td>Principles of Accounting I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>ECO 2010, 20, 30</td>
<td>Principles of Economics I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>MAT 1110, 20, 30</td>
<td>Sophomore English</td>
<td>9</td>
</tr>
<tr>
<td>MAT 2510</td>
<td>Introduction to Analysis I, II, III</td>
<td>9-10</td>
</tr>
<tr>
<td>PSY 1010, 20</td>
<td>Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2010</td>
<td>General Psychology I, II</td>
<td>6</td>
</tr>
<tr>
<td>HIS 2110, 20, 30</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Survey of American History I, II, III</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Science</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Physical Education Activity</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Electives</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>TOTAL HOURS</td>
<td>99-100</td>
</tr>
</tbody>
</table>

1BUS 2250 may be substituted for BUS 2230.
2Or MAT 2610, 20.
ASSOCIATE OF SCIENCE (BUSINESS EDUCATION)

The business education program includes professional studies and courses in liberal arts. Upon completion of this two-year program, the student may then transfer to a senior institution to complete the requirements for the baccalaureate in secretarial science or to teach business education.

### SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1010</td>
<td>Biology</td>
<td>12</td>
</tr>
<tr>
<td>BUS 2210, 20, 30</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2010, 20, 30</td>
<td>Principles of Accounting I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>ENG 1010, 20, 30</td>
<td>Principles of Economics I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>ENG 1110, 20, 30</td>
<td>Composition I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>MAT 1110, 20, 30</td>
<td>Sophomore English</td>
<td>9</td>
</tr>
<tr>
<td>MAT 2110</td>
<td>History</td>
<td>9</td>
</tr>
<tr>
<td>PSY 1010, 20</td>
<td>General Psychology I, II</td>
<td>9</td>
</tr>
<tr>
<td>SPE 2410</td>
<td>Basic Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td>SSC 1010, 20, 30</td>
<td>Typing I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>SSC 1110, 20, 30</td>
<td>Shorthand I, II, III</td>
<td>0-15</td>
</tr>
<tr>
<td>SSC 2010</td>
<td>Typing IV</td>
<td>3</td>
</tr>
<tr>
<td>SSC 2110, 20</td>
<td>Shorthand IV, V</td>
<td>0-10</td>
</tr>
<tr>
<td></td>
<td>Physical Education Activity</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

TOTAL HOURS 99-124

1 Take BIO 1110, 20, 30.  
2 BUS 2250 may be substituted for BUS 2230.  
3 Take ENG 2110, 20, 30.  
4 Taken only if student wishes to be certified in shorthand.

ASSOCIATE OF SCIENCE (ELEMENTARY EDUCATION)

The elementary education curriculum is designed for a student who wishes to take the first two years of a program toward certification. It will meet the lower division requirements for transfer to a four-year institution granting the baccalaureate degree in elementary education. A student may transfer to a senior college and complete requirements for state certification.

### SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1010 or 1810</td>
<td>Art Appreciation or School Art</td>
<td>3</td>
</tr>
<tr>
<td>BIO 1110, 20, 30</td>
<td>General Biology I, II, III</td>
<td>12</td>
</tr>
</tbody>
</table>

56
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 2010</td>
<td>Introduction to Education</td>
<td>3</td>
</tr>
<tr>
<td>EDU 2710</td>
<td>Reading in the Elementary Schools</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>HEA 2210</td>
<td>Personal Health</td>
<td>3</td>
</tr>
<tr>
<td>HIS 2110, 20, 30</td>
<td>Survey of American History I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>MAT 2310, 20, 30</td>
<td>Concepts of Math I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>MUS 1010 or 2810</td>
<td>Music Appreciation or Music Education I</td>
<td>3</td>
</tr>
<tr>
<td>PSY 1010</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2210</td>
<td>Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2410</td>
<td>Child Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SPE 2410</td>
<td>Basic Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td>GGY 1010</td>
<td>Physical Geography I</td>
<td>3</td>
</tr>
<tr>
<td>PED 2810</td>
<td>Physical Education in the Elementary Schools</td>
<td>3</td>
</tr>
<tr>
<td>PED 2850</td>
<td>Playground Leadership</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL HOURS 99**

---

1The following courses are suggested as elective hours for students planning to be teacher aides or to meet specific requirements of their choice of a four-year institution.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 2910, 20</td>
<td>Prospective Teacher Cooperative</td>
<td>6</td>
</tr>
<tr>
<td>GGY 1020</td>
<td>Physical Geography II</td>
<td>3</td>
</tr>
<tr>
<td>GGY 2110</td>
<td>World Regional Geography I</td>
<td>3</td>
</tr>
<tr>
<td>PED 2810</td>
<td>Physical Education in the Elementary Schools</td>
<td>3</td>
</tr>
<tr>
<td>PED 2850</td>
<td>Playground Leadership</td>
<td>3</td>
</tr>
</tbody>
</table>

This curriculum is designed to provide an alternative in required course work for elementary education and provide a student with a terminal degree. This program will, in part, meet the lower division requirements for transfer to a four-year institution granting the baccalaureate degree in elementary education. All of the courses should benefit the student who desires employment as an elementary teacher aide.

**NOTE:** Each student in this program will be required to select one physical education activity course from each of the following areas:

- One course in team activity
- One course in individual activity
- One course in dance activity

---

**ASSOCIATE OF SCIENCE**

**HEALTH, PHYSICAL EDUCATION, AND RECREATION**

The health, physical education, and recreation curriculum is designed to meet the needs of a student who desires to transfer to a senior institution, and complete a baccalaureate degree with a major or minor in this area. This program is also designed to help a student maintain the best possible physical, mental, and social well-being. The degree program will be planned by subject area adviser in line with the state certification and the catalog requirements of the senior institution.
### SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1110, 20, 30</td>
<td>General Biology I, II, III</td>
<td>12</td>
</tr>
<tr>
<td>EDU 2010</td>
<td>Introduction to Education</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>HEA 2210</td>
<td>Personal Health</td>
<td>3</td>
</tr>
<tr>
<td>HEA 2310</td>
<td>Safety and First Aid</td>
<td>3</td>
</tr>
<tr>
<td>HIS 2110, 20, 30</td>
<td>Survey of American History I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>PED 2710</td>
<td>Introduction to Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>PED 2720</td>
<td>Individual and Dual Sports</td>
<td>3</td>
</tr>
<tr>
<td>PED 2810</td>
<td>P.E. in the Elementary Schools</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2210</td>
<td>Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SPE 2410</td>
<td>Basic Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>P.E. Activity</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>recreation Electives</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Math Electives</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Total Electives</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>99</td>
</tr>
</tbody>
</table>

### ASSOCIATE OF SCIENCE

**(MATHEMATICS OR PHYSICAL SCIENCE)**

The mathematics or physical science curriculum will allow a student to transfer to a four-year college or university and work toward a Bachelor of Science Degree in mathematics, physics, or any area which has similar requirements for the first two years.

### SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 1010, 20, 30</td>
<td>General Chemistry I, II, III</td>
<td>12</td>
</tr>
<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Sophomore English</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Western Civilization or American History</td>
<td>9</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Introduction to Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1210</td>
<td>Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1500</td>
<td>Pre-Calculus</td>
<td>5</td>
</tr>
<tr>
<td>MAT 2510</td>
<td>Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MAT 2610, 20, 30, 40</td>
<td>Calculus and Analytic Geometry</td>
<td>20</td>
</tr>
<tr>
<td>MAT 2650</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MAT 2710</td>
<td>Differential Equations</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Physical Education Activity</td>
<td>3</td>
</tr>
</tbody>
</table>
PHY 2110, 20, 30  
Physics I, II, III .............................................12  
Social Science Electives ....................................9  
Electives .........................................................12  

TOTAL HOURS 100

1A student choosing to major in mathematics may substitute a three-quarter (12 quarter hour) sequence in biology.

ASSOCIATE OF SCIENCE
(Chemistry)

The chemistry curriculum will allow a student to transfer to a four-year college or university and work toward a Bachelor of Science Degree in chemistry, or any area which has similar requirements for the first two years.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 1010, 20, 30</td>
<td>General Chemistry I, II, III</td>
<td>12</td>
</tr>
<tr>
<td>CHE 2310, 20, 30</td>
<td>Organic Chemistry I, II, III</td>
<td>12</td>
</tr>
<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>CHE 2210</td>
<td>Sophomore English</td>
<td>9</td>
</tr>
<tr>
<td>PHY 2110, 20, 30</td>
<td>Physics I, II, III</td>
<td>12</td>
</tr>
<tr>
<td>MAT 1210</td>
<td>Quantitative Analysis</td>
<td>4</td>
</tr>
<tr>
<td>or MAT 1500</td>
<td>Trigonometry</td>
<td>3 or 5</td>
</tr>
<tr>
<td>MAT 2610, 2620</td>
<td>Calculus and Analytic Geometry I, II</td>
<td>10</td>
</tr>
<tr>
<td>MAT 2630 or 2710</td>
<td>Calculus and Analytic Geometry III or Differential Equations</td>
<td>5</td>
</tr>
<tr>
<td>or Physical Education Activity</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>or Social Science Electives</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>or Electives</td>
<td>5-3</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL HOURS 99

ASSOCIATE OF SCIENCE
(Music Education)

The music education curriculum is designed for a student who plans to complete a baccalaureate degree in music and who desires to receive a certificate to teach music in elementary or secondary school.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 2010</td>
<td>Introduction to Education</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>HEA 2210</td>
<td>Personal Health</td>
<td>3</td>
</tr>
</tbody>
</table>
ASSOCIATE OF SCIENCE
(PRE-ENGINEERING)

The basic pre-engineering curriculum is designed for a student desiring to earn a baccalaureate degree in any engineering field at a four-year institution. Upon the successful completion of the basic program, the student can transfer to an engineering college and major in any of these engineering fields: aerospace, chemical, civil, electrical, engineering mechanics, engineering physics, engineering science, industrial, mechanical, metallurgical, nuclear, etc.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 1010, 20, 30</td>
<td>General Chemistry I, II, III</td>
<td>12</td>
</tr>
<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Sophomore English</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Western Civilization or American History</td>
<td>9</td>
</tr>
<tr>
<td>ERG 1010, 20</td>
<td>Engineering Graphics I, II</td>
<td>6</td>
</tr>
<tr>
<td>ERG 1100</td>
<td>Introduction to Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ERG 1110, 20</td>
<td>Engineering Mechanics I, II</td>
<td>6</td>
</tr>
<tr>
<td>ERG 2110</td>
<td>Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1500</td>
<td>Pre-Calculus</td>
<td>5</td>
</tr>
<tr>
<td>MAT 2610, 20, 30, 40</td>
<td>Calculus and Analytic Geometry I, II, III,</td>
<td>20</td>
</tr>
<tr>
<td>MAT 2710</td>
<td>Differential Equations</td>
<td>5</td>
</tr>
<tr>
<td>PHY 2110, 20, 30</td>
<td>Physical Education Activity</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Physics I, II, III</td>
<td>12</td>
</tr>
</tbody>
</table>

TOTAL HOURS 102

1Exceptional students may start in MAT 2610. This would be a 25 hour mathematics requirement instead of 30 hours, leaving 5 hours elective.
ASSOCIATE OF SCIENCE
(PRE-MEDICINE, PRE-DENTISTRY, PRE-PHARMACY)

This unified basic curriculum in pre-medicine, pre-dentistry, and pre-pharmacy is designed to prepare a student for entrance to a professional school, such as The University of Tennessee or a similar institution, where admission requirements are two years of college experience. Medical college usually requires three or four years of college experience. A student at Roane State Community College should consult the catalog of the university of his choice to determine specific requirements for admission.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1110, 20, 30</td>
<td>General Biology I, II, III</td>
<td>12</td>
</tr>
<tr>
<td>CHE 1010, 20, 30</td>
<td>General Chemistry I, II, III</td>
<td>12</td>
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<tr>
<td>CHE 2310, 20, 30</td>
<td>Organic Chemistry I, II, III</td>
<td>12</td>
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<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Sophomore English</td>
<td>9</td>
</tr>
<tr>
<td>MAT 1110, 20, 30</td>
<td>Introduction to Analysis I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>PHY 2010, 20, 30</td>
<td>General Physics I, II, III</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>History</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Physical Education Activity</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Humanities Electives</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Social Science Electives</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Electives</td>
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<tr>
<td><strong>TOTAL HOURS</strong></td>
<td><strong>105</strong></td>
<td></td>
</tr>
</tbody>
</table>

1 Student preference or senior institution requirement.
2 Provides one year of the foreign language requirement.

ASSOCIATE OF SCIENCE
(SECONDARY EDUCATION)

The secondary education curriculum is designed for a student who wishes to take the first two years of a program toward certification. It will meet the lower division requirements for transfer to a four-year institution granting the baccalaureate degree in secondary education. A student may transfer to a senior college and complete requirements for state certification.

A student desiring to teach in a subject area on the secondary education level may also have the option of completing the Associate of Arts Degree (General) or the Associate of Science Degree (General) curriculum at Roane State Community College. Such a student will concentrate in a major area and
take Introduction to Education, Educational Psychology, and Child Psychology in lieu of general electives in these curriculums. The degree program will be planned by the subject area adviser in line with the state certification and the catalog requirements of the senior institution.

**SUMMARY OF REQUIRED HOURS**

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART or MUS</td>
<td>Art Appreciation or Music Appreciation</td>
<td>3</td>
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<tr>
<td>EDU 2010</td>
<td>Introduction to Education</td>
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<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>HEA 2210</td>
<td>Personal Health</td>
<td>3</td>
</tr>
<tr>
<td>MAT 2310, 20</td>
<td>Concepts of Mathematics I, II</td>
<td>6</td>
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<tr>
<td>PSY 1010, 20</td>
<td>General Psychology I, II</td>
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<tr>
<td>PSY 2210</td>
<td>Educational Psychology</td>
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<tr>
<td>PSY 2410</td>
<td>Child Psychology</td>
<td>3</td>
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<tr>
<td>SPE 2410</td>
<td>Basic Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Natural Science</td>
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<td></td>
<td>Physical Education Activity</td>
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<td></td>
<td>Electives</td>
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<td></td>
<td><strong>TOTAL HOURS</strong></td>
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**ASSOCIATE OF SCIENCE (TECHNOLOGY)**

This program is designed for the student who plans to obtain a B.S. degree in technology or industrial education. The curriculum includes basic science courses and eighteen elective hours in technical studies.

**SUMMARY OF REQUIRED HOURS**

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CST 1010</td>
<td>Introduction to Data Processing</td>
<td>3</td>
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<tr>
<td>CHE 1010, 1020</td>
<td>General Chemistry I, II</td>
<td>8</td>
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<tr>
<td>EET 1010, 1020</td>
<td>Electric Circuits I, II</td>
<td>6</td>
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<tr>
<td>EET 1015, 1025</td>
<td>Electric Circuits I, II Lab</td>
<td>2</td>
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<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
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<tr>
<td>ERG 1010, 20</td>
<td>Engineering Graphics I, II</td>
<td>6</td>
</tr>
<tr>
<td>HIS 2110, 20, 30</td>
<td>Survey of American History I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>MAT 1000</td>
<td>Slide Rule</td>
<td>1</td>
</tr>
<tr>
<td>MAT 1050</td>
<td>Algebra and Trigonometry I</td>
<td>5</td>
</tr>
<tr>
<td>MAT 1500</td>
<td>Pre-Calculus</td>
<td>5</td>
</tr>
<tr>
<td>MAT 2610</td>
<td>Calculus and Analytic Geometry I</td>
<td>5</td>
</tr>
<tr>
<td>PHY 2010, 20, 30</td>
<td>General Physics I, II, III</td>
<td>12</td>
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<tr>
<td></td>
<td>Technology Electives</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Sophomore English</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Physical Education Activities</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL HOURS</strong></td>
<td><strong>101</strong></td>
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</table>
CAREER EDUCATION PROGRAMS

ASSOCIATE OF SCIENCE
COMPUTER SCIENCE TECHNOLOGY

The technical society of today is in a state of constant change brought about by automation and technological innovations. The computer is one of the greatest contributors to automation of this decade and also one of its most significant technological achievements. The growth and development of the electronic computer in this decade has created many new jobs in the scientific, engineering, and business fields. The computer science technology curriculum is designed to prepare students to enter into any of these computer-related fields.

Two options are offered in computer science technology at Roane State Community College: (1) a scientific computer option, and (2) a business computer option. The scientific option is designed for students interested in scientific and engineering applications of the computer, while the business option is designed for students interested in business data processing.

The Computer Science Technology Curriculum has as its primary objectives:

(1) The task of qualifying the student for a successful career as a programmer, systems analyst, or assistant computer center manager if his respective option is business, through the orderly presentation of programming languages, business, and managerial courses.

(2) The task of qualifying a student for transferring to a four year school which has a major in computer science, if he chooses the scientific option.

### SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CST 1010</td>
<td>Introduction to Data Processing</td>
<td>3</td>
</tr>
<tr>
<td>CST 1020</td>
<td>Introduction to Programming</td>
<td>3</td>
</tr>
<tr>
<td>CST 2310</td>
<td>Introduction to Systems Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>MAT 2510</td>
<td>Elementary Statistics</td>
<td>3</td>
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<tr>
<td></td>
<td>Physical Education Activity</td>
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<tr>
<td></td>
<td><strong>SUB-TOTAL</strong></td>
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<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
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<tbody>
<tr>
<td>BUS 1010</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1810</td>
<td>Business Mathematics</td>
<td>3</td>
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<tr>
<td>BUS 1820</td>
<td>Finance Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2210, 20, 30</td>
<td>Principles of Accounting I, II, III</td>
<td>9</td>
</tr>
<tr>
<td>BUS 2910</td>
<td>Management and Supervision I</td>
<td>3</td>
</tr>
<tr>
<td>CST 2220, 30</td>
<td>COBOL Programming I, II</td>
<td>6</td>
</tr>
<tr>
<td>CST 2410, 20</td>
<td>Systems Analysis I, II</td>
<td>6</td>
</tr>
</tbody>
</table>
CST 2510  Advanced Computing and Programming Systems  3
CST 2610  Management Information Systems  3
CST 2700  Management of EDP Function  3
ECO 2010, 20, 30  Principles of Economics I, II, III  9
MAT 1050  Algebra and Trigonometry I  5
PHL 1310  Symbolic Logic  3
PSY 2610  Psychological Aspects of Management  3
SPE 2440  Business and Professional Speaking  3

Social Science Electives  3
Electives  9

Sub-Total  77
TOTAL  101

Catalog Number  
CHE 1010, 20, 30
CST 1210
CST 2210
HIS 2110, 20, 30
MAT 1500
MAT 2610, 20
MAT 2650
PHY 2110, 20, 30
Course Title  
General Chemistry I, II, III  12
Assembler Language Programming  3
FORTRAN Programming  3
Sophomore English  9
Survey of American History I, II, III  9
Pre-Calculus  5
Calculus and Analytic Geometry I, II  10
Linear Algebra  3
Physics I, II, III  12
Social Science Elective  3
Electives  6

Sub-Total  75
TOTAL  99

ASSOCIATE OF SCIENCE
(DIETETIC TECHNOLOGY)

The Associate of Science Degree program in dietetic technology and food service management provides students with an opportunity to study dietetics at the college level. The curriculum combines general education and technical courses with supervised field work. This program is seven quarters in length and is designed to train dietetic technicians who can promote or improve quality food service and nutritional care for individuals in hospitals, nursing homes, rehabilitation centers, and other medical care facilities and agencies, thus helping others while enjoying a satisfying and rewarding career. The concept of a two-year training program for dietetic technicians is fully endorsed by The American Dietetic Association.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 2310, 20</td>
<td>Anatomy and Physiology I, II</td>
<td>8</td>
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<tr>
<td>BIO 2510</td>
<td>Microbiology</td>
<td>4</td>
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</tbody>
</table>
BUS 1810  Business Mathematics ..................... 3
BUS 2910  Management and Supervision I ............ 3
CHE 1010, 20, 30  General Chemistry I, II, III ....  12
CST 1010  Introduction to Data Processing ........  3
DFT 1010  Fundamentals of Food Service ............ 3
DFT 1020  Food Principles .............................. 3
DFT 1030  Advanced Menu Planning and Quality Food 3
DFT 2110  Food Purchasing and Cost Control ....... 3
DFT 2210  Principles of Nutrition ........................ 3
DFT 2220  Therapeutic Nutrition ........................ 3
DFT 2310  Food Systems Administration .............. 3
DFT 2410  Sanitation and Safety ........................ 3
DFT 1810, 20  Physical Education Activity .......... 3
DFT 2810, 20, 30  Field Experience III, IV, V ....  12
ENG 1010, 20, 30  Composition I, II, III ..........  9
HMT 2110  Food Distribution ............................ 3
HMT 2120  Quality Food Preparation ................... 3
POL 1010  Fundamentals of American Government .... 3
PSY 1010, 20  General Psychology I, II ............... 6
SOC 2010  Introduction to Sociology ................... 3

TOTAL HOURS 104

ASSOCIATE OF SCIENCE
(ELECTRICAL AND ELECTRONICS TECHNOLOGY)

This program is intended to meet the need in industry for personnel capable of entry and advancement in the highly diversified electronics field involving research development, manufacturing, quality control, installation, and the service of electronic systems.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1850</td>
<td>Personal Finance</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1010, 20</td>
<td>Composition I, II</td>
<td>6</td>
</tr>
<tr>
<td>ENG 2820</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>ERG 1010</td>
<td>Engineering Graphics I</td>
<td>3</td>
</tr>
<tr>
<td>EET 1010, 20</td>
<td>Electric Circuits, I, II</td>
<td>6</td>
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<tr>
<td>EET 1015, 25</td>
<td>Electric Circuits I, II Lab</td>
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<tr>
<td>EET 1210</td>
<td>Materials and Construction Practices</td>
<td>2</td>
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<tr>
<td>EET 1310, 20</td>
<td>Electronics I, II</td>
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<tr>
<td>EET 1315, 25</td>
<td>Electronics I, II Lab</td>
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<tr>
<td>EET 1410, 20</td>
<td>Electronics Drafting I, II</td>
<td>4</td>
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<tr>
<td>EET 1640</td>
<td>Electrical Wiring</td>
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<tr>
<td>EET 2310</td>
<td>Digital Electronics I</td>
<td>3</td>
</tr>
<tr>
<td>EET 2315</td>
<td>Digital Electronics I Lab</td>
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<td>EET 1330</td>
<td>Electronics III</td>
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<td>EET 1335</td>
<td>Electronics III Lab</td>
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<td>EET 1340</td>
<td>FCC License Preparation</td>
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</tr>
<tr>
<td>EET 2260</td>
<td>Electronic Troubleshooting</td>
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<tr>
<td>EET 2530</td>
<td>AC/DC Machines</td>
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<td>EET 2540</td>
<td>Commercial Electronic System</td>
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<td>EET 2560</td>
<td>Electrical Estimation &amp; Pricing</td>
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65
MAT 1010, 20  Technical Math I, II ................................................... 6
SOC 2010   Introduction to Sociology ........................................ 3
          Natural or Physical Science Electives .......................... 6
          Physical Education Activity .................................... 3
          Social Sciences or Humanities Electives .................. 6
          Electives ................................................................ 9

TOTAL HOURS 99

ASSOCIATE OF SCIENCE
(ENGINEERING TECHNOLOGY)

The primary objectives of the Engineering Technology program are to provide students with: (1) the basic background information to understand the environment in which he will work, (2) the technical training and experience needed to be productive at job entry level, and (3) the educational foundation necessary to undertake further study. Other objectives include the retraining and upgrading of people already employed.

