MECT122  $ (3)
Mechanical Drawing II
Limit dimensioning, drawing, and interpretation of weld symbols. Solid modeling and production drawings using CAD. Weekly: a 3-hour lab. Prerequisite: MECT121. Spring

MECT235  $ (4)
(was MECT185, 186)
Materials Technology
Study of industrial materials. Properties of materials correlated with the internal structure. Includes metals, plastics, and ceramics. Weekly: a 3-hour lab. Prerequisites: MATH168, CHEM131. Spring

MECT285  (4)
(merges MECT265, 365, 366)
Statics and Strength of Materials
Analysis of static force systems. Forces, moments, resultants, free-body diagrams, equilibrium, center of mass, moment of inertia, and friction. Assignments designed to develop problem-solving abilities. Study of internal stress and deformation of elastic bodies. A minimum grade of C required in order to enroll in MECT355. Prerequisite: MATH182. Fall

MECT326  $ Alt (4)
(was MECT226)
Fluid Power Systems
Principles and applications of fluid power systems to actuate and/or control machines. Electro-hydraulic-pneumatic systems studied. Principles of fluids introduced. Weekly: a 3-hour lab. Prerequisite: MECT285. Fall

MECT355  (4)
(merges MECT345, 364)
Dynamics and Kinematics
Fundamentals and applications of dynamics; displacement, velocities, acceleration, work, energy, power impulse, momentum, and impact. Also a study of the basic theories and techniques in the analysis of relative motion, acceleration, and acceleration of machine parts such as linkages, cams, gears, and other mechanisms. Prerequisites: MATH182, MECT285. Fall

MECT370  $ Alt (4)
(merges MECT371, 372)
Heat Power
Thermodynamics properties, first and second law of thermodynamics, ideal gas law, the Carnot Cycle, power and refrigeration cycles, heat transfer power and refrigeration cycles, non-flow gas processes, mixtures of ideal gases, psychrometric chart, air conditioning, fluid statics, kinematics, dynamics. Weekly: a 3-hour lab. Prerequisite: MECT355. Fall

MECT375  $ Alt (4)
Fluid Mechanics
Dimensionless parameters, compressible flow, flow-in pipes, open channel flow, drag, lift. Weekly: a 3-hour lab. Prerequisite: MECT355. Spring

MECT415  (3)
(was MECT386)
Mechanical Design and Fabrication
The design of machine elements and the calculations necessary in determining the size and shape of machine parts. The selection of materials and the application of standard machine components. Includes bearings, gears, clutches, and couplings. Prerequisite: MECT355. Spring
Programs

AUTOMOTIVE TECHNOLOGY

Two options are available in the automotive field—auto body and auto mechanics. Auto body provides the training needed to repair auto damage incurred in accidents and to restore vehicles to their original appearance and correct body alignment. Auto mechanics provides the training needed to maintain and repair automobile engines and systems.

BT: Automotive Technology

Major requirements—40
AUTO135, 140, 150, 330, 380, 425; TCED140, 250, 254, 456, plus 7 credits of electives.

Emphasis in Auto Body—20
AUTO120, 130, 345, 355, plus 4 credits of electives chosen from auto technology.

Emphasis in Auto Mechanics—20
AUTO325, 340, 350, 425, plus 5 credits of electives chosen from auto technology.

AT: Automotive Technology

Major requirements—20
AUTO135, 140, INDT315; TCED456, plus 3 credits of electives.

Emphasis in Auto Body—20
AUTO120, 130, 345, plus 8 credits of electives chosen from AUTO335, 380; TCED140 and other auto technology courses.

Emphasis in Auto Mechanics—20
AUTO325, 330, 340, plus 9 credits of electives chosen from AUTO335, 380 and other auto technology courses.

All students in these two program options must have written two ASE exams by the end of their first year. By the end of the second year, they must have passed a minimum of five ASE tests in their respective option.

CONSTRUCTION MANAGEMENT

This program is directed toward residential and light commercial construction. Management and job entry level skills in basic trades are stressed.

BT: Construction Management

Major requirements—53
CNST105, 115, 120, 135; MECT120; TCED180, 9 credits minimum chosen from INDT320, 410, 440, 460; TCED254, 6 credits minimum chosen from ACCT111, 112; BSD210, 341, 355, 374, 415, 436; ECON225, 226; FNCE387; MKTG310, 320, 330, plus 12 credits of electives chosen from upper division courses in consultation with adviser.

Cognate requirements—17
ARCH201, 202, 205, 230, 305; MATH167.

DIGITAL MULTIMEDIA TECHNOLOGY

Digital Multimedia is a very exciting field which utilizes the computer as its main work tool in developing projects needed by clients.

Students learn skills such as digital image manipulation and enhancement, 3-D modeling and animation, digital sound mixing and enhancement, digital video editing, interactive web page design, interactive multimedia, and CD authoring.

BT: Digital Multimedia Technology

Major requirements—58
DGME130, 175, 185, 215, 216, 220, 305, 330, 340, 345, 360, 370, 385, plus