Engineering technology degree options are available in Civil, Electrical, Chemical, Mechanical, and Nuclear fields. Two certificate programs related to Civil Engineering are available which are (1) Drafting and Design, and (2) Surveying.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Course</th>
<th>Quarter</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Requirements</td>
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<tr>
<td>CHE 1010</td>
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<td>General Chemistry I</td>
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</tr>
<tr>
<td>CST 2210</td>
<td></td>
<td>FORTRAN Programming</td>
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</tr>
<tr>
<td>ENG 1010, 20</td>
<td></td>
<td>Composition I, II</td>
<td>6</td>
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<tr>
<td>ENG 2820</td>
<td></td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>ERG 1010, 20</td>
<td></td>
<td>Engineering Graphics I, II</td>
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<tr>
<td>ERG 1100</td>
<td></td>
<td>Introduction to Engineering</td>
<td>3</td>
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<tr>
<td>ERG 1110</td>
<td></td>
<td>Engineering Mechanics I</td>
<td>3</td>
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<tr>
<td>EET 1010, 20</td>
<td></td>
<td>Electric Circuits I, II</td>
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<tr>
<td>MAT 1050</td>
<td></td>
<td>Algebra and Trigonometry1</td>
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<tr>
<td>MAT 1500</td>
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<td>Pre-Calculus</td>
<td>5</td>
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<tr>
<td>MAT 2610</td>
<td></td>
<td>Calculus and Analytic Geometry I</td>
<td>5</td>
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<tr>
<td>PHY 2010</td>
<td></td>
<td>General Physics I</td>
<td>4</td>
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<td>PHY 2020 or CHE 1020</td>
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<td>General Physics II or</td>
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<td></td>
<td></td>
<td>General Chemistry II</td>
<td>4</td>
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<td></td>
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<td>Physical Education Activity</td>
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<td></td>
<td></td>
<td>Social Science Electives</td>
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SUB-TOTAL 66

1Student may substitute MAT 1010 and MAT 1020 for MAT 1050.

<table>
<thead>
<tr>
<th>Course</th>
<th>Quarter</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CHE 1020</td>
<td></td>
<td>General Chemistry II (satisfies core requirements)</td>
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<td>CHE 1030</td>
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<td>General Chemistry III</td>
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<td>CHE 2310, 20</td>
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<td>Organic Chemistry I, II</td>
<td>8</td>
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<tr>
<td>Catalog Number</td>
<td>Course Title</td>
<td>Quarter Hours</td>
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<tr>
<td>CHT 2010, 20, 30</td>
<td>Unit Operations I, II, III</td>
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<tr>
<td>CHT 2110</td>
<td>Matter and Energy Balances</td>
<td>2</td>
<td></td>
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<tr>
<td>CHT 2210, 20</td>
<td>Quantitative Analysis I, II</td>
<td>6</td>
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<tr>
<td>CHT 2410</td>
<td>Heat, Mass, and Momentum Transfer</td>
<td>2</td>
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<tr>
<td>ERG 1120</td>
<td>Engineering Mechanics II</td>
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<tr>
<td>ERG 2110</td>
<td>Thermodynamics</td>
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**SUB-TOTAL 37**

**TOTAL HOURS 103**

<table>
<thead>
<tr>
<th>Course Title</th>
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<tbody>
<tr>
<td>Civil Engineering Technology Option</td>
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<td>Construction Planning</td>
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<td>Surveying I, II</td>
<td>8</td>
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<tr>
<td>Soil Mechanics</td>
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<td>Hydraulics</td>
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<td>Structural Analysis</td>
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<tr>
<td>Strength of Materials</td>
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**SUB-TOTAL 23**

Plus *either* of the following technical elective sequences

**Technology Sequence**

<table>
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<tr>
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<th>Quarter Hours</th>
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<tbody>
<tr>
<td>Concrete Technology</td>
<td>3</td>
</tr>
<tr>
<td>Traffic and Transportation Technology</td>
<td>3</td>
</tr>
<tr>
<td>Bituminous Technology</td>
<td>3</td>
</tr>
<tr>
<td>Route Surveying and Highway Design</td>
<td>3</td>
</tr>
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</table>

**SUB-TOTAL 12**

**TOTAL HOURS 101**

**OR**

**Design Sequence**

<table>
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<tr>
<th>Course Title</th>
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<tbody>
<tr>
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<tr>
<td>Advanced Reinforced Concrete Design</td>
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<tr>
<td>Structural Steel Design</td>
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**SUB-TOTAL 12**

**TOTAL HOURS 101**

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<td>Electronics I Lab</td>
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<td>EET 2310</td>
<td>Digital Electronics I</td>
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**Electric Engineering Technology Option**

**TOTAL 67**
EET 2315  Digital Electronics I Lab ........................................1
EET 2510  Industrial Electronics I ......................................3
EET 2515  Industrial Electronics I Lab ................................1
ERG 2110  Thermodynamics ..............................................3
PHY 2020  General Physics II (satisfies core requirement) ...

SUB-TOTAL 21

Plus either of the following technical elective sequences

**Electronics Sequence**

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<tr>
<td>EET 1210</td>
<td>Materials and Construction Practices</td>
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<tr>
<td>EET 1330</td>
<td>Electronics III</td>
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<td>EET 1335</td>
<td>Electronics III Lab</td>
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<td>Electronics Project</td>
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<td>EET 2250</td>
<td>Special Topics in Electronics</td>
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<td>EET 2320</td>
<td>Digital Electronics II</td>
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SUB-TOTAL 14

TOTAL HOURS 101

OR

**Power and Industrial Sequence**

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<td>Electrical Systems Design I, II</td>
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<td>EET 1630</td>
<td>Elements of Electrical Generation, Transmission and Distribution</td>
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SUB-TOTAL 14

TOTAL HOURS 101

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**Catalog Number**

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<tr>
<td>CST 1010</td>
<td>Introduction to Data Processing</td>
<td>3</td>
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<tr>
<td>ERG 1120</td>
<td>Engineering Mechanics II</td>
<td>3</td>
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<tr>
<td>MET 1010, 20</td>
<td>Manufacturing Processes I, II</td>
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<td>MET 1110</td>
<td>Materials of Industry</td>
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<td>MET 1210</td>
<td>Industrial Organizations and Institutions</td>
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<td>MET 1310</td>
<td>Hydraulics and Pneumatics</td>
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<tr>
<td>PHY 2020</td>
<td>General Physics II (satisfies core requirement)</td>
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SUB-TOTAL 24

Plus either of the following technical elective sequences

**Design Sequence**

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<td>Strength of Materials</td>
<td>3</td>
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<tr>
<td>MET 2010</td>
<td>Piping Drafting</td>
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<tr>
<td>----------------</td>
<td>------------------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>ERG 1120</td>
<td>Engineering Mechanics II</td>
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<td>ERG 2110</td>
<td>Thermodynamics</td>
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<td>MAT 2620</td>
<td>Calculus and Analytic Geometry II</td>
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<tr>
<td>NUC 1010</td>
<td>Introduction to Nuclear Technology</td>
<td>3</td>
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<tr>
<td>NUC 2010</td>
<td>Nuclear Physics</td>
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<tr>
<td>NUC 2110</td>
<td>Radiation Biology</td>
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<td>NUC 2120</td>
<td>Radiation Protection</td>
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<td>NUC 2310</td>
<td>Reactor Analysis and Design</td>
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<td>NUC 2510</td>
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<td>NUC 2710</td>
<td>Radioisotopes</td>
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<td>PHY 2020</td>
<td>General Physics II (satisfies core requirement)</td>
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<td>General Physics III</td>
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ASSOCIATE OF SCIENCE  
(GENERAL BUSINESS ADMINISTRATION)  
(Two-Year)

The two-year program in general business administration is designed to prepare the interested student in many phases of the business field. Upon graduation, the student may enter a variety of career positions in business. The curriculum provides training in a number of areas, such as advertising, banking, credit finance, retailing, insurance, and accounting. This program is for a student planning to seek employment at the end of two years.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
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<tr>
<td>BUS 1010</td>
<td>Introduction to Business</td>
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<td>BUS 1810</td>
<td>Business Mathematics</td>
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<tr>
<td>BUS 1820</td>
<td>Finance Mathematics</td>
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<td>BUS 1850</td>
<td>Personal Finance</td>
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<td>BUS 2110</td>
<td>Business Systems Simulations</td>
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<tr>
<td>BUS 2210, 20, 30</td>
<td>Principles of Accounting I, II, III</td>
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<tr>
<td>BUS 2250</td>
<td>Cost Accounting</td>
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<tr>
<td>BUS 2310</td>
<td>Income Tax Accounting-Personal</td>
<td>3</td>
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<td>BUS 2410</td>
<td>Business Machines I-Computational</td>
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<tr>
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<td>BUS 2520</td>
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<td>Introduction to Data Processing</td>
<td>3</td>
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<td>CST 1020</td>
<td>Introduction to Programming</td>
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<td>ECO 2010, 20, 30</td>
<td>Principles of Economics I, II, III</td>
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<td>PSY 2610</td>
<td>Psychological Aspects of Management</td>
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<tr>
<td>SOC 2010</td>
<td>Introduction to Sociology</td>
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<td>SPE 2410</td>
<td>Basic Speech Communication</td>
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<td>Physical Education Activity</td>
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<td></td>
<td>Business Electives</td>
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<td></td>
<td>Electives</td>
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</table>

TOTAL HOURS 99
ASSOCIATE OF SCIENCE
(GENERAL CLERICAL)
(Two-Year)

This two-year general clerical program is designed for a student interested in an office occupation emphasizing clerical duties rather than shorthand proficiency. The wide range of courses included in this curriculum provide training for office work in a number of areas; for example — filing, clerk, receptionist, typist, and numerous other general clerical job opportunities. In addition to the skills gained in typewriting and office machines, the student acquires a broad background of knowledge that will enable him to function more effectively in the business world.

SUMMARY OF REQUIRED HOURS

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<th>Course Title</th>
<th>Quarter Hours</th>
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<td>BUS 1110</td>
<td>Business Communications</td>
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<td>Introduction to Business</td>
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<tr>
<td>BUS 1810</td>
<td>Business Mathematics</td>
<td>3</td>
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<tr>
<td>BUS 2110</td>
<td>Business Systems Simulations</td>
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<tr>
<td>BUS 2210, 20, 30</td>
<td>Principles of Accounting I, II, III</td>
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<tr>
<td>BUS 2410</td>
<td>Business Machines I-Computational</td>
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<td>BUS 2420</td>
<td>Business Machines II-Duplication</td>
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<td>BUS 2520</td>
<td>Business Law</td>
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<td>Introduction to Data Processing</td>
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<td>General Psychology I, II</td>
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<td>Typing IV</td>
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<td>Report Writing/Records Management</td>
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<td>Office Practicum Lab I, II</td>
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<td>Physical Education Activity</td>
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<td>Electives</td>
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</table>

TOTAL HOURS 101

1BUS 2250 Cost Accounting may be substituted for BUS 2230.
ASSOCIATE OF SCIENCE
(SECRETARIAL SCIENCE)
(Two-Year)

The two-year program in secretarial science is designed to prepare a finished professional secretary in the many aspects of secretarial work in the modern office in business and industry. Proficiency is developed in the skills of typewriting, shorthand dictation, transcription, office machines, and office management. The wide scope of courses offered in this program will provide an opportunity for the student to increase his understanding of the many facets involved in the operation of business today. This curriculum is for a student planning to seek employment at the end of two years.

SUMMARY OF REQUIRED HOURS

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TOTAL HOURS 99
ASSOCIATE OF SCIENCE
(ACCOUNTING TECHNOLOGY)

The primary objective of the two-year accounting technology curriculum is to train students for employment as technicians in the field of accounting. Other objectives involve the re-training and upgrading of people already employed.

SUMMARY OF REQUIRED HOURS

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<td>Principles of Accounting I, II, III</td>
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<tr>
<td>BUS 2250</td>
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<td>Income Tax Accounting I, II</td>
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<td>Business Machines I-Computational</td>
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<td>Physical Education Activity</td>
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</table>

TOTAL HOURS 99
ASSOCIATE OF SCIENCE (FIRE SCIENCE TECHNOLOGY)

This program is designed to prepare students for initial entrance into employment or advancement with municipalities, industrial firms, or other employers requiring fire protection personnel. Graduates may also be employed by insurance companies as salesmen, fire insurance adjusters, or bureau raters.

SUMMARY OF REQUIRED HOURS

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<td>EET 1110, 20</td>
<td>Electric Fundamentals I, II</td>
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<td>ENG 1010, 20</td>
<td>Composition I, II</td>
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<td>ENG 2820</td>
<td>Technical Writing</td>
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<tr>
<td>ERG 1010, 20</td>
<td>Engineering Graphics I, II</td>
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<td>ERG 1100</td>
<td>Introduction to Engineering</td>
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<tr>
<td>FST 1010</td>
<td>Introduction to Fire Science</td>
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<td>Municipal Fire Protection</td>
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<td>Industrial Hazards</td>
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<td>Construction Codes and Fire Protection Standards</td>
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<td>Water Suppression Systems</td>
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<td>Inspection Principles and Practices</td>
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<td>Principles of Hydraulics</td>
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<td>Flammable Materials</td>
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<td>FST 2510</td>
<td>Fire Protection Equipment and Systems</td>
<td>3</td>
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<tr>
<td>FST 2610</td>
<td>Fire Department Administration</td>
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<tr>
<td>FST 2620</td>
<td>Seminar</td>
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<td>FST 2700</td>
<td>Practicum</td>
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<tr>
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<td>Safety and First Aid</td>
<td>3</td>
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<tr>
<td>MAT 1010, 20</td>
<td>Technical Math I, II</td>
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<td>POL 1030</td>
<td>State and Local Government in the U.S.</td>
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<td></td>
<td>Natural Science</td>
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<td>TOTAL HOURS</td>
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</table>
ASSOCIATE OF SCIENCE
(HOTEL-MOTEL-RESTAURANT MANAGEMENT)

This curriculum prepares the student for mid-management employment in the hospitality industry. The team teaching concept is utilized in the program. On-the-job training through cooperative agreements with industry is a unique feature of the course of study.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1010</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1810</td>
<td>Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1820</td>
<td>Finance Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2210, 20, 30</td>
<td>Principles of Accounting I, II, III</td>
<td>9</td>
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<tr>
<td>BUS 2410</td>
<td>Business Machines I-Computational</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2510</td>
<td>Legal Environment for Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2520</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2810</td>
<td>Salesmanship</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2820</td>
<td>Retailing</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2910, 20, 30</td>
<td>Management and Supervision I, II, III</td>
<td>9</td>
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<tr>
<td>ENG 1010, 20</td>
<td>Composition I, II</td>
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<td>ENG 2820</td>
<td>Technical Writing</td>
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<tr>
<td>HMT 1000</td>
<td>Introduction to Hotel-Motel-Restaurant Management</td>
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<tr>
<td>HMT 1010</td>
<td>Hotel-Motel Front Office Procedure</td>
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<td>HMT 1110, 20, 30</td>
<td>Hotel-Motel-Restaurant Seminar I, II, III</td>
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<td>HMT 2010</td>
<td>Hotel-Motel-Restaurant Practicum</td>
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<td>HMT 2110</td>
<td>Food Distribution</td>
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<td>HMT 2120</td>
<td>Quality Food Preparation</td>
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<td>FST 1030</td>
<td>Industrial Hazards</td>
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<tr>
<td>PSY 2610</td>
<td>Psychological Aspects of Management</td>
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<tr>
<td>SPE 2440</td>
<td>Business and Professional Speaking</td>
<td>3</td>
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<tr>
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<td>Physical Education Activity</td>
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<td></td>
<td>Electives</td>
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</tr>
</tbody>
</table>

TOTAL HOURS 99
ASSOCIATE OF SCIENCE
(MANAGEMENT AND SUPERVISION TECHNOLOGY)

This program is designed for those individuals who desire to be managers or supervisors in business and industry. It is a program which offers training in the basic principles of supervision such as planning, organizing, directing, controlling, and coordinating business and industrial endeavors.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
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<tbody>
<tr>
<td>BUS 1010</td>
<td>Introduction to Business</td>
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<tr>
<td>BUS 1810</td>
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<td>BUS 1820</td>
<td>Finance Mathematics</td>
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<tr>
<td>BUS 1850</td>
<td>Personal Finance</td>
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<tr>
<td>BUS 2210, 20</td>
<td>Principles of Accounting I, II</td>
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<tr>
<td>BUS 2410</td>
<td>Business Machines I-Computational</td>
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<td>BUS 2510</td>
<td>Legal Environment for Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2520</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2810</td>
<td>Salesmanship</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2820</td>
<td>Retailing</td>
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<tr>
<td>BUS 2830</td>
<td>Marketing</td>
<td>3</td>
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<tr>
<td>BUS 2910, 20, 30</td>
<td>Management and Supervision I, II, III</td>
<td>9</td>
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<tr>
<td>BUS 2940</td>
<td>Management Seminar</td>
<td>3</td>
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<tr>
<td>CST 1010</td>
<td>Introduction to Data Processing</td>
<td>3</td>
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<tr>
<td>ECO 2010, 20</td>
<td>Principles of Economics I, II</td>
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<tr>
<td>ENG 1010, 20</td>
<td>Composition I, II</td>
<td>6</td>
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<tr>
<td>ENG 2820</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>FST 1030</td>
<td>Industrial Hazards</td>
<td>3</td>
</tr>
<tr>
<td>PSY 1010, 20</td>
<td>General Psychology I, II</td>
<td>6</td>
</tr>
<tr>
<td>PSY 2610</td>
<td>Psychological Aspects of Management</td>
<td>3</td>
</tr>
<tr>
<td>SPE 2440</td>
<td>Business and Professional Speaking</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Physical Education Activity</td>
<td>3</td>
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<tr>
<td></td>
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<td>15</td>
</tr>
</tbody>
</table>

TOTAL HOURS 99
ASSOCIATE OF SCIENCE
(MEDICAL RECORDS TECHNOLOGY)

The Medical Records Technology program emphasizes specialized skills in the management of medical records. The medical records technician helps to provide accuracy and efficiency in the management of the patient's records. In smaller health facilities, the medical records technician is in charge of the medical records room. Application of the didactic instruction is provided through clinical experience in local health facilities.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
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</thead>
<tbody>
<tr>
<td>BIO 2310, 20, 30</td>
<td>Anatomy and Physiology I, II, III</td>
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<tr>
<td>BUS 1810</td>
<td>Business Mathematics</td>
<td>3</td>
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<tr>
<td>BUS 2410</td>
<td>Business Machines I-Computational</td>
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<td>CST 1010</td>
<td>Introduction to Data Processing</td>
<td>3</td>
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<tr>
<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
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<tr>
<td>MRT 1010, 20, 30</td>
<td>Medical Records I, II, III</td>
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<tr>
<td>MRT 1210, 20</td>
<td>Medical Terminology I, II</td>
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<td>MRT 1230</td>
<td>Medical Transcription</td>
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<tr>
<td>MRT 2310, 20, 30</td>
<td>Directed Practice I, II, III</td>
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<tr>
<td>MRT 2410</td>
<td>Advanced Medical Records</td>
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<td>MRT 2420</td>
<td>Office Supervision for the Medical Record Supervisor</td>
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<tr>
<td>MRT 2430</td>
<td>Medical Records Seminar</td>
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<tr>
<td>PSY 1010, 20</td>
<td>General Psychology I, II</td>
<td>6</td>
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<td>PSY 2610</td>
<td>Psychological Aspects of Management</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2010</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2020</td>
<td>Social Institutions</td>
<td>3</td>
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<tr>
<td>SPE 2440</td>
<td>Business and Professional Speaking</td>
<td>3</td>
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<tr>
<td>SSC 1010</td>
<td>Typing I (or equivalent)</td>
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</tr>
<tr>
<td>Electives</td>
<td></td>
<td>3</td>
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<tr>
<td>TOTAL HOURS</td>
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</tr>
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77
ASSOCIATE OF SCIENCE
(OPERATING ENGINEERING TECHNOLOGY)

The primary objective of the Operating Engineering Technology Program is to train two-year technicians for employment in one of the four options offered: Grading and Paving Equipment Operator, Plant Equipment Operator, Heavy Duty Repairman, or Universal Equipment Operator.

Other program objectives include re-training and upgrading of employees working in one of these fields of operating engineering.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
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<tbody>
<tr>
<td>BUS 1850</td>
<td>Personal Finance</td>
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<tr>
<td>EET 1110, 20</td>
<td>Electric Fundamentals I, II</td>
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<tr>
<td>ENG 1010</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2820</td>
<td>Technical Writing</td>
<td>3</td>
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<tr>
<td>FST 2020</td>
<td>Blue Print Reading</td>
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<tr>
<td>HEA 2310</td>
<td>Safety and First Aid</td>
<td>3</td>
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<td>MAT 1010, 20</td>
<td>Technical Math I, II</td>
<td>6</td>
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<td>General Introduction to Operating Engineering and History of the Labor Movement</td>
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<tr>
<td>OET 1020</td>
<td>Introduction to General Construction Power Sources</td>
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<td>OET 1030</td>
<td>Introduction to Basic Power Trains and Undercarriages</td>
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<tr>
<td>OET 1040</td>
<td>Introduction to Basic Electricity, Hydraulics, and Pneumatics</td>
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<tr>
<td>OET 1110, 20, 30</td>
<td>Apprenticeship Field Experiences I, II, III</td>
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<tr>
<td>OET 1210</td>
<td>Introduction to Fuels, Oils, and Lubricants</td>
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<td>OET 1220</td>
<td>General Introduction to Welding, Rigging, Soils, and Compaction</td>
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<td>OET 1230</td>
<td>Function of Grades and Grade Stakes</td>
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<td>OET 1240</td>
<td>Introduction to Construction Equipment</td>
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<td>Apprenticeship Field Experiences IV, V</td>
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TOTAL HOURS 102
ASSOCIATE OF SCIENCE
(POLICE SCIENCE AND CRIMINOLOGY EDUCATION)

This program is designed to meet the need in society for personnel capable of entry and advancement in the law enforcement field. The two year curriculum emphasizes an academic approach to law enforcement rather than a training approach.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
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<tbody>
<tr>
<td>BUS 2910</td>
<td>Management and Supervision I</td>
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</tr>
<tr>
<td>CST 1010</td>
<td>Introduction to Data Processing</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1010, 20</td>
<td>Composition I, II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2820</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>FST 1020</td>
<td>Municipal Fire Protection</td>
<td>3</td>
</tr>
<tr>
<td>HEA 2310</td>
<td>Safety and First Aid</td>
<td>3</td>
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<tr>
<td>MAT 1010</td>
<td>Technical Math I</td>
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<tr>
<td>PST 1010</td>
<td>Introduction to Law Enforcement</td>
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<td>PST 1110, 20</td>
<td>Police Science I, II</td>
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<td>PST 2010</td>
<td>Police Administration and Organization</td>
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<td>PST 2130, 40</td>
<td>Police Science III, IV</td>
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<td>PST 2200</td>
<td>Seminar in Police Problems</td>
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<td>POL 1010</td>
<td>Fundamentals of American Government</td>
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<td>POL 1020</td>
<td>United States National Government</td>
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<td>POL 1030</td>
<td>State and Local Government in the United States</td>
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<td>PSY 1010, 20</td>
<td>General Psychology I, II</td>
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<tr>
<td>PSY 2310</td>
<td>Abnormal Psychology</td>
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<tr>
<td>PSY 2420</td>
<td>Adolescent Psychology</td>
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<tr>
<td>SSC 1010</td>
<td>Typing I</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2010</td>
<td>Introduction to Sociology</td>
<td>3</td>
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<tr>
<td>SOC 2020</td>
<td>Social Institutions</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2030</td>
<td>Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2130</td>
<td>Introduction to Criminology</td>
<td>3</td>
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<tr>
<td></td>
<td>Physical Education Activity</td>
<td>3</td>
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<tr>
<td></td>
<td>Electives</td>
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</tbody>
</table>

TOTAL HOURS 99
ASSOCIATE OF SCIENCE
(RECREATION MANAGEMENT AND ADMINISTRATION TECHNOLOGY)

The Recreation Management and Administration program leadership curriculum has been designed to provide the postsecondary student with: (1) The basic background information required to understand the environment within which he will work, (2) The broad technical training and minimum experience necessary to be a productive employee in an entry-level job, and (3) The educational foundation needed to undertake further study within the field through in-service training professional short courses, or — to a limited extent — enrollment in a four year program.

The Recreation Management and Administration program employs a basic core of recreation courses. After taking the basic core courses, students are allowed to select an emphasis in one or more of the following career fields: Camp Administration, Park Administration, Marine Management, and Recreation Leadership.

### SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
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<tbody>
<tr>
<td>ART 1810</td>
<td>School Art</td>
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<tr>
<td>BUS 1810</td>
<td>Business Mathematics</td>
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<td>ENG 1010, 20, 30</td>
<td>Composition I, II, III</td>
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<td></td>
<td>Biological Science1</td>
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<tr>
<td>HEA 2210</td>
<td>Personal Health</td>
<td>3</td>
</tr>
<tr>
<td>HEA 2310</td>
<td>Safety and First Aid</td>
<td>3</td>
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<tr>
<td>MUS 2810</td>
<td>Music Education I</td>
<td>3</td>
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<td>PED 2720</td>
<td>Individual and Dual Sports</td>
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</tr>
<tr>
<td>PSY 1010, 20</td>
<td>General Psychology I, II</td>
<td>6</td>
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<tr>
<td>PSY 2610</td>
<td>Psychological Aspects of Management</td>
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</tr>
<tr>
<td>REC 1010</td>
<td>Introduction to Recreation</td>
<td>3</td>
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<tr>
<td>REC 1020</td>
<td>Social Recreation</td>
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<td>REC 1030</td>
<td>Outdoor Education</td>
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<td>REC 1110</td>
<td>Team Sports</td>
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<td>REC 1310</td>
<td>Arts and Crafts</td>
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<td>REC 2010</td>
<td>Organization and Administration in Recreation</td>
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<td>REC 2310</td>
<td>Water Sports</td>
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<td>REC 2410</td>
<td>Field Work</td>
<td>3</td>
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<tr>
<td>SOC 2010</td>
<td>Introduction to Sociology</td>
<td>3</td>
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<td>SOC 2030</td>
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<tr>
<td>SPE 2410</td>
<td>Basic Speech Communication</td>
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<tr>
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<td>Physical Education Activity</td>
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</tbody>
</table>

**TOTAL HOURS 99**

1 Students desiring an emphasis in Park Administration should take BIO 2210, 20.
CERTIFICATE OF PROFICIENCY PROGRAMS

CIVIL ENGINEERING — DRAFTING AND DESIGN
(CERTIFICATE)

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
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</thead>
<tbody>
<tr>
<td>CET 2010</td>
<td>Construction Planning</td>
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<td>CET 2050, 60</td>
<td>Civil Drafting I, II</td>
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<tr>
<td>CET 2250</td>
<td>Structural Analysis</td>
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</tr>
<tr>
<td>CET 2610</td>
<td>Reinforced Concrete Design</td>
<td>3</td>
</tr>
<tr>
<td>CET 2620</td>
<td>Advanced Reinforced Concrete Design</td>
<td>3</td>
</tr>
<tr>
<td>CET 2710</td>
<td>Structural Steel Design</td>
<td>3</td>
</tr>
<tr>
<td>CET 2720</td>
<td>Advanced Structural Steel Design</td>
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</tr>
<tr>
<td>CST 2210</td>
<td>FORTRAN Programming</td>
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<tr>
<td>ENG 2820</td>
<td>Technical Writing</td>
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<td>ERG 1010, 20</td>
<td>Engineering Graphics I, II</td>
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<td>ERG 1050</td>
<td>Elementary Mechanics</td>
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<td>Strength of Materials</td>
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<td>EET 1410</td>
<td>Electronics Drafting I</td>
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<td>MAT 1050</td>
<td>Algebra and Trigonometry¹</td>
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<td>Pre-Calculus</td>
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</table>

TOTAL HOURS 57

¹Student may substitute MAT 1010 and MAT 1020 for MAT 1050.
CIVIL ENGINEERING — SURVEYING
(CERTIFICATE)

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 2010</td>
<td>Construction Planning</td>
<td>3</td>
</tr>
<tr>
<td>CET 2110, 20</td>
<td>Surveying I, II</td>
<td>8</td>
</tr>
<tr>
<td>CET 2210</td>
<td>Soil Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>CET 2410</td>
<td>Traffic and Transportation Technology</td>
<td>3</td>
</tr>
<tr>
<td>CET 2810</td>
<td>Route Surveying and Highway Design</td>
<td>3</td>
</tr>
<tr>
<td>ERG 1050</td>
<td>Elementary Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>ERG 1010, 20</td>
<td>Engineering Graphics I, II</td>
<td>6</td>
</tr>
<tr>
<td>ERG 2210</td>
<td>Strength of Materials</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2820</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1050</td>
<td>Algebra and Trigonometry</td>
<td>5</td>
</tr>
<tr>
<td>MAT 1500</td>
<td>Pre-Calculus</td>
<td>5</td>
</tr>
</tbody>
</table>

TOTAL HOURS 45

1Student may substitute MAT 1010 and MAT 1020 for MAT 1050.

ELECTRONICS TECHNOLOGY
(CERTIFICATE)

This program is intended to meet the need in industry for personnel capable of entry and advancement in the highly diversified electronics field. The one-year curriculum emphasizes the practical aspects of electronic application.

SUMMARY OF REQUIRED HOURS

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1010</td>
<td>Composition I</td>
<td>3</td>
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<tr>
<td>EET 1110, 20</td>
<td>Electric Fundamentals I, II</td>
<td>6</td>
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<tr>
<td>EET 1010</td>
<td>Electric Circuits I</td>
<td>3</td>
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<td>EET 1140, 50</td>
<td>Electronic Communications I, II</td>
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<tr>
<td>EET 1160</td>
<td>Industrial Electronics Measurement and</td>
<td>5</td>
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<tr>
<td></td>
<td>Control</td>
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<tr>
<td>MAT 1050</td>
<td>Algebra and Trigonometry</td>
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<tr>
<td></td>
<td>Natural Science</td>
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<tr>
<td></td>
<td>Social Science</td>
<td>3</td>
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</tbody>
</table>

TOTAL HOURS 47
GENERAL CLERICAL  
(CERTIFICATE)

This one-year general clerical program is designed for a student interested in an office occupation emphasizing clerical duties. The wide range of courses included in this curriculum provide training for office work in a number of areas; for example — filing clerk, receptionist, typist, and numerous other general clerical job opportunities.

**SUMMARY OF REQUIRED HOURS**

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Course Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1010</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1110</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1810</td>
<td>Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2210, 20</td>
<td>Principles of Accounting I, II</td>
<td>6</td>
</tr>
<tr>
<td>BUS 2410</td>
<td>Business Machines-Computational</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2420</td>
<td>Business Machines-Duplication</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2510</td>
<td>Legal Environment for Business</td>
<td>3</td>
</tr>
<tr>
<td>CST 1010</td>
<td>Introduction to Data Processing</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2010</td>
<td>Principles of Economics I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1010</td>
<td>Composition I</td>
<td>3</td>
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<tr>
<td>SSC 1010, 20, 30</td>
<td>Typing I, II, III</td>
<td>9</td>
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<tr>
<td>SSC 1210, 2210</td>
<td>Office Practice I, II</td>
<td>6</td>
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<tr>
<td>SSC 2010</td>
<td>Typing IV</td>
<td>3</td>
</tr>
<tr>
<td>SSC 2810</td>
<td>Report Writing/Records Management</td>
<td>3</td>
</tr>
<tr>
<td>SSC 1220, 2220</td>
<td>Office Practicum Lab I, II</td>
<td>2</td>
</tr>
</tbody>
</table>

**TOTAL HOURS**  56
COURSES OF STUDY

In addition to the credit courses of study in each of the following disciplines, the College also offers from quarter to quarter various special courses of study not listed. These courses are offered through the division of Continuing Education, and all inquiries should be addressed to the Director of Community Services.

Certain courses have prerequisites. However, in limited instances, prerequisites may be waived by the instructor and the Dean of Instruction.

In general, a course in a given discipline may be replaced by a course in the same discipline having a higher catalog number.

ART

ART 1010 — Art Appreciation ................................................................. 3 Credits
Analysis of expressive form, stylistic distinction. Traditional and Modern techniques of painting, sculpture, architecture, and printmaking. A lecture course, illustrated with slides.

ART 1110 — Basic Studio I ..................................................................... 3 Credits
A structured studio course for beginning art majors consists of fundamentals emphasizing basic and related problems in two dimensional design and composition as a foundation for advanced work. May be taken in any sequence with Basic Studio II and III.

2 hours lecture — 4 hours studio

ART 1120 — Basic Studio II ................................................................... 3 Credits
A continuation of Basic Studio I and the study of two dimensional design with emphasis on the theory of color and its application. (Required of all art majors. May be taken in any sequence with Basic Studio I and II.)

2 hours lecture — 4 hours studio

ART 1130 — Basic Studio III ................................................................. 3 Credits
An extension of the study of fundamentals of design with basic and related problems in three dimensional structure. (Required of all art majors. May be taken in any sequence with Basic Studio I and II.)

2 hours lecture — 4 hours studio

ART 1810 — School Art ......................................................................... 3 Credits
The child, his development, and needs in creative art experiences. Two and three dimensional lab experiences appropriate for later use with children. Designed for elementary education majors.

ART 2010 — Art History Survey I ......................................................... 3 Credits
A survey of architecture, painting, and sculpture from prehistoric times to the Renaissance.

ART 2020 — Art History Survey II ......................................................... 3 Credits
A survey of architecture, painting, and sculpture from the Renaissance to nineteenth century Impressionism.

ART 2030 — Art History Survey III — Modern Art ............................... 3 Credits
A detailed survey of architecture, painting, and sculpture from the late nineteenth century to the present.

ART 2410 — Ceramics I ......................................................................... 3 Credits
Lecture and studio experience in ceramic techniques; clay mixing, hand building, wheel throwing, glazing, firing. May be started any quarter.

2 hours lecture — 4 hours studio
ART 2420 — Ceramics II ................................................................. 3 Credits  
Refinement of fundamental skills and techniques. Individualized consultation with instructor.  
2 hours lecture — 4 hours studio

ART 2430 — Ceramics III ............................................................... 3 Credits  
Creative experimentation with contemporary sculptural form, clays, and glazes.  
2 hours lecture — 4 hours studio

ART 2510 — Painting I ................................................................. 3 Credits  
An introduction to the techniques, materials, and tools used in oil painting. Still life, figure and landscape.  
2 hours lecture — 4 hours studio

ART 2520 — Painting II ................................................................. 3 Credits  
A continuation of ART 2510 with an emphasis on individual experimentation.  
2 hours lecture — 4 hours studio

ART 2530 — Painting III ............................................................... 3 Credits  
An introduction to the technique, materials, and tools used in acrylic and polymer painting.  
2 hours lecture — 4 hours studio

ART 2610 — Weaving I ................................................................. 3 Credits  
Exploration of techniques in loom and non-loom experiences. Plain weave, tapestry, warping (dressing) of frame looms, four harness looms and the drafting of weaves will be given in conjunction with a history of textiles and the art of weaving.

ART 2620 — Weaving II ............................................................... 3 Credits  
Art from fibers and fabrics. An extension of skills in Weaving I to include macramé, wrapping, rugmaking, collage, quilting and mixed media.

ART 2710 — Introduction to Printmaking ............................................. 3 Credits  
Technical instruction in printmaking processes; intaglio, relief, and planographic processes.  
2 hours lecture — 4 hours studio

ART 2720 — Advanced Printmaking ................................................ 3 Credits  
Continuation of Introduction to Printmaking with emphasis on individual experimentation.  
2 hours lecture — 4 hours studio

BIOLOGY

To receive credit for a Biology course, the lecture section must be accompanied by a laboratory session during the same quarter.

BIO 1110 — General Biology I ................................................... 4 Credits  
An introduction to biology at the cellular and subcellular levels.  
3 hours lecture — 2 hours laboratory

BIO 1120 — General Biology II ................................................... 4 Credits  
An introduction to the structure and function of multicellular organisms.  
3 hours lecture — 2 hours laboratory

BIO 1130 — General Biology III ................................................... 4 Credits  
An introduction to the principles of heredity and to environmental biology.  
3 hours lecture — 2 hours laboratory

BIO 2210 — Plant Kingdom I ................................................... 4 Credits  
Lower plants; emphasis on evolutionary relationships, morphology and development. (Prerequisite: BIO 1130 or consent of instructor.)  
3 hours lecture — 3 hours laboratory

BIO 2220 — Plant Kingdom II ................................................... 4 Credits  
Higher plants; emphasis on evolutionary relationship, morphology and development. A study of the seed plants with an emphasis on anatomy and physiology.  
(Prerequisite: BIO 110-1120-1130 or consent of instructor.)  
3 hours lecture — 3 hours laboratory
<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>BIO 2310</td>
<td>Anatomy and Physiology I</td>
<td>4</td>
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<tr>
<td>BIO 2320</td>
<td>Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>BIO 2330</td>
<td>Anatomy and Physiology III</td>
<td>4</td>
</tr>
<tr>
<td>BIO 2410</td>
<td>Invertebrate Zoology</td>
<td>4</td>
</tr>
<tr>
<td>BIO 2420</td>
<td>Comparative Vertebrate Anatomy</td>
<td>4</td>
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<tr>
<td>BIO 2510</td>
<td>Microbiology</td>
<td>4</td>
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<tr>
<td>BIO 2610</td>
<td>Genetics</td>
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<tr>
<td>BIO 2620</td>
<td>Cell Biology</td>
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<td>BIO 2630</td>
<td>Ecology</td>
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**BUSINESS AND COMMERCE**

<table>
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<tr>
<th>Course Code</th>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1010</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1110</td>
<td>Business Communications</td>
<td>3</td>
</tr>
</tbody>
</table>
BUS 1810 — Business Mathematics .................................................................3 Credits
The fundamentals of mathematics as applied to business. Emphasis on problems involving discounts, simple and compound interest, insurance and payroll.

BUS 1820 — Finance Mathematics .................................................................3 Credits
Math applied to business operations such as preparing payroll, discounting notes and drafts, distributing profits and dividends, trading on the stock and bond markets, figuring consumer credit, and computing federal income taxes and social security benefits.

BUS 1850 — Personal Finance ........................................................................3 Credits
A course designed to aid the student in practical money management. Topics included are charting financial objectives; budgeting; consumer borrowing, renting, and buying; investing; employee benefits and taxation. Designed for special career education curricula.

BUS 2010 — Real Estate I ................................................................................3 Credits
A fundamental real estate course covering the basic laws and principles of Tennessee Real Estate, giving understanding, background, and terminology necessary for advanced study in specialized courses. Will be of assistance to those preparing for the real estate salesman license examinations.

BUS 2020 — Real Estate II .............................................................................3 Credits
A study of Tennessee Real Estate Law, including rights incident to property ownerships and management, agency, contracts, and applications to real estate transfer, conveyances, probate proceedings, trust deeds, and foreclosure, as well as, recent legislation governing real estate transactions. Applies toward educational requirement of a broker's examination. (Prerequisite: BUS 2010)

BUS 2030 — Real Estate III ..............................................................................3 Credits
Institutional and governmental funds for financing real estate transactions. (Prerequisite: BUS 2010.)

BUS 2210 — Principles of Accounting I ............................................................3 Credits
Covers the basic principles and procedures from the management viewpoint. Determination of net income and valuation of assets and the basic problems connected therewith are given careful attention.

BUS 2220 — Principles of Accounting II ..........................................................3 Credits
Continues with notes and interest determination; plant depreciation; voucher systems; taxes on payroll, property and income; and the theory of internal control. (Prerequisite: BUS 2210.)

BUS 2230 — Principles of Accounting III..........................................................3 Credits
Covers partnership organizations and operation, cost accounting, corporation capital accounts, earnings and dividends, bonds, funds statement and statement analysis. (Prerequisite: BUS 2220.)
BUS 2250 — Cost Accounting ................................................................. 3 Credits
Principles of manufacturing and distribution cost accounting. Material, labor, and overhead costs in job order and process cost accounting; analysis of cost distribution and related problems. Business procedures and their relation to business situations and needs of management. (Prerequisite: BUS 2220.)

BUS 2310 — Income Tax Accounting — Personal ........................................ 3 Credits
Federal income tax laws with emphasis on the preparation of returns for individuals. (Prerequisite: BUS 2210 or permission of instructor.)

BUS 2320 — Income Tax Accounting — Business ........................................ 3 Credits
Federal income tax laws with emphasis on the preparation of returns for partnerships and corporations. (Prerequisite: BUS 2310.)

BUS 2410 — Business Machines I — Computational ................................... 3 Credits
Operation of the printing, electronic, and rotary calculators and the ten-key adding machine.

BUS 2420 — Business Machines II — Duplication ....................................... 3 Credits
Operation of the spirit, fluid, and offset duplicating machines with black and colored printing. A study of other methods of duplication and business machines. (Prerequisite: SSC 1020 or equivalent.)

BUS 2510 — Legal Environment for Business.............................................. 3 Credits
Emphasis is placed on classification of laws, historical background of our systems of laws, duties, buying services, insurance, consumer protection, negotiable instruments, and business organization. The student will gain experience in recognizing and isolating issues of legal importance of precise language in business and legal transactions.

BUS 2520 — Business Law ......................................................................... 3 Credits
Designed to acquaint the student with the privileges and responsibilities of the individual under business law. Topics studied will include the uniform commercial code, contracts, sales, agency, partnerships, corporations, and negotiable instruments.

BUS 2710 — Intermediate Accounting I ......................................................... 3 Credits
Extensive analysis of the principal elements of accounting systems and statements. (Prerequisite: BUS 2210, 20, 30.)

BUS 2720 — Intermediate Accounting II ..................................................... 3 Credits
An intensive study of the balance sheet including valuation of assets, disclosure of liabilities, proper account classification, balance sheet and related income and expense items; and preparation of financial statements including tax regulations, management needs, and credit purposes. (Prerequisite: BUS 2710).

BUS 2730 — Intermediate Accounting III ..................................................... 3 Credits
Continuation of BUS 2720. (Prerequisite: BUS 2720.)

BUS 2810 — Salesmanship ........................................................................... 3 Credits
A specific course emphasizing the relationship of product and market, industrial and consumer retailing, methods of market analysis, salesmanship and sales methods.

BUS 2820 — Retailing .................................................................................. 3 Credits
A study of the principles and practices of retailing including planning, policies, and procedures of distribution.

BUS 2830 — Marketing .................................................................................. 3 Credits
A general but critical survey of the field of marketing, covering international industries and commerce distribution of resources, factors of distribution and transportation.

BUS 2910 — Management and Supervision I .................................................. 3 Credits

BUS 2920 — Management and Supervision II ................................................. 3 Credits
BUS 2930 — Management and Supervision III .............................................. 3 Credits
A three course sequence designed to introduce the basic aspects of supervisory development, to include the functions of management, communications skills, interpersonal relations, motivation, morale, discipline, leadership, training and evaluation, decision making and self-development.

BUS 2940 — Management Seminar ................................................................. 3 Credits
Consideration of current problems, issues, and developments in the area of management. Students are guided through individual projects and outside research related to their area of concentration and employment training.

BUS 2950 — Labor Relations ........................................................................... 3 Credits
A broad overview of the general nature of the labor-management relationship as it exists. Specific areas studied include: historical, legal and structural environments which influence contractual content and labor relations; and the examination of the negotiation, administration, and content of the labor contract.

CHEMISTRY
To receive credit for a Chemistry course, the lecture section must be accompanied by a laboratory session during the same quarter.

CHE 1010 — General Chemistry I ................................................................... 4 Credits
A sequence study of fundamental concepts of atoms, molecules, periodic relation of properties of the elements, gas laws, type and laws of chemical reaction, equations, and the preparation and properties of selected elements and compounds. (Prerequisite: 2 years of high school algebra or one college level math course.)

3 hours lecture — 3 hours laboratory

CHE 2210 — Quantitative Analysis .................................................................. 4 Credits
The study of the basic theories of quantitative analysis with stress on the theories of neutralization, precipitation, volumetric, and gravimetric analysis. (Prerequisite: CHE 1030.)

3 hours lecture — 3 hours laboratory

CHE 2310 — Organic Chemistry I ................................................................... 4 Credits
CHE 2320 — Organic Chemistry II ................................................................ 4 Credits
CHE 2330 — Organic Chemistry III ................................................................ 4 Credits
An introductory sequence course in organic chemistry which considers the occurrences, structure, nomenclature, properties, and uses of the more important classes of organic compounds. Concepts such as mechanisms of reactions and the relationships between structure and properties are developed. (Prerequisite: CHE 1030.)

3 hours lecture — 3 hours laboratory

CHEMICAL TECHNOLOGY

CHT 2010 — Unit Operations I................................................................. 3 Credits
Presentation of and experiments in the basic ideas of Chemical Engineering. Intended to familiarize the student with chemical process equipment and its uses and applications.

6 hours lecture — laboratory
CHT 2020 — Unit Operations II ........................................................................ 3 Credits
6 hours lecture — laboratory

CHT 2030 — Unit Operations III .................................................................... 3 Credits
Continuation of Unit Operations II. Combined Heat and Mass Transfer Operations.
6 hours lecture — laboratory

CHT 2110 — Matter and Energy Balances ...................................................... 2 Credits
Problem solving course in the application and utilization of the basic laws of conservation of matter and energy as they are used in chemical engineering.
2 hours lecture — laboratory

CHT 2210 — Quantitative Analysis I .............................................................. 4 Credits
The study of the basic theories of quantitative analysis with stress on the theories of neutralization, precipitation, volumetric, and gravimetric analysis. (Prerequisite: CHE 1030.)
4 hours lecture — laboratory

CHT 2220 — Quantitative Analysis II .............................................................. 2 Credits
A continuation of Quantitative Analysis I with emphasis on instrumental methods of analysis.
2 hours lecture — laboratory

CHT 2410 — Heat, Mass, and Momentum Transfer ....................................... 2 Credits
Each student will select a problem in heat mass and/or momentum transfer, determine a solution and present a written and oral report to the instructor.

CIVIL ENGINEERING TECHNOLOGY

CET 2010 — Construction Planning .............................................................. 3 Credits
Introduction to the equipment used in civil engineering construction and the principles of construction planning.

CET 2050 — Civil Drafting I .......................................................................... 3 Credits
Course will introduce the student to drafting practices pertinent to the field of Civil Engineering. Work will include topographic drawings, land layout, utility plans and profiles. (Prerequisite: ERG 1020.)
1 hour lecture — 5 hours laboratory

CET 2060 — Civil Drafting II ......................................................................... 3 Credits
Course will continue topic covered in Civil Drafting I with additional emphasis on structural design drawing in steel, wood, and concrete. Shop drawings as required in steel and reinforced concrete will be covered. (Prerequisite: CET 2050.)
1 hour lecture — 6 hours laboratory

CET 2110 — Surveying I ................................................................................ 4 Credits
Introduction to surveying, chaining and pacing, direct and profile leveling, measurements of angles, transit-tape-traversing, traverse analysis, calculation of areas, adjustment of instruments. (Prerequisite: MAT 1050 or MAT 1010 or 1020.)
3 hours lecture — 3 hours laboratory

CET 2120 — Surveying II ............................................................................... 4 Credits
Basic complex circular curves, stadia surveying, topographic surveying analysis and preparation of topographic maps. Field work parallels classroom instruction. (Prerequisite: CET 2110.)
3 hours lecture — 3 hours laboratory
CET 2210 — Soil Mechanics ................................................................. 3 Credits
Physical properties of soils as applied to civil engineering; index properties, permeability, moisture-density, consolidation and shear strength. (Prerequisite: ERG 2210.)

CET 2220 — Hydraulics ................................................................. 3 Credits
Principles of fluid flow and development of practical hydraulics resulting from study of fluid statics, flow of real fluid in pipes, multiple pipe lines, liquid flow in open channels, and fluid measurement techniques. (Prerequisite: ERG 1050 or ERG 1110.)

CET 2250 — Structural Analysis ..................................................... 3 Credits
Analysis of statically determinate structures; shear and moment diagrams; influence lines; introduction to matrix algebra; introduction to statically indeterminate methods of analysis. (Prerequisite: ERG 1050 or ERG 1110) (Corequisite: ERG 2210.)

CET 2310 — Concrete Technology .................................................... 3 Credits
Introduction to the properties of portland cement concrete; methods of designing concrete mixtures and the mixing, testing, and quality control during construction.

CET 2410 — Traffic and Transportation Technology ............................ 3 Credits
Introduction to the techniques of traffic and transportation surveys. The application of survey data to the planning, design and operation of modern transportation systems. (Prerequisite: CET 2110.)

CET 2510 — Bituminous Technology .................................................. 3 Credits
Introduction to the properties of bituminous materials, primarily asphalt cement used in highway construction; testing of asphalt materials and the quality control of asphalt concrete mixtures.

CET 2610 — Reinforced Concrete Design .......................................... 3 Credits
Design, investigation and detailing of reinforced concrete structural members. (Prerequisite: CET 2250.)

CET 2620 — Advanced Reinforced Concrete Design ............................... 3 Credits
Continuation of CET 2610. (Prerequisite: CET 2610.)

CET 2710 — Structural Steel Design .................................................. 3 Credits
Design, investigation and detailing of basic steel members. (Prerequisite: CET 2250.)

CET 2720 — Advanced Structural Steel Design ..................................... 3 Credits
Continuation of CET 2710. (Prerequisite: CET 2710.)

CET 2810 — Route Surveying and Highway Design ............................... 3 Credits
Principles of route surveying; simple, compound and transition curves; grades and vertical curves; earthwork and haul quantities. (Prerequisite: CET 2120.)

COMPUTER SCIENCE TECHNOLOGY

CST 1010 — Introduction to Data Processing .................................... 3 Credits
An orientation to the field of electronic data processing. The history of data processing — familiarization with the broad concepts and applications related to business and industry. Unit record and digital computer concepts and techniques, including number systems, and data flow patterns.

CST 1020 — Introduction to Programming ...................................... 3 Credits
A basic course in programming techniques. Introducing the student to BASIC FORTRAN AND COBOL. Utilizing lab work to gain experience in programming applications. (Corequisite: CST 1010 or consent of instructor.)

CST 1210 — Assembler Language Programming ................................. 3 Credits
A basic course in programming techniques. Introduction to assembler involving lab work in the programming of business applications. (Prerequisite: CST 1010.)
CST 2210 — FORTRAN Programming .......................................................... 3 Credits
A basic course in scientific oriented FORTRAN (formula translation) programming language. (Prerequisite: CST 1020 or consent of instructor.)

CST 2220 — COBOL Programming I .......................................................... 3 Credits
A study of commercial oriented language (COBOL) to enable the student to gain programming proficiency through lectures and labs with “hands on” computer experience. (Prerequisite: CST 1020 or consent of instructor.)

CST 2230 — COBOL Programming II .......................................................... 3 Credits
A course for developing programming skills. This course will include the program development, coding, and testing of sophisticated programs, macro writing, utility modification, etc. (Prerequisite: CST 2220.)

CST 2310 — Introduction to Systems Analysis .............................................. 3 Credits
This course is designed to teach the basic fundamentals of systems analysis with emphasis on systems study and design, flow charting, file descriptions, procedure analysis, and documentation. (Prerequisite: CST 1020.)

CST 2410 — Systems Analysis I ................................................................. 3 Credits
This course is designed to teach the fundamentals of management by system. The life cycle of a management system is presented in terms of (1) study and design; (2) implementation; and (3) operation, evaluation, and modification. Major emphasis is in the area of analysis and design. (Prerequisite: CST 2310.)

CST 2420 — System Analysis II ................................................................. 3 Credits
This course involves the application of computer analysis and application principles. The student will design a system for an actual industry case, undergo faculty systems evaluation, and make a case study presentation. (Prerequisite: CST 2410.)

CST 2510 — Advanced Computing and Programming Systems .................... 3 Credits
This course involves writing and testing of all programs and documentation necessary to implement the systems developed in CST 2420. (Prerequisite: CST 2420.)

CST 2610 — Management Information Systems ......................................... 3 Credits
This course is designed to provide the student with the concepts, characteristics, and operation of management information systems. (Prerequisite: CST 2420.)

CST 2700 — Management of EDP Function .............................................. 3 Credits
This course is designed to teach the concepts of managing the data processing function in an organization. The normal managerial functions are discussed as related to the data processing area. (Prerequisite: CST 2610 and PSY 2610.)

CST 2910 — Cooperative Seminar .......................................................... 4 Credits
This course offers a college programmed study, designed to give the student practical experience in the area of his major by placing him in a cooperative work study program with local organizations. This student is required to attend a one period seminar per week. (Summer Quarter Only.)

DEVELOPMENTAL STUDIES
Roane State Community College offers specialized programs to students in need of intensive preparation for college level academic work. Students are directed into this individualized work on the basis of an evaluation of high school work, placement test scores and recommendation of high school and college counselors.

The basic courses are numbered 0100 to 0990 and should not be taken for college transfer credit. Up to six hours of such credit may be used as elective credit toward the Associate Degree.

92
DVS 0510 — Basic Communications I ................................................................. 3 Credits
A course in elementary writing principles with emphasis on sentence and paragraph structure. The course is designed to prepare the student so that he may be successful in freshman English.

DVS 0520 — Basic Communications II ............................................................ 1-3 Credits

DVS 0530 — Basic Communications III ............................................................ 1-3 Credits
These courses are a continuation of Basic Communications I. The number of hours taken is determined by the degree of mastery achieved in Basic Communications I.

DVS 0610 — Basic Science I .............................................................................. 3 Credits
A course designed for the student who does not have background necessary for college level science courses.

DVS 0620 — Basic Science II ............................................................................ 1-3 Credits

DVS 0630 — Basic Science III ........................................................................... 1-3 Credits
These courses are a continuation of Basic Science I. The number of hours taken is determined by the degree of mastery achieved in Basic Science I.

DVS 0710 — Basic Mathematics I ..................................................................... 3 Credits
A course designed for the student who does not have background necessary for college level mathematics courses.

DVS 0720 — Basic Mathematics II .................................................................... 1-3 Credits

DVS 0730 — Basic Mathematics III ................................................................... 1-3 Credits
A continuation of Basic Mathematics I. The number of hours taken is determined by the degree of mastery achieved in Basic Mathematics I.

DIETETIC TECHNOLOGY

DFT 1010 — Fundamentals of Food Service ...................................................... 3 Credits
Overview of the food service industry, planned to acquaint the student with the organization, operation, and job potential of different types of food services. Field trips to a hospital, nursing home, restaurant, and industrial food service operation.

DFT 1020 — Food Principles ............................................................................. 3 Credits
This course is a study of the basic principles of food selection and preparation. Two lecture, two laboratory hours per week.

DFT 1030 — Advanced Menu Planning and Quality Food .................................. 3 Credits
Principles and practices of menu planning and good cookery as related to institutional and commercial food service operations are studied. Consideration is given to nutritional and psychological needs, type of operation, utilization of equipment, and costs.

DFT 1810 — Field Experience I ........................................................................ 3 Credits
One lecture hour per week is devoted to orientation to the health field, the various professions within it and their relationships. Laboratory work consists of approximately 60 hours of supervised observation and practical experience designed to increase student understanding of dietetics as related to hospital dietary department function.

DFT 1820 — Field Experience II ...................................................................... 2 Credits
This course provides approximately 60 hours of supervised observation and practical experience in a health care facility dietary department. It is planned to parallel content of major college courses and bridges the gap between theory and practice. Five laboratory hours per week.
DFT 2110 — Food Purchasing and Cost Control ........................................... 3 Credits
Fundamentals of sound purchasing methods based on the analysis of quality food, accepted food standards, availability of food, legal regulations, and recommended ordering techniques. Methods of controlling food costs in relation to budgeting and purchasing.

DFT 2210 — Principles of Nutrition .......................................................... 3 Credits
Nutritive value and functions of food in the body, including personal and family nutritive requirements.

DFT 2220 — Therapeutic Nutrition .......................................................... 3 Credits
This course is designed to relate the principles of nutrition to special and abnormal conditions. A study of dietary modification necessary as a result of medical or surgical problems is included. Routine hospital diets are studied and aid in planning modified diets is given.

DFT 2310 — Food Systems Administration .............................................. 3 Credits
Management aspects of food service systems: organization, personnel, food and financial.

DFT 2410 — Sanitation and Safety ........................................................... 3 Credits
Detailed study of the control of bacteria in the food service industry. Good practices in housekeeping, sanitary food handling, and personal cleanliness. Practical problems concerned with protection of health and with prevention of food spoilage and contamination. Importance of safety and accident prevention.

DFT 2810 — Field Experience III ............................................................ 2 Credits
This course provides approximately 60 hours of supervised observation and practical experience in a health care facility dietary department. It is planned to parallel content of major college courses and is a continuation of a series of supervised field experiences designed to develop practitioner competency. Five laboratory hours per week.

DFT 2820 — Field Experience IV ............................................................. 3 Credits
This course provides approximately 90 hours of supervised observation and practical experience in a health care facility dietary department. It is planned to parallel content of major college courses and is a continuation of a series of supervised field experiences designed to develop practitioner competency. Seven and one-half laboratory hours per week.

DFT 2830 — Field Experience V .............................................................. 7 Credits
The student participates in approximately 180 hours of supervised experience in actual working situations on varying shifts in affiliated health care food service. This experience is designed to provide practical application of principles learned. One hour per week is scheduled at the college as a seminar session. One lecture, fifteen laboratory hours per week.

ECONOMICS

ECO 2010 — Principles of Economics I .................................................... 3 Credits

ECO 2020 — Principles of Economics II .................................................. 3 Credits
A continuation of economic principles with the special emphasis on microeconomics. An introduction to individual demand. Production planning and the related effect upon market structures, resource allocation, and income distribution; e.g., wages, rent, interest and profits. (Prerequisite: ECO 2010.)
ECO 2030 — Principles of Economics III ....................................................... 3 Credits

EDUCATION

EDU 2010 — Introduction to Education ..................................................... 3 Credits
A short survey of the field of education in which the history of American education, present philosophies of education, major problems of education, present practices and the school as a social institution are considered.

EDU 2110 — Driver and Traffic Safety Education ......................................... 3 Credits
Critical analysis of traffic accidents and causation, attitude factors, essential knowledge of automobile operation and function, and traffic laws and regulations. Includes laboratory experiences to develop skills in driving and operating the automobile, as well as evaluating conditions for safety of the persons involved.

EDU 2310 — Audio-Visual Aids ................................................................. 3 Credits
This course is designed to develop skill in the use of the mimeograph, ditto, tape recorder, motion picture projector, slide projector, and other audio-visual equipment. Experience in the preparation of visual aids used in the public school system is given.

EDU 2610 — Public School Records .......................................................... 2 Credits
A study and use of forms and records used in school systems.

EDU 2710 — Reading in the Elementary Schools ......................................... 3 Credits
Designed to acquaint students with the objectives of a reading program. Attention given to reading readiness, diagnosis of reading problems and a brief survey of reading skills. (Prerequisite: PSY 2210.)

EDU 2730 — Diagnostic Teaching of Reading ............................................. 3 Credits
A course designed to acquaint the student with various modern approaches to reading in the classroom, emphasizing the construction of diagnostic tools and prescriptive materials. (Prerequisite: Education 2710, or teaching experience.)

EDU 2910 — Prospective Teacher Cooperative Practicum I ..................................... 3 Credits
EDU 2920 — Prospective Teacher Cooperative Practicum II ..................................... 3 Credits
This program is designed to provide the student and local school systems with a cooperative classroom experience. The college student will investigate the duties, responsibilities, and requirements of the teacher’s aid profession. Each assigned classroom teacher will be involved with the evaluation of the student, as well as the College Instructor and Administrator of the school.

ELECTRONICS TECHNOLOGY

EET 1010 — Electric Circuits I ..................................................................... 3 Credits
A study of the fundamental principles of circuit analysis, including Ohm’s law, Kirchoff’s law, Thevenin and Norton’s theorems, node and mesh equation analysis and power relations. The response of resistive, capacitive and inductive circuits to both AC and DC sources using phasor notation is also considered.

EET 1020 — Electric Circuits II ................................................................... 3 Credits
A continuation of EET 1010, Electric Circuits I.

EET 1015 — Electric Circuits Lab I .............................................................. 1 Credit
EET 1025 — Electric Circuits Lab II .............................................. 1 Credit
Laboratory verification of principles introduced in Electric Circuits I and II. 3 hours laboratory

EET 1110 — Electric Fundamentals I .............................................. 3 Credits
The first course in a two course sequence designed to familiarize the student with the fundamentals of electricity from basic concepts to semiconductors and vacuum tubes. This course is designed for the certificate program or electives for other than Electronics Technology students.

EET 1120 — Electric Fundamentals II .............................................. 3 Credits
The second course in a two-part sequence designed to familiarize the student with the fundamentals of electricity from basic concepts to semiconductors and vacuum tubes. This course is designed for the certificate program or electives for other than Electronics Technology students. (Prerequisite: EET 1110 or permission of the instructor.)

EET 1130 — Electronic Circuit Fundamentals ............................... 3 Credits
A course in the characteristics of electronic devices and electronic circuits to include vacuum tubes, semiconductors and their associated circuits and applications. This course is designed for the certificate program or electives for other than Electronics Technology students. (Prerequisite: EET 1110 or permission of the instructor.)

EET 1140 — Electronic Communications I ...................................... 5 Credits
EET 1150 — Electronic Communications II ..................................... 5 Credits
A two-course sequence designed to cover radio receiver and transmitter circuits and systems including AM, FM, SSB, TV, and other communications, circuits and systems. These courses are designed for the certificate program or electives for other than Electronics Technology students. (Prerequisite: EET 1130 or permission of the instructor.)

4 hours lecture — 2 hours laboratory

EET 1160 — Industrial Electronics Measurement and Control .......... 5 Credits
A study of devices, circuits and systems used in electronic measurement and controls in industry. This course is designed for the certificate program or electives for other than Electronics Technology students. (Prerequisite: EET 1130 or permission of the instructor.)

4 hours lecture — 2 hours laboratory

EET 1210 — Materials and Construction Practices .......................... 2 Credits
A laboratory course to familiarize the student with electronic hardware, hand tools and shop practices. Includes layout design of chassis and printed-circuit fabrication processes.

1 hour lecture — 3 hours laboratory

EET 1310 — Electronics I ............................................................... 3 Credits
A study of electronic device characteristics, basic circuits and biasing techniques. Solid state devices are emphasized.

EET 1320 — Electronics II ............................................................... 3 Credits
Small signal amplifiers, tuned amplifiers, class A, B, C power amplifiers and basic feedback circuits.

EET 1330 — Electronics III ............................................................. 3 Credits
A study of communication electronic circuits used in reception and transmission of modulated signals.

EET 1340 — FCC License Preparation ............................................ 3 Credits
Preparatory course for those desiring to obtain their first or second class radiotelephone operators license from the Federal Communications Commission.

EET 1315 — Electronics Lab I ......................................................... 1 Credit
EET 1325 — Electronics Lab II ....................................................... 1 Credit
EET 1335 — Electronics Lab III ............................................................... 1 Credit
Experimental verification of principles introduced in Electronics I, II, III.
3 hours laboratory

EET 1410 — Electronics Drafting I.................................................................. 2 Credits

EET 1420 — Electronics Drafting II............................................................... 2 Credits
Basic drafting practices, use of instruments, theory of projections, and freehand
sketching. Methods and principles of graphically presenting electronic informa-
tion. Covers the principles of circuit layout and introduces the student to elec-
tronic symbols employed in electronic circuit schematics.
1 hour lecture — 3 hours laboratory

EET 1610 — Electrical Systems Design .......................................................... 3 Credits
This course is a study of the design of electrical service systems for residential,
commercial and industrial applications. The student will learn to design elec-
trical systems in accordance with local and national electrical codes. Topics
included will be an introduction to electrical codes, types of conductors and
cables, safety grounding, overcurrent protection, branch circuits, estimate of
loads, and equipment selection. The student will be given practical problems in
the layout and design of electrical service systems for residential, commercial
and industrial locations. (Prerequisite: EET 1020.)

EET 1620 — Electrical System Design II.......................................................... 3 Credits
A continuation of Electrical Systems Design I with emphasis on advanced design
problems.

EET 1630 — Elements of Electrical Generation, Transmission and
Distribution .......................................................................................... 3 Credits
A study of the components of electrical power generation, transmission and
generation. Including transmission law theory and load flow studies.

EET 1635 — Elements of Electrical Generation, Transmission and
Distribution Laboratory ........................................................................ 1 Credit
Experimental verification of principles introduced in EET 1630.
3 hours laboratory

EET 1640 — Electrical Wiring ........................................................................ 4 Credits
Basic principles and practice of modern electrical wiring for residential, com-
mercial and farm installations. Including installation of service entrance and
ground, wiring of specific outlets and common switch legs, wiring of heavy
appliances, modernization of installation, grounding theory and practice. Re-
quirements of National Electrical Code are emphasized through course.
3 hours lecture — 3 hours laboratory

EET 2210 — Electronics Project ........................................................................ 1 Credit
The student selects an electronics project: designs, fabricates and tests the fin-
ished project. (Prerequisite: EET 1210.)
3 hours laboratory

EET 2250 — Special Topics in Electronics ....................................................... 3 Credits
Subject areas in electronics selected by instructor, consistent with present needs
of industry.

EET 2260 — Electronic Troubleshooting ......................................................... 4 Credits
A study in the techniques of locating malfunctions in television and other
electronic systems in a logical manner.
3 hours lecture — 3 hours laboratory

EET 2310 — Digital Electronics I ................................................................. 3 Credits
A study of circuits used in pulse generation, shaping and switching, including
couplers, inverters, basic logic circuits and multivibrators.

EET 2320 — Digital Electronics II ................................................................. 3 Credits
A study of binary number system, switching algebra and fundamental computer
circuits.
EET 2315 — Digital Electronics I Laboratory .......................................................... 1 Credit
EET 2325 — Digital Electronics II Laboratory .......................................................... 1 Credit
Experimental verification of principles introduced in Digital Electronics I, II.
3 hours laboratory

EET 2510 — Industrial Electronics and Control I .................................................. 3 Credits
A study of commonly used circuits for industrial applications including phase
shifting networks, time delay circuit, digital and analog control circuitry, digital
sequence controls with emphasis on relay circuitry. Power control circuits using
SCRs, triacs and their triggering circuitry is also covered.

EET 2520 — Industrial Electronics and Control II .................................................. 3 Credits
A continuation of Industrial Electronics I.

EET 2515 — Industrial Electronics and Control I Laboratory .................................. 1 Credit
EET 2525 — Industrial Electronics and Control II Laboratory .................................. 1 Credit
Experimental verification of principles introduced in Industrial Electronics.
3 hours laboratory

EET 2530 — AC/DC Machines .................................................................................. 4 Credits
A study in the application of electric motors and the proper maintenance of such
machines. Control of machines using relays and static logic is also considered.
3 hours lecture — 3 hours laboratory

EET 2540 — Commercial Electronic System .......................................................... 3 Credits
An examination of the widely employed electronic systems in a commercial
environment. Including emergency power systems, security systems and fire and
smoke detection systems.

EET 2560 — Electrical Estimation and Pricing ...................................................... 3 Credits
A study of the estimation procedures for determining the cost of a wide variety
of electrical installations in residential, commercial and industrial facilities.

ENGINEERING

ERG 1010 — Engineering Graphics I ........................................................................ 3 Credits
Basic drafting practices, the use of instruments, theory of projections, free hand
sketches, the graphic language, and representation of the shape and size of three
dimensional objects.
1 hour lecture — 4 hours laboratory

ERG 1020 — Engineering Graphics II ...................................................................... 3 Credits
Continuation of Graphics I with experience in working drawings and design
drawings, machine, sheet metal, and electrical drawing and space relations of
points, lines and plane intersections. (Prerequisite: ERG 1010 or consent of
Instructor.)
1 hour lecture — 4 hours laboratory

ERG 1050 — Elementary Mechanics ..................................................................... 3 Credits
Statics of particles and rigid bodies resultants of force systems, vector algebra,
equilibrium, friction, centers of gravity, centroids, and moments of inertia. (To
be taken by special certificate students only.) (Prerequisite: MAT 1050 or MAT
1010 and MAT 1020.)

ERG 1100 — Introduction to Engineering .............................................................. 3 Credits
Introduction to engineering problem solving and computations. Data presenta-
tion; error analysis; empirical methods; use of slide rule and elementary com-
puter programming.

ERG 1110 — Engineering Mechanics I ................................................................. 3 Credits
Statics of particles and rigid bodies resultants of force systems, static equilibri-
um, friction, and moments. (Prerequisite: MAT 2610 and PHY 2010.)
ERG 1120 — Engineering Mechanics II .......................................................... 3 Credits
Dynamics of particles and rigid bodies, kinematics, kinetics, Newton's laws, and impulse-momentum. (Prerequisite: ERG 1110.)

ERG 2110 — Thermodynamics ...................................................................... 3 Credits
Work and kinetic energy; temperature; heat; first law of thermodynamics. (Prerequisite: MAT 2610.)

ERG 2210 — Strength of Materials ............................................................... 3 Credits
Stress; strain; Hook's Law; extension, torsion, and bending of bars; plastic action. (Prerequisite: ERG 1050 or ERG 1110.)

ENGLISH

ENG 1010 — Composition I .............................................................................. 3 Credits
Composition: establishing purpose, organization, paragraph structure, style, grammar and mechanics; reading: for meaning and ways of expressing meaning.

ENG 1020 — Composition II ............................................................................ 3 Credits
Composition: patterns and techniques of development, documentation (preparation of a documented paper); reading: essays and short fiction. (Prerequisite: ENG 1010.)

ENG 1030 — Composition III ........................................................................... 3 Credits
Composition: writing based on fiction, drama, and poetry; reading: fiction, drama, and poetry. (Prerequisite: ENG 1020.)

NOTE: Composition I, II, and III are prerequisite to Sophomore English. Sophomore English requirements may be met with any three of the five courses offered — World Literature I, II, III, American Literature, or Ethnic Literature.

ENG 2110 — World Literature I ....................................................................... 3 Credits
Greek and Roman mythology, drama, epic, history, and philosophy; The Bible; Germanic myth and saga; Beowulf; Dante; Medieval romance; Chaucer; Cervantes.

ENG 2120 — World Literature II ...................................................................... 3 Credits

ENG 2130 — World Literature III ................................................................... 3 Credits
Realism in fiction. Modern poetry and drama.

ENG 2140 — American Literature ................................................................. 3 Credits
Colonial through Modern.

ENG 2150 — Ethnic Literature ........................................................................ 3 Credits
Survey of literature of American minority groups: Negro, Indian, Jewish, Oriental, Hispanic.

ENG 2310 — Children's Literature .................................................................. 3 Credits
Characteristics and methods of teaching children's literature.

ENG 2320 — Modern Grammar for Teachers .................................................. 3 Credits
A practical study of modern grammar, comparing traditional, structural, and transformational grammar. Stresses approaches to teaching grammar and dealing with social and regional dialects. May be taught in workshops for teachers.

ENG 2810 — Creative Writing ......................................................................... 3 Credits
Theory and practice of the creation of fiction, drama, and poetry by the analysis of models and student manuscripts. (Permission of the instructor is required.)
ENG 2820 — Technical Writing ................................................................. 3 Credits
An intensive study in the principles of exposition and practice in writing letters, technical reports, outlines, abstracts, and a research paper related to the student's field of specialization.

FIRE SCIENCE TECHNOLOGY

FST 1010 — Introduction to Fire Science ....................................................... 3 Credits
A course to acquaint the students with the broad field of Fire Science. Emphasis on some of the problems of the Fire Service with potential or possible solutions.

FST 1020 — Municipal Fire Protection ........................................................... 3 Credits
A study of the typical municipal fire department in Tennessee. The course stresses organization, modern procedures, and urban characteristics.

FST 1030 — Industrial Hazards ....................................................................... 3 Credits
A course emphasizing the causes of fires in various types of industries. Explores new techniques and chemicals used in industrial fires.

FST 1110 — Construction Codes and Fire Protection Standards .................... 3 Credits
A study of fire codes and standards. The course includes a study of modern protection equipment and building construction materials.

FST 1120 — Environmental Technology .......................................................... 3 Credits
See course description for Natural Science (NSC) 1120.

FST 2010 — Fire Fighting Strategy ..................................................................... 3 Credits
A course illustrating the physical and chemical aspects of fire suppression technology. The student will pursue a detailed study of the chemistry of fire, along with modern methods of fire suppression, tactical decisions and post fire analysis.

FST 2020 — Blue Print Reading ........................................................................ 3 Credits
An interpretation of building plans and blueprints. Instructional material includes special problems.

FST 2110 — Inspection Principles and Practices .............................................. 4 Credits
The course includes the development and philosophy of fire inspection. Emphasis is on inspection techniques, arson investigation, and the development of technical inspection reports.

2 hours laboratory

FST 2120 — Principles of Hydraulics ................................................................. 3 Credits
Surveys the basic laws of hydraulics. Includes a study of the fundamentals of pressures and measurements. Reviews related math and pertinent theorems and formulas.

FST 2210 — Flammable Materials ................................................................. 3 Credits
Study of chemical characteristics and reactions related to storage, transportation, handling hazardous materials, i.e., flammable liquids, combustible solids, oxidizing and corrosive materials and radioactive compounds. Emphasis on emergency situations and fire fighting and control.

FST 2220 — Water Distribution ....................................................................... 3 Credits
A study in applying the principles of hydraulics to fire fighting problems. Attention is also given to water supply problems.

FST 2230 — Water Suppression Systems ....................................................... 3 Credits
Study of the required standard for water supply; special hazards protection systems; automatic sprinklers and special extinguishing systems; automatic signaling and detection systems; rating organizations and underwriting agencies.
FST 2510 — Fire Protection Equipment and Systems ................................... 3 Credits
A study of the operation and maintenance of fire apparatus and pumps. Attention is focused on the required standards for water supply as it is related to automatic sprinklers and special extinguishing systems. Includes an analysis of various automatic signaling and detection systems.

FST 2610 — Fire Department Administration ................................................ 3 Credits
A detailed study of the Fire Department Organization. Includes fire company organization; the company officer (duties, responsibilities, leadership, supervision); company personnel administration; company communications; company maintenance and training; records and reports; and problem solving.

FST 2620 — Seminar ......................................................................................... 3 Credits
A course designed to consolidate the various learning experiences in fire fighting. Emphasis is placed on special problems.

FST 2700 — Practicum ...................................................................................... 2 Credits
Practical experience is provided for each student through cooperative agreements with local fire stations. Emphasis is placed on the day-to-day activities of firemen.

FRENCH

FRE 1010 — Beginning French I ...................................................................... 3 Credits
FRE 1020 — Beginning French II ................................................................ 3 Credits
FRE 1030 — Beginning French III ................................................................ 3 Credits
Elementary grammar, pronunciation, conversation and simple readings. (Laboratory required.)

FRE 2010 — Intermediate French I ................................................................ 3 Credits
FRE 2020 — Intermediate French II ................................................................ 3 Credits
FRE 2030 — Intermediate French III ................................................................ 3 Credits
Reading intermediate texts, grammar review, and oral practice. (Prerequisite: Beginning French III or equivalent.) (Laboratory required.)

GEOGRAPHY

GGY 1010 — Physical Geography I ................................................................. 3 Credits
(Amospheric Environment)
A study of the processes and principles which govern atmospheric activity and world climatic patterns. Subjects of interest include storms (tornadoes, hurricanes, thunderstorms), air pollution, weather modification, and climatic change.

GGY 1020 — Physical Geography II ............................................................... 3 Credits
(Earth Physical Systems)
An investigation of the natural environment as a system comprised of landforms, soils, vegetation, and animals, each conditioned by climate. Topics of interest include volcanoes and earthquakes, stream erosion and mountain building, continental drifting and animal distributions, and soil formation and vegetation development. (No prerequisites)

GGY 1030 — Introduction to Human Geography ............................................... 3 Credits
An introduction to the basic concepts in human geography, including population, political, cultural, urban, and economic geography. Attention is given to analysis of current world problems and issues.

GGY 2110 — World Regional Geography I ....................................................... 3 Credits
A geographic survey of North America, with particular emphasis upon current regional problems.
GGY 2120 — World Regional Geography II ......................................................... 3 Credits
A geographic survey of South America and Europe which seeks to broaden perspectives regarding the world and its peoples.

GGY 2130 — World Regional Geography III .................................................. 3 Credits
A geographic survey of the Middle East, Africa, Asia, and Australia which seeks to broaden perspectives regarding the world and its peoples.

GGY 2210 — Introduction to Economic Geography ....................................... 3 Credits
A survey of agricultural, mining, manufacturing, transportation and service activities as they effect man's economic life.

GERMAN

GRN 1010 — Beginning German I ................................................................. 3 Credits
GRN 1020 — Beginning German II ................................................................. 3 Credits
GRN 1030 — Beginning German III ................................................................. 3 Credits
Fundamentals of German with emphasis on elementary grammar, pronunciation and simple readings. (Laboratory required.)

GRN 2010 — Intermediate German I ............................................................... 3 Credits
GRN 2020 — Intermediate German II ............................................................. 3 Credits
GRN 2030 — Intermediate German III ............................................................ 3 Credits
Reading intermediate texts, grammar review, and oral practice. (Prerequisite: GRN 1030 or equivalent.) (Laboratory required.)

HEALTH

HEA 2210 — Personal Health ........................................................................... 3 Credits
A consideration of principles from the natural, biological, social, and behavioral sciences as they may be applied to healthful living. Emphasis on knowledge, attitudes, and practices related to self-direction of health behavior.

HEA 2310 — Safety and First Aid .................................................................... 3 Credits
The development of a safety attitude and understanding of individual responsibility in personal and community programs for accident prevention and control and acquiring knowledge and skills for the emergency care of individuals are primary course objectives. Upon satisfactory completion of the course, students will receive the American Red Cross Standard First Aid Certificate.

HISTORY

HIS 1010 — Survey of Western Civilization I ............................................... 3 Credits
Analysis of western civilization from classical antiquity to the Reformation with emphasis on the political, social, economic, and religious themes on which western culture is based.

HIS 1020 — Survey of Western Civilization II ............................................ 3 Credits
Western civilization from the mid 16th century, beginning with the Wars of Religion, to 1860.

HIS 1030 — Survey of Western Civilization III ............................................ 3 Credits
Western civilization from 1860 to the present.

HIS 2110 — Survey of American History I ................................................. 3 Credits
European background: Settlement of American colonies, severance of European ties, national development and expansion.

HIS 2120 — Survey of American History II .................................................. 3 Credits
Rise of democracy and humanitarianism; sectional controversies; Civil War and reconstruction; rise of big business; postwar social, economic and political changes.
HIS 2130 — Survey of American History III ................................................. 3 Credits
Emergence as a world power; Populism and Progressivism; World War I; the search for normalcy; the great depression and the New Deal; World War II and its aftermath; the 1970’s and future prospects.

HOTEL-MOTEL-RESTAURANT MANAGEMENT
HMT 1000 — Introduction to Hotel-Motel-Restaurant Management .............. 3 Credits
The hospitality field, its history, famous people, economic and social importance, and operations are the major areas of emphasis in this course.

HMT 1010 — Hotel-Motel-Front Office Procedure ...................................... 3 Credits
This course provides an analysis of various jobs within hotel-motel front office, and procedures involved in registering, accounting for, and checking out guests. Front office promotional and sales practices are also investigated.

HMT 1110 — Hotel-Motel-Restaurant Seminar I ....................................... 3 Credits
Study of parliamentary procedure, business etiquette and club activity.

HMT 1120 — Hotel-Motel-Restaurant Seminar II ...................................... 3 Credits
A continuation of HMT 1110 with an emphasis on housekeeping problems.

HMT 1130 — Hotel-Motel-Restaurant Seminar III ..................................... 3 Credits
A continuation of HMT 1110-20 with an emphasis on electrical requirements and equipment.

HMT 2010 — Hotel-Motel-Restaurant Practicum ......................................... 3 Credits
Required “on-the-job” work experience supplied by the hotel-motel-restaurant industries. Department arranges two hundred hours in a selected job learning program with the employer and makes regular appraisals of learning progress.

HMT 2110 — Food Distribution ...................................................................... 3 Credits
A study of the history of the food distribution industry in our free enterprise system. To study the agricultural revolution of food processing; canning meats, frozen foods, dairy, grain, beverage, sugar refining, etc., to study methods of transportation and types of modern food distribution systems.

HMT 2120 — Quality Food Preparation ...................................................... 3 Credits
The emphasis is placed on quantity cookery by department and station. Detailed studies in raw materials, recipes, menu planning, and the use of equipment.

HMT 2210 — Hotel-Motel-Restaurant Accounting ....................................... 3 Credits
This is a study of accounting applications to various service institutions. Emphasis is placed on operating cost data, cost analyses and methods of reporting for managerial uses.

HUMANITIES
HUM 2800 — Humanities Seminar .............................................................. 3 Credits
This course is designed for those students who are interested in pursuing an in-depth study of some particular fine arts problem. (May be scheduled as ART 2800, ENG 2800, GRN 2800, FRE 2800, MUS 2800 and PHL 2800.)

JOURNALISM
JRN 1110 — Introduction to Mass Communications .................................... 3 Credits
Survey of contemporary mass media, historical development, theories and philosophies of the press, freedom of the press, effects mass media have on society.

JRN 2210 — Writing for Mass Media .......................................................... 3 Credits
A general course in writing for mass media with emphasis on news reporting. (Prerequisite: JRN 1110 and typing proficiency)
JRN 2220 — Reporting  ................................................................. 4 Credits
A course concerning methods of gathering facts and reporting; 3 hours class plus practical assignments. (Prerequisite: JRN 2210.)

JRN 2750 — Introduction to Broadcasting ..................................... 3 Credits
A broad, basic course covering organization, comparative systems, regulatory and technical aspects of broadcasting.

MATHEMATICS

MAT 1000 — Slide Rule ................................................................. 1 Credit
Operation and use of slide rule. Meets one hour per week.

MAT 1010 — Technical Math I ........................................................... 3 Credits
Beginning with basic arithmetic and continuing through basic algebra, emphasizing algebraic expressions and operations, fractions, linear and quadratic functions, and graphing of functions. Primarily for Technology students.

MAT 1020 — Technical Math II ....................................................... 3 Credits
A continuation of MAT 1010.

MAT 1050 — Algebra and Trigonometry I ........................................... 5 Credits
Algebraic expressions and operations, fractions, factoring, graphing of functions, linear and quadratic functions, basic trigonometric functions, exponential and logarithmic functions, vectors and complex numbers. (Prerequisite: 1 year of high school algebra and geometry or consent of instructor.)

MAT 1110 — Introduction to Analysis I ............................................. 3 Credits
Sets, real numbers, equations, inequalities, relations, functions, graphs. (Prerequisite: 2 years high school algebra or 1 year high school algebra and 1 year high school geometry.) (Must be taken in sequence.)

MAT 1120 — Introduction to Analysis II ............................................. 3 Credits
Average rates, differentiation, integration, polynomial equations, systems of linear equations and inequalities.

MAT 1130 — Introduction to Analysis III .......................................... 3 Credits
Trigonometric functions, simple and compound interest, exponential and logarithmic functions, sequence, and series.

MAT 1210 — Trigonometry ............................................................... 3 Credits
Analysis of functions of angles with their relations, logarithms, and solution of right and general triangles. (Prerequisite: 2 years of high school algebra and the consent of instructor.)

MAT 1310 — Symbolic Logic ............................................................. 3 Credits
Logical symbolism, truth tables, propositional calculus, properties of formed systems. (Same as PHL 1310).

MAT 1500 — Pre-Calculus ............................................................... 5 Credits
A course for the above-average student which includes integrated topics of college Algebra and Trigonometry. Set language and logic is used when appropriate. It is designed primarily for students planning to enter the calculus.

MAT 2310 — Concepts of Mathematics I .......................................... 3 Credits
MAT 2320 — Concepts of Mathematics II ......................................... 3 Credits
MAT 2330 — Concepts of Mathematics III ....................................... 3 Credits
Logic and logical reasoning; sets; language and rules for operation; history of early number systems; development of the rational number system; number systems in bases other than ten; extending the number system to include complex numbers; mathematical applications involving operations with sets. (Required of elementary education majors. Must be taken in sequence.)

MAT 2510 — Elementary Statistics ................................................ 3 Credits
An introduction to elementary methods and techniques. Topics covered include sampling, frequency distributions, elementary probability, binomial distributions, normal distributions, null hypothesis, rank correlation, significance of
A statistical project of an elementary nature including collecting, presenting and interpreting data is required. (Prerequisite: A college level algebra course or consent of the instructor.)

MAT 2610 — Calculus and Analytic Geometry I ..................................................5 Credits
Rate of change, limits, continuity, derivatives, maxima and minima introduction to integration. (Prerequisite: high school algebra, trigonometry and consent of instructor.)

MAT 2620 — Calculus and Analytic Geometry II ............................................5 Credits
Application of the definite integral, transcendental functions, integration, determinants and linear equations. (Prerequisite: MAT 2610.)

MAT 2630 — Calculus and Analytic Geometry III ...........................................5 Credits
Plane Analytic Geometry, hyperbolic functions, polar coordinates, vectors and parametric equations. (Prerequisite: MAT 2620.)

MAT 2640 — Calculus and Analytic Geometry IV ..........................................5 Credits
Solid Geometry and vectors, partial differentiation, multiple integrals and infinite series. (Prerequisite: MAT 2630.)

MAT 2650 — Linear Algebra ..............................................................................3 Credits
Systems of linear equations, vector space and dimensions, matrix multiplication, dot product, inner product, cross product, introduction to the theory of a simple linear operator. (Prerequisite: MAT 2610-20.)

MAT 2710 — Differential Equations ...................................................................5 Credits
A study of the solution of ordinary differential equations, first order equations, linear equations of any order, series solutions and applications. (Prerequisite: MAT 2620.)

MECHANICAL TECHNOLOGY

MET 1010 — Manufacturing Processes I ............................................................3 Credits
This course is designed to provide a background of knowledge covering the various manufacturing materials and the fundamental types of manufacturing methods as employed in cold working processes. Through lecture, demonstration, and practical applications the student is given the opportunity to become familiar with the various types of machine tools, tooling, measuring, and inspection procedures. Automation is introduced and information is presented to acquaint the student with the modern practices of numerical control for machine tools and the uses of transfer and special machines.

2 hours lecture — 3 hours laboratory

MET 1020 — Manufacturing Processes II ............................................................3 Credits
This course is designed to provide a background of knowledge covering the various manufacturing materials and the fundamental types of manufacturing methods as employed in hot working processes. Through lecture, demonstration, and discussion the student becomes familiar with the various types of welding processes and their applications, with special machining operations such as ultrasonic, electrical discharge, electroarc, and chemical milling, and with bonding practices and the use of adhesives in modern manufacturing. Some emphasis is also given to metallurgical practices and procedures. Practical experience is gained by the student in performing simple arc and oxyacetylene welding operations, in producing simple molds, cores, and castings, and in basic heat treating, inspection, and testing, using both destructive and non-destructive methods.

2 hours lecture — 3 hours laboratory

MET 1110 — Materials of Industry .....................................................................3 Credits
Modern industry utilizes a variety of engineering materials with which the student in mechanical technology must be familiar. A study is made of the five general classifications of materials and their application to industrial uses. Spe-
cial emphasis is given to new materials which have been developed through technological advances.

**MET 1210 — Industrial Organizations and Institutions** .............................. 3 Credits
A description and analysis of roles of labor and management in the economy. Approximately one-half of the classroom time is devoted to labor-management relations, including the evolution and growth of the American labor movement and the development and structure of American business management. A study is made of the legal framework within which labor-management relations are conducted and the responsibilities of each in a democratic system of government. The second half of the course pertains to labor economics as applied to the forces affecting labor supply and demand, problems of unemployment reduction and control, and wage determination on the national, plant, and individual levels. Emphasis centers upon current practical aspects of our industrial society with historical references intended only as background material to interpret trends and serve as points of departure.

**MET 1310 — Hydraulics and Pneumatics** .................................................. 3 Credits
A study of the basic components of hydraulic and pneumatic systems and how they are combined to build up various circuits. The emphasis is on the use of hydraulics and pneumatics for power transmission and for control purposes. Both areas are treated as basic sciences with emphasis on mathematical analysis and the scientific method. It is recommended that individual term problems requiring a significant amount of handbook design be required for this course.

2 hours lecture — 3 hours laboratory

**MET 2010 — Piping Drafting** ................................................................. 3 Credits
Fundamental principles of designing pipe systems, including development of diagrams, arrangements and schemes with information concerning standards and specifications of the components in typical systems.

1 hour lecture — 6 hours laboratory

**MET 2110 — Machine Design** ................................................................. 3 Credits
A course in which the design principles of manufacturing elements are taken up and calculations are made in determining the size and shape of various machine parts. It includes factors which influence the selection of materials to be used in designing such elements as beams, bearings, clutches, brakes, shafts, bushings, screens, rivets, gears, belts, and fly wheels. Attention is given to various types of loading conditions, stresses, deformations, fits, finishes, and other factors which must be considered in the design of machine elements.

**MET 2210 — Basic Tool Design** ............................................................... 4 Credits
Lectures, classroom discussion, and actual drawing practice are combined to help the student gain knowledge and experience necessary to design tools commonly used in modern manufacturing. The work consists of designing and laying out cutting tools, gauges, simple jigs, fixtures, and dies. Mass production methods are discussed so that the student may apply the information gained in the practical work of tool designing.

1 hour lecture — 6 hours laboratory

**MET 2310 — Design Problems** ............................................................... 4 Credits
Opportunities in advanced drafting room practices are offered in this course. The student applies his knowledge of mathematics, science, and drawing to practical problems while he is designing complete machines or component parts of machines. He analyzes the problem, gathers data, sketches ideas on paper, does all necessary mathematical calculations, makes working drawings, and finally checks his work. Throughout the course he is encouraged to use his judgment and work on his own initiative.

1 hour lecture — 9 hours laboratory

**MET 2410 — Methods and Operations Analysis** ...................................... 4 Credits
Understanding of the techniques used in determining the best way of doing a specific piece of work is developed through the systematic study of methods,
materials, tools, and equipment for the purpose of finding the most economical way of doing the work, standardizing the methods and procedures to be used, and determining the time required by an average worker to perform the various tasks. Laboratory activities include the analysis of the fundamental physical motions, the construction of various charts, the practice of dividing operations into elementary and time study observations. Additional experience is gained in recognizing and giving value to foreign elements, allowances, and performance rating, and in calculating average cycle time, minimum observations, and standard times.

3 hours lecture — 3 hours laboratory

MET 2510 — Statistics and Quality Control .................................................. 3 Credits
An elementary approach to the statistical techniques used in the control of the quality requirements of manufactured articles. The course is primarily intended for those who have had no previous experience. The entire course is woven around a core which consists of the application of formulas and control charts. The main objectives covered include sampling inspection techniques, use of inspection tools and instruments, construction and interpretation of control charts for variables, defects, and fraction defective. Concentrated effort is put on the relationship of theoretical concepts to practical manufacturing operations and processes so that assignable causes and weaknesses in a process can be readily isolated and recognized.

2 hours lecture — 3 hours laboratory

MET 2610 — Plant Layout and Materials Handling .............................................. 4 Credits
Emphasis is placed upon the relationship between good plant layout and efficient materials handling. Evaluation of the site and planning of the factory building are done with consideration of transportation, shipping and receiving, power, heat, light, and air conditioning. Selection and arrangement of production machinery, product and process layout schemes, techniques of making layouts, and balance and flexibility of operations are discussed. Study is also made of the basic packaging and materials protection methods along with consideration of the specific types of equipment used in the movement of incoming, in-process, storage, and waste materials.

3 hours lecture — 3 hours laboratory

MET 2710 — Process Planning ................................................................. 4 Credits
A comprehensive study of the fundamental principles, practices, and methods of process planning. The responsibilities and range of activities normally associated with process planning are surveyed; also the relationship of process planning to other manufacturing functions in the course is made meaningful by reference to concrete examples, interpretation of charts, operation analysis, and routing forms. Student participation is provided through selected case problems having single or multiple solutions. Additional classroom activities include the actual process planning of selected jobs in terms of description and sequence of operations, set-up time estimating, feed and speed calculations, process and machinery selection.

3 hours lecture — 3 hours laboratory

MET 2810 — Production Problems ................................................................. 4 Credits
A detailed study is made of various production activities and the problems associated with them. Problems and cases are solved through the use of available data in texts and engineering handbooks. Discussion of each topic begins with a consideration of the nature of the problem and continues with a presentation of the detailed approach to be employed in its solution. Some problems deal with the analysis of the elements of production scheduling. Others deal with methods of determining production costs in terms of labor, material, and burden. Balancing work stations on production lines by graphic, as well as mathematical means to achieve constant flow and calculating machine capacities to establish
completion dates, represent a major portion of the laboratory work.
1 hour lecture — 9 hours laboratory

MEDICAL RECORDS

MRT 1010 — Medical Records I ................................................................. 3 Credits
Introduction to the history of medicine, the hospital and medical records. Lecture and classroom laboratory experience which will enable the student to be familiar with the purposes, content, and uses of the medical record. Laboratory practice in the analysis and assembly of medical records. (Prerequisite: Permission from Program Director.) (Corequisite: MRT 1210.)

MRT 1020 — Medical Records II ............................................................... 3 Credits
Orientation to the methods of numbering, systems of filing, microfilming and the retention of medical records. Lecture and classroom laboratory practice in the methods of compiling hospital statistics, both manually and by computer. Laboratory practice in gathering statistics and working with formulas to compile actual reports and computer abstracting. (Prerequisite: MRT 1010.) (Corequisite: MRT 1220.)

MRT 1030 — Medical Records III ............................................................. 3 Credits
Introduction to the disease and operation classification and the indexes maintained in the medical record department. Instruction in SNDO as a nomenclature and laboratory practice in the coding and indexing by ICDA. Legal aspects of medical records are introduced. Special attention is given to consents, authorizations, release of information and handling medical records in court. (Prerequisite: MRT 1020.) (Corequisite: MRT 1230.)

MRT 1210 — Terminology I ................................................................. 3 Credits
Introduction to the principles of medical terminology and the use of word elements as building blocks for medical terminology. (Corequisite: MRT 1010.)

MRT 1220 — Terminology II ............................................................... 3 Credits
Further study of medical terminology with emphasis on terminology as it relates to the systems of the body. (Corequisite: MRT 1020.) (Prerequisite: MRT 1210.)

MRT 1230 — Medical Transcription ......................................................... 3 Credits
Additional study in medical terminology in conjunction with medical transcription. Lecture and actual practice in transcription will be co-ordinated. Practice transcription will include X-ray reports, medical history, physicals and summaries plus operative reports. Emphasis will also be given to the management of the steno pool, incentive pay plans, training methods, etc. (Corequisite: MRT 1030.) (Prerequisite: MRT 1220.)

MRT 2310 — Directed Practice I .............................................................. 3 Credits
Actual practice under the direction of a Medical Record Practitioner in a local hospital department. Orientation to the admitting office and medical record department. Practice in the admitting and discharge procedure plus filing methods. (Prerequisite: MRT 1030.) (Corequisite: MRT 2410.)

MRT 2320 — Directed Practice II ............................................................ 3 Credits
Hospital practice in coding and indexing and in statistical compilation and reports. Actual practice in the release of information. (Prerequisite: MRT 2310.) (Corequisite: MRT 2420.)

MRT 2330 — Directed Practice III .......................................................... 3 Credits
Hospital practice in medical transcription and other secretarial skills. Attendance at various medical meetings, minute taking and contact with the medical staff. (Prerequisite: MRT 2320.) (Corequisite: MRT 2430.)
MRT 2410 — Advanced Medical Records
Special attention is made to the requirements of accrediting agencies plus new trends in medical records. Emphasis is placed on new government laws and regulations. Special instruction in audit and Utilization Review. (Corequisite: MRT 2310.)

MRT 2420 — Office Supervision For The Medical Record Supervisor
Introduction to the field of organization and management plus personnel management. Instruction in office arrangement and design and equipment selection. Laboratory experience in organization charts, procedure manuals, budgets, and equipment purchasing. (Corequisite: MRT 2320.)

MRT 2430 — Medical Records Seminar
This quarter will be devoted to individual research projects to the group for evaluation. (Corequisite: 2330.)

MILITARY SCIENCE (ROTC)

MS 1110 — Fundamentals of Military Leadership and Management
A study of the development of American military institutions, policies, experiences and traditions in peace and war from colonial times to the present. Historical examples of effective and ineffective leadership and application of the principles of war. Practical exercises in leadership development.

MS 2110 — Applied Military Leadership and Management I
Concentrated study of leadership. Factors which affect human behavior. Leadership functions, principles, and traits. Development of leadership qualities through practical exercises. Military teaching principles and development of teaching skills. (Prerequisite: MS 1110.)

MS 2120 — Applied Military Leadership and Management II
The contemporary world scene and its impact on the military. Planning, preparation and presentation of briefings and continued development of leadership skills through practical exercise. Discussion of the ROTC Advanced Course. (Prerequisite: MS 2110.)

NOTE: Additional information concerning the Army Reserve Officer’s Training Corps (ROTC) program may be obtained from the guidance counselor or the ROTC instructor.

MUSIC

Theory and Literature

MUS 1010 — Music Appreciation
Open to all students who desire a better understanding of music. Through listening to recordings, the student will become familiar with several forms of music from the time of Bach to the present. An attempt will be made to aid the student in recognizing the various instruments both visually and aurally, and to recognize themes from various master works often performed in concerts and on recordings.

MUS 1020 — Fundamentals of Music
A beginning study of music, its terminology, and elements such as notes, scales, intervals, keys, triads, meter and smaller forms. Designed to acquaint the student with notation, the keyboard, sight singing, and ear training. Offered for non-music majors or for remedial study for music majors.

MUS 1110 — Beginning Theory I

MUS 1120 — Beginning Theory II
MUS 1130 — Beginning Theory III ................................................................. 4 Credits
Ear training, sight singing, dictation, rhythmic reading, harmonic analysis, written and keyboard harmony, two voice counterpoint, homophonic forms, standard vocabulary of chords and inversions. Must be taken in sequence.

3 hours lecture — 2 hours laboratory

MUS 2010 — Introduction to Music Literature I ............................................ 3 Credits
Meets three times per week. Listening periods assigned. A selection of representative work from antiquity through the Baroque, with reference to style, form, and aesthetics. (Prerequisite: MUS 1110, 20, 30)

MUS 2020 — Introduction to Music Literature II .......................................... 3 Credits
A continuation of MUS 2710, beginning with Romantic era to the Modern era. Listening assignments.

MUS 2030 — Introduction to Music Literature III ......................................... 3 Credits
A continuation of MUS 2710-20, dealing with the Modern, Contemporary and Impressionistic eras. Listening assignments.

MUS 2110 — Advanced Theory I ................................................................. 4 Credits

MUS 2120 — Advanced Theory II ............................................................... 4 Credits

MUS 2130 — Advanced Theory III .............................................................. 4 Credits
Four-part harmony using secondary dominants, modulation, harmonic analysis, sight singing, ear training, melodic and harmonic dictation, keyboard harmony. Neapolitan and augmented sixth chords, diminished sevenths and other chromatic harmonies; analysis of early 19th century works; the sonata form. Further studies of musical forms, analysis of 19th and 20th century works, serial composition, original composition. Three and four voice counterpoint, part writing, figured bass, binary and ternary forms. Must be taken in sequence.

MUS 2810 — Music Education .................................................................... 3 Credits
Methods of teaching music in the elementary school by rhythmic, singing, listening, music reading and creative activities. Autoharp, rhythm instruments, Flutophone, and sample series of school music books will be studied. (Prerequisite: MUS 1020, or demonstration of adequate proficiency.)

Applied Music: Ensembles

MUS 1050 — Chorus .................................................................................. 1 Credit
Meets two hours per week. The official choral organization of the College. Performs standard repertoire and selections suitable for use with school and church choirs. Membership by permission of the director of the chorus. Members are expected to attend all rehearsals and performances. Failure to do so will result in dismissal from the chorus and a failing mark for the quarter. May be taken repeatedly until six quarter hours are accumulated.

MUS 1070 — Small Instrumental Ensembles .............................................. 1 Credit
String, brass, and woodwind ensembles will rehearse two hours per week and perform twice during a quarter. Classical literature for standard instrumentations will be emphasized. Rehearsal times arranged according to students' schedules. Assignment of groups to be determined by instructor.

MUS 1080 — Stage Band ........................................................................... 1 Credit
No audition required. Performs standard "big band" literature with heavy emphasis on swing style. Designed for students who desire to perform with the Jazz Band but have no prior experience in the popular idiom.

MUS 1090 — Jazz Band ............................................................................. 1 Credit
Membership by audition only. Performs arrangements for jazz, "big band," and studio band in contemporary and jazz-rock styles. Improvisation is encouraged, but not required. Performances regularly scheduled off-campus, as well as for student body.
Applied Music: Class Instruction

MUS 1510 — Class Lessons in Voice I ............................................................. 1 Credit
MUS 1520 — Class Lessons in Voice II ........................................................... 1 Credit
MUS 1530 — Class Lessons in Voice III ......................................................... 1 Credit
  Group instruction in basic techniques of breath control, tone production, diction, phrasing and interpretation using simple song repertoire, with suggested songs suitable for solos. A study of the vocal instrument and stage presence will be included. Meets twice weekly. Daily practice required. Not for the student whose major is voice.

MUS 1610 — Class Piano I ............................................................................... 1 Credit
MUS 1620 — Class Piano II .............................................................................. 1 Credit
MUS 1630 — Class Piano III ........................................................................... 1 Credit
  Group instruction in basic keyboard technique for students with no prior training in piano. Electronic pianos will be used. Meets twice per week. Daily practice required.

Applied Music: Individual Instruction

Private lessons in voice, organ, piano, or other instruments may be taken each quarter for one or two quarter hours credit. Any student may take private lessons but only students performing at the college level will receive academic credit.

Students receive 25 minutes of private instruction per week per quarter hour of credit.

In scheduling individual instruction preference will be given to full-time music majors. In order to receive credit for individual instruction in piano, the student must be able to perform on at least the level of Grade Four in a standard piano course. Practice requirements for credit in individual instruction is on the following basis: Three hours of practice per week for each quarter hour of credit. A minimum of one hour per day practice is required for each quarter hour of credit earned. Practice rooms will be assigned as the need arises.

A recital is required for music majors in their applied major field during their second year of study. No credit given. Minimum of thirty minutes duration. Solo classes required for all applied music students. Meets twice each quarter.

MUS 1211 — Individual Instruction in Brass Instruments ............................. 1 Credit
MUS 2211 — Individual Instruction in Brass Instruments ............................. 1 Credit
  (One lesson per week)
MUS 1212 — Individual Instruction in Brass Instruments ............................. 2 Credits
MUS 2212 — Individual Instruction in Brass Instruments ............................. 2 Credits
  (Two lessons per week)
MUS 1311 — Individual Instruction in Woodwinds ......................................... 1 Credit
MUS 2311 — Individual Instruction in Woodwinds ......................................... 1 Credit
  (One lesson per week)
MUS 1312 — Individual Instruction in Woodwinds ......................................... 2 Credits
MUS 2312 — Individual Instruction in Woodwinds ......................................... 2 Credits
  (Two lessons per week)
MUS 1411 — Individual Instruction in Strings ................................................ 1 Credit
MUS 2411 — Individual Instruction in Strings ................................................ 1 Credit
(One lesson per week)
MUS 1412 — Individual Instruction in Strings ................................................ 2 Credits
MUS 2412 — Individual Instruction in Strings ................................................ 2 Credits
(Two lessons per week)
MUS 1711 — Individual Instruction in Piano .................................................. 1 Credit
MUS 2711 — Individual Instruction in Piano .................................................. 1 Credit
(One lesson per week)
MUS 1712 — Individual Instruction in Piano ................................................... 2 Credits
MUS 2712 — Individual Instruction in Piano ................................................... 2 Credits
(Two lessons per week)
MUS 1811 — Individual Instruction in Classical Guitar ................................. 1 Credit
MUS 2811 — Individual Instruction in Classical Guitar ................................. 1 Credit
(One lesson per week)
MUS 1812 — Individual Instruction in Classical Guitar ................................ 2 Credits
MUS 2812 — Individual Instruction in Classical Guitar ................................ 2 Credits
(Two lessons per week)
MUS 1911 — Individual Instruction in Voice .................................................. 1 Credit
MUS 2911 — Individual Instruction in Voice .................................................. 1 Credit
(One lesson per week)
MUS 1912 — Individual Instruction in Voice ................................................... 2 Credits
MUS 2912 — Individual Instruction in Voice ................................................... 2 Credits
(Two lessons per week)

NOTE: The student may receive credit for one full year's Individual Instruction on each level: One thousand level courses and Two thousand level courses.

NATURAL SCIENCE

Five survey courses are offered to provide the student with a brief exposure to various disciplines in the natural sciences. The courses are intended for the student who does not desire a three-quarter sequential science course. The survey courses are also designed to aid the student in determining the curriculum which he would like to pursue or to better prepare him for additional courses in the sciences.

The survey courses have no prerequisites, and may be taken individually or in any sequence. For fulfillment of natural science requirements, also see listings under Biology, Chemistry, and Physics.

NSC 1010 — Survey of Physical Science ....................................................... 4 Credits
An introduction course dealing with selected topics from general chemistry and general physics. Topics to be considered include atoms, molecules, reactions, forces, laws of motion, heat, light, sound, etc. No credit is given to any student who has successfully completed CHE 1010 or PHY 2010.

NSC 1120 — Environmental Technology ....................................................... 3 Credits
A course which analyzes interrelationships between man and the physical environment for the purpose of developing useful management strategies for our natural resources. Primary attention is directed toward an understanding of basic scientific principles in such fields as soil and water conservation, forest ecology, wildlife management, air pollution control, and energy production.
The document contains course descriptions, credits, and prerequisites for various science courses. Here is a structured representation:

**NSC 1230 — Survey of Earth Science**
- 4 Credits
- An introductory course designed to provide an exposure to the basic principles of physical and historical geology. Subjects considered include the nature of the earth's crust, geological processes, the geological time scale, and paleontology.

**NSC 1450 — Survey of Life Science**
- 4 Credits
- An introductory course designed to provide an exposure to the scope of biology. Subject matter will be selected from such diverse areas as cellular biology, microbiology, heredity, and environmental biology. No credit is given to any student who has successfully completed BIO 1110.

**NSC 1670 — Interdisciplinary Topics in the Sciences**
- 4 Credits
- A team-taught course providing the student with a brief exposure to selected areas of study which are based upon several of the natural sciences. Subjects considered include astronomy, meteorology, climatology, oceanography, and soil science.

**NUCLEAR TECHNOLOGY**

**NUC 1010 — Introduction to Nuclear Technology**
- 3 Credits
- A survey of nuclear science at the introductory level. Topics include nuclear physics, reactors, nuclear hazards and safety.

**NUC 2010 — Nuclear Physics**
- 3 Credits
- Nuclear structure and stability; radioactive decay; nuclear reactions; fission and fusion; reaction cross-section; nuclear energy.

**NUC 2110 — Radiation Biology**
- 3 Credits
- Biological effects of radiation; permissible levels of exposure; radiation in the environment; food chains; radiation units and dosimetry. (Prerequisite: NUC 2010.)

**NUC 2120 — Radiation Protection**
- 3 Credits
- Radiation detection and monitoring; attenuation and shielding; handling of radioactive materials; reactor safety. (Prerequisite: NUC 2010.)

**NUC 2310 — Reactor Analysis and Design**
- 3 Credits
- Fission chain reactions; neutron diffusion; reactor dynamics; control systems; basic reactor types and designs. (Prerequisite: NUC 2010.)

**NUC 2510 — Nuclear Laboratory**
- 3 Credits
- Instruction and practice in safe handling techniques; calibration and use of health physics instruments; nuclear detection systems, radioactive decay analysis; radioisotope production and use; shielding. (Prerequisite: NUC 2010.) 6 hours laboratory per week

**NUC 2710 — Radioisotopes**
- 3 Credits
- Production and properties of isotopes, scientific and industrial applications. (Prerequisite: NUC 2010.)

**OPERATING ENGINEERING TECHNOLOGY**

**OET 1010 — General Introduction to Operating Engineering and History of the Labor Movement**
- 2 Credits
- Emphasis is placed on history of the labor union movement.

**OET 1020 — Introduction to General Construction Power Sources**
- 2 Credits
- To provide the trainee with basic knowledge relevant to 2-stroke cycles and 4-stroke cycle internal combustion engines; operation of gasoline and diesel engines; as basic understanding of the combustion process and the hardware involved in providing clean air for combustion needs; and familiarize the student with the problems involved in eliminating waste heat from the engines, and the methods required to overcome these problems.
OET 1030 — Basic Engineer Power Trains & Undercarriages ..................... 2 Credits
Provides a basic knowledge of mechanical power transmission and the rolling
and carrying components of heavy construction equipment, and gives the trainee
some understanding of the component parts, capabilities and limitations.

OET 1040 — Introduction to Basic Electricity, Hydraulics, & Pneumatics 3 Credits
To provide the trainee with a basic knowledge of electricity and the knowledge
to perform checks and preventive maintenance on electrical motors and basic
circuits. Also provides a general knowledge of the principles of hydraulics to
include definitions, advantages, relationship of pressure and force, and its ev­
eyday applications.

OET 1110 — Apprenticeship Field Experiences I ......................................... 4 Credits
OET 1120 — Apprenticeship Field Experiences II ....................................... 4 Credits
OET 1130 — Apprenticeship Field Experiences III ..................................... 8 Credits
Field Course (On the job training, continuous learning, practicum). The program
will consist of about 500, 500, 1,000 hours respectively of fairly consistent em­
ployment with one or more general contractors. The work program must meet
the standards of the IUOE. The students will be under the supervision of a
journeyman, or higher employed by the contractor, a member of the joint
committee, IUOE, and a college representative.

OET 1210 — Introduction to Fuels, Oil, and Lubricants .......................... 2 Credits
To provide the trainee with an understanding of the type of fuels, oils, and
lubricants used in the heavy construction industry, how and when they are used,
and how to achieve best results from their use.

OET 1220 — General Introduction to Welding, Rigging, Soils and
Compaction ....................................................................................................... 2 Credits
A general knowledge of the principles, capabilities, and application of oxyacety­
lene, electric arc, and heliarc welding, and also the application of rigging.

OET 1230 — The Function of Grades and Grade Stakes .......................... 2 Credits
To teach the trainee the basic reason for moving earth, the basic nomenclature
of roads, airfields, dams, levees, drainage projects, railroads, and the types,
purposes, and use of grade stakes.

OET 1240 — Introduction to Construction Equipment .......................... 2 Credits
To acquaint the trainee with the types of construction equipment and with the
utilization, capabilities, and limitations of each type.

OET 2010 — Earth-moving Equipment ................................................... 2 Credits
To provide the trainee with detailed information on earth-moving and hauling
equipment. To teach the controls, operation and operator maintenance of all
types of earth-moving equipment.

OET 2020 — Grades and Plans for Operating Engineers ..................... 2 Credits
To provide the trainee detailed information on the engineer function and the
operating engineers activities on construction projects.

OET 2030 — Mining and Tunneling Equipment ....................................... 2 Credits
To provide the trainee detailed information on mining and tunneling equipment
and its operation.

OET 2110 — Electrical Systems and Electronics ................................. 2 Credits
To provide the trainee detailed information on the operation and uses of elec­
trical systems used on and around heavy construction equipment.

OET 2120 — Material Processing and Application ................................. 4 Credits
To provide the trainee detailed information on all types of construction material,
how it is processed, and procedures used in application of construction material.

OET 2130 — General Construction Equipment, Structure of
Components, Seals, and Sealants ............................................................... 4 Credits
To provide the trainee detailed information on the operation, operator mainte­
nance, and uses of general construction equipment. To teach the controls, opera­
tion, and operator maintenance of general construction equipment used on construction sites. To provide the trainee detailed information on the structure of components of heavy construction equipment, and seals and sealants.

OET 2210 — Paving Equipment ................................................................. 2 Credits
To provide the trainee detailed information on all types of paving equipment. To teach the controls, operation, and operator maintenance on all types of paving equipment.

OET 2220 — Revolving Shovel and Crane Equipment ............................. 2 Credits
To provide the trainee detailed information on revolving type construction equipment. To give specific details on nomenclature and description, uses, servicing, preventive maintenance, minor repairs, uprighting and recovery, moving, shipping, storage, special tool requirements, minor adjustments to components, vehicle codes, accessories and safety. To teach the operation of revolving shovel and crane type equipment.

OET 2230 — Repair and Rebuilding of Internal Combustion Engines........ 2 Credits
To provide the trainee detailed information on the repair and rebuilding of engines used in heavy construction equipment and in support equipment.

OET 2240 — Crushing, Screening, and Washing Plants ............................ 4 Credits
To provide the trainee detailed information on crushing, screening, and washing plants. To teach the controls, operation, and operator maintenance of aggregate crushing, screening, and washing plants.

OET 2310 — Tools, Parts, and Housekeeping ........................................... 2 Credits
To provide the trainee detailed information on tools and shop equipment used in the repair of heavy equipment, on orders and reports required on the inventory control of parts and tools, on cleaning and inspecting parts, and on housekeeping and safety around repair shops.

OET 2320 — Concrete Plants .................................................................... 4 Credits
To provide the trainee detailed information on the controls and operation of concrete batch plants. To teach the controls, operation, and operator maintenance of concrete plants.

OET 2330 — Material Hoisting and Handling Equipment ........................... 2 Credits
To provide the trainee detailed information on operation and use of material hoisting and handling equipment. To give specific details on nomenclature and description, uses, servicing, PM, minor repairs, storage, shipping, special tool requirements, minor adjustments to components, accessories, and safety. To teach the operation of material hoisting and handling equipment.

OET 2410 — Repair of Hydraulic Systems and Pneumatic Equipment ...... 4 Credits
To provide the trainee detailed information on the repair of hydraulic systems and pneumatic equipment used on heavy duty construction equipment and support equipment.

OET 2420 — Heavy Duty Component Repair ............................................ 4 Credits
To provide the trainee detailed information on the repair of all components of heavy construction equipment.

OET 2540 — Apprenticeship Field Experiences IV ................................. 9 Credits

OET 2550 — Apprenticeship Field Experiences V ................................. 9 Credits
Field Course (On the job training, continuous learning, practicum). The program will consist of about 2,000 hours each of fairly consistent employment with one or more general contractors. The work program must meet the standards of the IUOE. The students will be under the supervision of a journeyman, or higher employed by the contractor, a member of the joint committee, IUOE, and a college representative.
PHILOSOPHY

PHL 1010 — Introduction to Philosophy .................................................. 3 Credits
A study of problems that confront man as he deals with knowledge and the
nature of the world and his interaction with it.

PHL 1110 — Elementary Logic ............................................................... 3 Credits
Study of the principles of reasoning, deductive and inductive fundamentals, and
the use of logic as a practical tool.

PHL 1210 — Elementary Ethics ............................................................... 3 Credits
Critical analysis of the principal ethical theories and their application to the
problems of life.

PHL 1310 — Symbolic Logic ................................................................. 3 Credits
Logical symbolism, truth tables, propositional calculus, properties of formal
systems. (Same as MAT 1310)

PHL 2010 — Religions in History: An Introduction ................................. 3 Credits
Introduction to History of Religions, Eastern and Western.

PHL 2020 — Existentialism and Religion ................................................ 3 Credits
A study of existentialism and its meaning for religion.

PHYSICAL EDUCATION

PED 1000, 1001, 1002, 1003, 1004, 1005 — Adaptive Physical Education... 1 Credit
Modified physical activity designed for students with physical limitations. Students are enrolled in these courses on advice of their physician.

PED 1010 — Physical Conditioning ......................................................... 1 Credit
This course is designed for those people wishing to keep physically fit through
strenuous exercises. Studies the effect exercises have on the body.

PED 1020 — Snow Skiing I ...................................................................... 1 Credit
A working knowledge of ski equipment, safety procedures, as well as the funda­
mentals of walking, turning and climbing. A special fee as designated in class
schedule will be charged for this course.

PED 1110 — Archery ................................................................................ 1 Credit
Teaches the correct handling of tackle along with drawing, aiming and release.

PED 1210 — Badminton .......................................................................... 1 Credit
Instruction and practice in the fundamentals of badminton.

PED 1310 — Basketball .......................................................................... 1 Credit
Practice of fundamentals as well as the various types of play.

PED 1410 — Bowling ............................................................................. 1 Credit
Presents the proper selection of equipment and correct method of approach and
release of the bowling ball. A fee of not more than $10.00 per quarter may be
charged for this activity.

PED 1420 — Intermediate Bowling ........................................................... 1 Credit
Continuation of skills acquired in Beginning Bowling. More emphasis is placed
on individual styles of Bowling. (Prerequisite: Bowling 1410 or proficiency
exam.) A fee of not more than $10.00 per quarter may be charged for this
activity.

PED 1510 — Folk Dance.......................................................................... 1 Credit
Instruction in folk rhythms including square dances from various nations.

PED 1610 — Beginning Golf ................................................................. 1 Credit
To acquaint the beginning player with correct swing, selection, and use of the
various clubs.

PED 1620 — Intermediate Golf ............................................................... 1 Credit
Review of the basic fundamentals of the game plus rules and strategies.
PED 1710 — Soccer ................................................................. 1 Credit
Instruction and practice in the fundamentals of soccer.

PED 1810 — Modern Dance .................................................. 1 Credit
Basic movement and dance techniques; emphasis on communicative skills, cre­
avitiveness, and improvisation.

PED 1910 — Beginning Weightlifting ..................................... 1 Credit
An introduction to the proper techniques and practices of weightlifting.

PED 1920 — Intermediate Weightlifting .................................. 1 Credit
A continuation of PED 1910.

PED 2210 — Softball ............................................................ 1 Credit
Stresses the fundamentals of catching, swinging, and backing up other positions.

PED 2310 — Swimming ........................................................... 1 Credit
Training for beginners in swimming, emphasizing recreational swimming. A
special fee as designated in class schedule will be charged for this course.

PED 2410 — Beginning Tennis ................................................. 1 Credit
Study of the rules, serving and volley. Should develop a degree of skill in tennis.

PED 2420 — Intermediate Tennis ............................................. 1 Credit
Review of the basic fundamentals and rules, also current strategies involved in
the game.

PED 2510 — Stunts and Tumbling ............................................. 1 Credit
Practice of stunts, with a minimum achievement of intermediate skill expected.

PED 2610 — Volleyball ............................................................ 1 Credit
Practice of fundamentals as well as various types of play.

PED 2710 — Introduction to Physical Education .......................... 3 Credits
A study of the historical background, general scope, principles, and objectives
of physical education in its relationship to education as a whole.

PED 2720 — Individual and Dual Sports .................................... 3 Credits
Organization, techniques and methods of teaching individual and dual sports.

PED 2730 — Sports Officiating ............................................... 2 Credits
Detailed techniques and methods of sports officiating involving rule interpreta­
tion and ethical character pertaining to inter-scholastic, inter-collegiate, and
intramural activities. (Sports include football, basketball, softball, baseball.)
3 hours lecture — laboratory

PED 2810 — Physical Education in the Elementary Schools ................. 3 Credits
Study of theories and activities for physical education in the lower grades.
Problems in supervision, program planning, instructional methods in both indi­
vidual and group activities are emphasized.

PED 2850 — Playground Leadership ........................................... 3 Credits
Learning activities suitable for playgrounds and studying and applying the
principles of organizing and directing a playground program.

PHYSICS

To receive credit for a Physics course, the lecture section must be accompa­
nied by a laboratory session during the same quarter.

PHY 2010 — General Physics I ................................................. 4 Credits
Fundamental laws of mechanics. (Prerequisite: MAT 1320 or 1110 and 1210 or
consent of instructor.)
3 hours lecture — 3 hours laboratory

PHY 2020 — General Physics II ............................................... 4 Credits
Fundamental laws of heat, light, and sound. (Prerequisite: PHY 2010.)
3 hours lecture — 3 hours laboratory
PHY 2030 — General Physics III ................................................................. 4 Credits
Fundamental laws of electricity and magnetism in elements of modern physics.
(Prerequisite: PHY 2020.)

PHY 2110 — Physics I ............................................................................... 4 Credits
PHY 2120 — Physics II ........................................................................... 4 Credits
PHY 2130 — Physics III ........................................................................... 4 Credits
PHY 2110 covers mechanics. PHY 2120 covers wave motion, electricity, and
magnetism. PHY 2130 covers heat, optics, and modern physics. A sequence
course. (Prerequisite: Calculus and Analytic Geometry I. Corequisite calculus
sequence.)

3 hours lecture — 3 hours laboratory

POLICE SCIENCE AND CRIMINOLOGY EDUCATION

PST 1010 — Introduction to Law Enforcement ......................................... 3 Credits
Philosophical and historical background; agencies and respective jurisdictions;
police ethics, public relations, and career orientation.

PST 1110 — Police Science I ..................................................................... 3 Credits
A study of legal concepts and procedures, including the laws of arrest and search
warrant procedure, beginning with the issuance of legal process to ultimate court
disposition, embracing informations, indictments, arraignments, preliminary
hearings, bail, grand and petit juries, and the trial.

PST 1120 — Police Science II .................................................................... 3 Credits
A study of the qualities of an investigation; general criminal investigative meth­
ods, procedures and techniques; phases of investigation; testifying and prepara­
tion of evidence for court.

PST 2010 — Police Administration and Organization .............................. 3 Credits
A study of police organizations, their hierarchical structure, techniques of ad­
ministration and management utilized in standard police organizations with
emphasis on problems of supervision, responsibility, and control of police units.

PST 2130 — Police Science III .................................................................. 3 Credits
A continuation of Police Science II with emphasis on the elements, modus
operandi, and various investigative aspects of the serious and more frequently
occurring crimes, and methods of crime prevention through contact with the
public.

PST 2140 — Police Science IV ................................................................. 3 Credits
An introduction to the theory and practice of basic scientific techniques utilized
in the investigation and solving of crime. These procedures which will be pre­
sent ed by means of classroom lectures, demonstration sessions and practical
laboratory periods, will emphasize the proper handling and examination of
 evidence, fingerprinting, photography, glass fractures, casts and molds, narcotics
and narcotic preparations, and crime scene searches.

PST 2200 — Seminar in Police Problems .................................................. 6 Credits
A course designed to consolidate the various learning experiences in police
science. Emphasis is placed on special problems.

POLITICAL SCIENCE

POL 1010 — Fundamentals of American Government ................................ 3 Credits
An introduction to the setting and foundations of American politics with empha­
sis on citizen attitudes and values, national and state constitutions, political
parties, interest groups, public opinion, and voting.

POL 1020 — United States National Government ....................................... 3 Credits
United States national government with special emphasis upon the executive,
legislative, judicial and administrative functions.
POL 1030 — State and Local Government in the United States..................3 Credits
Forms of state and local government organizations. Interrelationships between
state and local, state and federal, and local and federal governments.

POL 2010 — Introduction to Political Science ...........................................3 Credits
A comprehensive introduction to the study of political science with emphasis on
the theory, processes, and institution of politics and governments in the modern
world.

PSYCHOLOGY

PSY 1010 — General Psychology I ..............................................................3 Credits
Introduction to the methods and findings of contemporary psychology.

PSY 1020 — General Psychology II ............................................................3 Credits
A continuation of PSY 1010. Basic principles of adjustment, personality develop­
ment, and psychological measurement and evaluation are covered. (Prerequisite:
PSY 1010 or consent of instructor.)

PSY 1030 — General Psychology III ...........................................................3 Credits
Developmental and social psychology, motivation and emotion, and physiologi­
cal psychology are the topics covered. (Prerequisite: PSY 1010 or consent of
instructor.)

PSY 1110 — Career Planning .................................................................3 Credits
A course designed to encourage the student to understand himself through past
achievements, test scores, and career goals. The student is introduced to the
world of work. Local, regional and national job opportunities in terms of en­
trance requirements, salaries, duties and conditions of work are reviewed.

PSY 2210 — Educational Psychology ........................................................3 Credits
The principles of growth and development are studied and related to student
learning. Capacity for learning, methods of effective study, and the effect of the
environment on the student are investigated and studied. (Prerequisite: PSY
1010 or consent of instructor.)

PSY 2310 — Abnormal Psychology ............................................................3 Credits
Topics covered include abnormal reactions to frustrations, psychotherapy, theo­
ries of personality structure, neural functions, receptor mechanisms, attention,
and perception. (Prerequisite: PSY 1020 or consent of instructor.)

PSY 2410 — Child Psychology .................................................................3 Credits
Psychological and physiological growth and development of the human organ­
ism, beginning with conception and continuing to adolescence. (Prerequisite:
PSY 1030 or consent of instructor.)

PSY 2420 — Adolescent Psychology ........................................................3 Credits
Psychological and physiological growth and development of the human organ­
ism beginning with adolescence. (Prerequisite: PSY 1030 or consent of instruc­
tor.)

PSY 2430 — Applied Psychology .............................................................3 Credits
Selected topics such as advertising, employment, motivation, and consumer
services are discussed from a programmatic viewpoint.

PSY 2510 — Social Psychology .................................................................3 Credits
Introduction to the relationship between psychology and social problems, in­clud­ing interviews, polls, questionnaires, and other social products. (Prerequi­site:
PSY 1030 or consent of instructor.)

PSY 2610 — Psychological Aspects of Management ..................................3 Credits
A study of the application of psychological principles to business and other areas
involving management. Representative topics to be covered will include supervi­
sion, communications, human relation skills, scientific and humanistic manage­
ment, and group dynamics.

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READING

REA 1010 — Foundation for College Reading I ............................................ 2 Credits
This course is designed to assist the student in developing reading skills that are necessary for college success. (3 hours per week.)

REA 1020 — Foundation for College Reading II ........................................... 2 Credits
Continuation of Reading 1010. (3 hours per week.)

REA 1030 — College Reading ........................................................................... 3 Credits
This course is designed to aid the average student in the extension of comprehension, vocabulary, study methods, and reading rate. Each student’s present reading efficiency is diagnosed and a program is designed to fit his individual needs. (3 hours per week.)

REA 1040 — Efficient Reading ....................................................................... 3 Credits
A continuation of Reading 1030 with increased attention to rate, versatility, and critical thinking.

RECREATION

REC 1010 — Introduction to Recreation ......................................................... 3 Credits
Introduces the basic fundamentals of the nature, scope, and significance of organized recreation services. It includes study of factors involved in the operation of basic recreation units, major program areas, organizational patterns, and the inter-relationship of special agencies and institutions which serve the recreation needs of society.

REC 1020 — Social Recreation ....................................................................... 3 Credits
Introduces methods and materials for planning, organizing, and conducting social activities for groups of various sizes and ages in a variety of social situations. Emphasis is on the mechanics of planning and presenting a repertoire of activities for social recreation events. Major activities will be discussed, played, and/or demonstrated.

REC 1030 — Outdoor Education ..................................................................... 3 Credits
Includes study of the history, development, and trends of outdoor recreation, conservation, and organized camping. Emphasis is on laboratory work, field trips, and the development of outdoor skills.

REC 1110 — Team Sports ............................................................................... 3 Credits
Offers a survey of the basic terminology, skills, and rules of selected team sports and their use in recreation. Emphasis is upon knowledge and understanding of the organization, administration, and promotion of sports rather than mastery of performance skills.

REC 1310 — Arts and Crafts ........................................................................... 3 Credits
Demonstrates the methods and materials used in arts and crafts projects for a variety of recreational settings: school, camp, playground, recreation center, and club. Emphasis is on constructing, administering, promoting, and teaching crafts.

REC 2010 — Organization and Administration in Recreation .......................... 3 Credits
A study of essential elements and basic principles involved in the organization, supervision, promotion, and evaluation of various types of recreation programs. Emphasis is on organized programs and services.

REC 2310 — Water Sports .............................................................................. 3 Credits
Includes the basic terminology, skills, and techniques of selected water-related activities and their use in recreation programs.
REC 2410 — Field Work .......................................................... 3 Credits  
A course designed to give the recreation student practical experience under supervision. The first experience should have the student working with an agency leader as a junior leader. Exposure to leadership responsibilities of planning, conducting, and evaluating an activity or program should result.

REC 2510 — Introduction to Marine Management ........................................ 3 Credits  
Introduces the basic fundamentals of the nature, scope, and modern practices in business oriented marine operations. Includes visits to local marinas and related marine-based industries.

REC 2520 — Small Craft Operations .............................................................. 3 Credits  
A study of basic principles and practices involved in small to medium-range boating. Includes an in-depth study into the kinds of equipment in use, mechanical fundamentals, management, and safety. Upon successful completion of this course, the student may be eligible for a Red Cross Basic Certificate in canoeing, motoring, rowing, and sailing.

REC 2610 — Camp Crafts ................................................................................. 3 Credits  
This course is designed to provide prospective leaders in camping and outdoor education with necessary camping skills. Each student will develop skills in firecraft, food selection and preparation, toolcraft, ropecraft, gear and shelter, map and compass, health and safety, nature and conservation, and leadership techniques. Emphasis is both on learning the skills and learning to teach them to others. Each student will participate in planning, executing and evaluating an overnight trip in which the acquired skills will be utilized. At the conclusion of the course, all students who have fulfilled the requirements will be awarded the Advanced Campcrafter Certificate by the American Camping Association.

REC 2710 — Park Administration ................................................................. 3 Credits  
Includes the history, development, and trends in park administration. Introduces methods and materials for planning, organizing, and conducting park supervision and services. Includes field trips to local parks.

REC 2720 — Facilities Planning and Maintenance ........................................... 3 Credits  
An in-depth study of essential elements and principles involved in physical plant planning and management. Includes special student projects.

REC 2810 — Camping and Camp Leadership .................................................. 3 Credits  
Emphasis is placed upon the camp counselor, the planning of programs, and demonstrations applicable to camp life.

REC 2870 — Recreation Leadership .................................................................. 3 Credits  
Principles, materials, methods, and practice in planning and directing recreation.

SECRETARIAL SCIENCE

SSC 1010 — Typing I ....................................................................................... 3 Credits  
Development of techniques in touch typewriting and the introduction of skills involved in composing at the typewriter, typing letters, typing simple tabulations, and typing manuscripts.  
5 hours per week — lecture and laboratory

SSC 1020 — Typing II ..................................................................................... 3 Credits  
Continued development of typewriting techniques with emphasis on increasing speed and accuracy in typing, business reports, correspondence, tabulations, and manuscripts. Students will learn to operate a variety of special typewriters — namely, the Executive, the Decimal Tab, and the Selectric II. (Prerequisite: SSC 1010 or equivalent.)  
5 hours per week — lecture and laboratory
SSC 1030 — Typing III .............................................................. 3 Credits
Continued emphasis on speed and accuracy building with more emphasis on timed production on various types of business materials. (Prerequisite: SSC 1020 or equivalent.)

5 hours per week — lecture and laboratory

SSC 1110 — Shorthand I .......................................................... 5 Credits
Theory of Gregg Shorthand, Diamond Jubilee Series; development of dictation and transcription abilities.

5 hours per week — lecture and laboratory

SSC 1120 — Shorthand II .......................................................... 5 Credits
Further application of principles of Gregg Shorthand, DJS, to the development of ability to read, write, and transcribe shorthand outlines. Transcription on the typewriter is introduced with emphasis on transcribing skills. Mailable transcripts are introduced. (Prerequisite: SSC 1110 or equivalent.)

5 hours per week — lecture and laboratory

SSC 1130 — Shorthand III .......................................................... 5 Credits
Continued development of dictation and transcription skills with increased emphasis on speed building and mailable transcripts. (Prerequisite: SSC 1120 or equivalent.)

5 hours per week — lecture and laboratory

SSC 1210 — Office Practice I .................................................... 3 Credits
A study of the principles and techniques of office procedures, including knowledge of office materials, filing systems and practical experience in office duties. This course must be accompanied by SSC 1220. (Prerequisite: SSC 1010 or equivalent.)

SSC 1220 — Office Practice Lab I ............................................. 1 Credit
Thirty hours during one quarter will be spent working in offices on campus. (Corequisite: SSC 1210.)

SSC 2010 — Typing IV ............................................................ 3 Credits
Continuation of speed and accuracy building with emphasis on business reports and legal, accounting, medical, and governmental typing. (Prerequisite: SSC 1030 or equivalent.)

5 hours per week — lecture and laboratory

SSC 2110 — Shorthand IV .......................................................... 5 Credits
Improvement of ability to take dictation and transcribe mailable copy with emphasis on the development of job competency. (Prerequisite: SSC 1130 or equivalent.)

5 hours per week — lecture and laboratory

SSC 2120 — Shorthand V .......................................................... 5 Credits
Continued emphasis on dictation and transcription skills necessary to meet occupational standards. (Prerequisite: SSC 2110 or equivalent.)

5 hours per week — lecture and laboratory

SSC 2210 — Office Practice II ................................................... 3 Credits
A study of office procedures and practices including practice in dictating and duplicating equipment. This course must be accompanied by SSC 2220. (Prerequisite: SSC 1210, 20.)

SSC 2220 — Office Practice Lab II .......................................... 1 Credit
Thirty hours during one quarter will be spent working in offices in the community. (Corequisite: SSC 2210.)

SSC 2810 — Report Writing/Records Management ................... 3 Credits
Basic principles of writing business reports and research papers will be presented. Instruction in the use of the library for research is given. Three weeks of the course will be spent in discussion of filing systems, indexing, and alphabetic and geographic filing techniques.
SOCIAL SCIENCE

SS 1010 — Social Science Seminar ......................................................... 3 Credits
In depth analysis of a particular topic, concern, or problem in the social sciences.
Social science elective credit only.

SOCIOLOGY

SOC 2010 — Introduction to Sociology .................................................. 3 Credits
A general survey of human social relationships.

SOC 2020 — Social Institutions ................................................................. 3 Credits
A sociological analysis of American society. Emphasis is placed on social power,
mass society, as well as the nature and structure of major social institutions.

SOC 2030 — Social Problems ................................................................. 3 Credits
A study of a number of problems in American society including their origins,
extent, nature, causal factors, and suggested solutions. Problem examples in­clude such topics as urbanization, family disorganization, crime and criminal
justice, population and environmental challenges.

SOC 2110 — Introduction to Cultural Anthropology ................................ 3 Credits
An introduction to the principles, concepts, methods, and scope of anthropolo­gy. Emphasis is placed on the nature of culture and society, cultural adaptation,
and differences and similarities among the cultural components of social organ­ization, economic organization, political organization, language, ideology, techn­ology, and art.

SOC 2120 — Introduction to Prehistory and Archaeology .................... 3 Credits
An introductory survey of human origins and prehistoric cultures. Emphasis is
placed on the general principles, theoretical orientations, and methods of ar­chaeology.

SOC 2130 — Introduction to Criminology ............................................... 3 Credits
An analysis of the nature and extent of crime. Emphasis is placed on criminal
and delinquent behavior and theories of causation; the criminal personality and
career orientation; and principles and theories of prevention, control, and treat­ment.

SPANISH

SPA 1010 — Beginning Spanish I ............................................................ 3 Credits

SPA 1020 — Beginning Spanish II ........................................................... 3 Credits

SPA 1030 — Beginning Spanish III .......................................................... 3 Credits
An elementary course in the essentials of Spanish, with special emphasis on oral
and aural training in the language. Laboratory required.

SPA 2010 — Intermediate Spanish I ........................................................ 3 Credits

SPA 2020 — Intermediate Spanish II ....................................................... 3 Credits

SPA 2030 — Intermediate Spanish III .................................................... 3 Credits
A comprehensive review of Spanish grammar and Hispanic literature with read­ings and exercises to increase vocabulary and contribute to mastery of idiomatic
constructions. Emphasis is placed on individual pronunciation. (Prerequisite:
SPA 1030 or equivalent.) Laboratory required.

SPEECH

SPE 1020 — Voice and Articulation ......................................................... 3 Credits
A study of the principles of voice and speech production. Attention is given to
the individual student’s ability and development of vocal skills. (No prerequi­site.)
SPE 2410 — Basic Speech Communication ..................................................... 3 Credits
Designed to introduce the student to the basic principles and techniques of public speaking. Emphasis in class is placed upon the selection of subjects and supporting materials, the organization of the speech, and the oral and physical aspects of delivery.

SPE 2430 — Interpersonal Communication ..................................................... 3 Credits
Communication theory in its application to informal, face-to-face situations. Practical application of the impromptu speech relative to interpersonal communication.

SPE 2440 — Business and Professional Speaking .......................................... 3 Credits
Designed for students going on into management, human relations, communications, personnel management and the sciences where the individual must work on a person-to-person basis. Included in the course are units on presenting informative reports, using visuals, interview and conference techniques, and manuscript speaking. (No prerequisite.)

SPE 2450 — Debate ...................................................................................... 3 Credits
A study of the principles of argumentation and debate, including analysis, briefing, evidence, reasoning, and refutation; class debating on vital questions. (Prerequisite: ENG 2410.)

SPE 2710 — Oral Interpretation ................................................................. 3 Credits
This course is to introduce students to the analysis of literature for the purpose of presenting it orally to an audience. It will include a study of those basic speech skills necessary for such presentation.

SPE 2720 — Fundamentals of Acting .......................................................... 3 Credits
Fundamentals of Acting will emphasize the mechanics (vocal and physical) of presenting a character on stage.

SPE 2730 — Introduction to Theatre ........................................................... 3 Credits
A survey course in theatre covering the history and development of Western drama. This course will emphasize drama as production rather than as literature.

SPE 2740 — Fundamentals of Theatrical Production .................................... 3 Credits
This course is designed to introduce students to the practical considerations of play production. It emphasizes theory and practice in the various areas of design and stage construction, introduces the students to meaningful rehearsal techniques and offers them the opportunity to apply acquired classroom skills to actual stage experience.

COOPERATIVE EDUCATION

COE 1010 — Cooperative Education I ....................................................... 3 Credits
COE 1020 — Cooperative Education II ..................................................... 3 Credits
COE 1030 — Cooperative Education III ................................................... 3 Credits
COE 1040 — Cooperative Education IV ................................................... 3 Credits
A sequence of experiential training. Student must be approved by the Co-op Coordinator and an employer for full-time employment in industry, business, education or governmental agency to give practical training in the student's major field of study. The student will submit to the coordinator, by the end of the third week of the quarter, a listing of the major training objectives. An end-of-quarter report will describe the degree of accomplishment of these objectives.
Councils and Committees

EXECUTIVE COUNCIL

President
Dean of Instruction
Dean of Student Personnel Services
Business Manager

COLLEGE COMMITTEES

Academic/Curriculum Council
Administrative Council
Admissions and Retentions Committee
Athletic Committee
Awards and Graduation Committee
Cafeteria Committee
Concerts and Lectures Committee
Discipline Committee
Faculty Affairs Committee
Faculty Benefits Committee
Financial Aid Committee
Library Committee
Publications Committee
Social Committee

THE PRESIDENT'S ROUND TABLES

The President of Roane State Community College periodically schedules an “open hour” for student organization officers and any other interested members of the student body. The student round table is scheduled weekly in the student center.

An “open hour” for faculty to discuss matters of concern is scheduled weekly, also. The President's Round Table for Faculty is scheduled in the faculty office areas.
Definition of Terms

Admission — Acceptance of a candidate for enrollment.

Admission to Advanced Standing — Granted on the basis of credits earned in another college or on the basis of demonstrated educational attainment beyond the minimum required for admission.

Adviser, Advisee — The adviser, or counselor, is the instructor assigned to help the student with his academic problems. The student is called the advisee.

Average, Grade Point — A measure of average scholastic success obtained by dividing the total number of grade points earned by the total number of hours of course work attempted.

Calendar — The division of the full calendar year. The quarter calendar is composed of three regular terms per year with about ten weeks per term of instruction excluding final examinations in a school year of about the same over-all length as under a semester system, running from last September through early June, with the fourth quarter as a summer session.

Classification — A student's status in respect to progress toward the completion of his curriculum based upon the number of hours or courses to his credit at the time of his registration and scholarship achievement required for advancement to another class.

Course — Organized subject matter in which instruction is offered within a given period of time and for which credit toward graduation or certification is usually given.

Course Number — Identifies class level and distinguishes it from other courses in a given area of study.

Course Corequisite — When two or more classes are required simultaneously.

Course Prerequisite — A preliminary requirement that must be met before a certain course may be taken.

Credit Hours (Quarter Hour) — Defined by the number of hours per week in class and the number of weeks in the quarter. One quarter hour is usually assigned to a class that meets fifty minutes a week during a quarter or laboratory type instruction that meets two to four hours a week for a quarter or a combination of class and laboratory meetings depending upon the type of instruction and material covered. Therefore, a three-hour non-laboratory course would in general meet three hours each week during the quarter; and the credit earned would be THREE QUARTER HOURS. A total of 99 quarter hours is the minimum required for graduation.

Curriculum — The whole body of courses offered for study.

Dean's List — Common designation for the published list of students who have made an honor average for the term.

Degree (Earned) — Title bestowed as official recognition for the completion of a curriculum.
Degree, Associate — Granted upon completion of an education program of less than four years of college work, generally for the completion of the curriculum.

Degree Student — One who has fulfilled the admissions requirements and who is pursuing an Associate Degree program, referred to by some colleges as a regular student.

Department — An area which offers instruction in a particular branch of knowledge.

Developmental Studies — A program of studies in various areas designed to give the student background prerequisite to college level studies.

Dismissal (Academic) — Involuntary separation of a student from his college because he has not met the academic requirements.

Dismissal (Disciplinary) — Involuntary separation of a student from his college as a result of action taken because of misconduct.

Division — A group of related departments, such as the Humanities Division.

Elective — A subject or course which the student may choose as distinguished from courses which are required.

Financial Aid, Student — Assistance to students in the form of "gift" aid (scholarships and grants) and "self-help" aid (loans and part-time employment). It is usually based on financial need and is used for expenses related to attending college (fees, books, transportation, room and board, and miscellaneous).

Full-Time Student — One who is carrying at least seventy-five percent of the normal student hour load. Twelve quarter hours is commonly accepted as a minimum load for a full-time student.

Grant-in-Aid — A gift of money made without regard to academic excellence to a student who possesses certain talent sought or valued by an institution, such as, "Athletic Grant-in-Aid," "Music Grant-in-Aid," etc., usually, although not always, made without regard to financial need.

Major — The student's primary field of interest. The field of concentration may fall within a single department of instruction or may overlap several departments. In the latter case, the major is described as a division major.

Minor — The student's field of secondary emphasis.

Part-Time Student — One who is carrying an academic schedule of less than 12 hours.

Probation — Probation status may be for academic or for disciplinary reasons. Academic Probation is the result of unsatisfactory scholarship. It is not a penalty but a warning and an opportunity to improve. Academic probation usually involves a compulsory reduction of academic load and interviews for diagnosis of difficulties and for checking on recovery. Sometimes it brings a required restriction of extracurricular activities and general surveillance. Usually the student is required to make regular specified improvement in his record in order to avoid disqualification. Disciplinary Probation is a middle status between good standing or dismissal. The student remains enrolled but under stated conditions according to the college policies. Disciplinary probation covers a stated trial period during which it is determined whether the student is returned to good standing, having met the stated requirements, or dismissed or suspended at the end of the period for failing to meet the stated requirements.

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Quarter — A fourth of a school year. Three quarters constitute the academic year.

Reinstatement — The act of readmitting a student after he has been dismissed.

Section Number — Refers to the specific class of the course for which the student is enrolled. The course section number designates the time the class meets, the location and the instructor for the course.

Special Student — One who is not pursuing an Associate Degree Program. Special students either do not fulfill minimum requirements for entrance as degree students or have been permitted to audit a limited or special selection of degree credit courses without regard to degree requirements.

Suspension — Involuntary separation of the student from the College is implied by the term suspension. It may not be a permanent separation but neither is a definite time set when return is expected.

Transfer Student — A student who has withdrawn from one college and is admitted to another.

Transient Student — A student in good standing in any recognized college who is taking work in another college to transfer back to his college.

Withdrawal — A release from enrollment. A student notifies the appropriate authorities, thereby making it an Official Withdrawal. When the student merely stops attending classes without notifying the authorities, failing marks are recorded and charged against him. This is termed Unofficial Withdrawal.
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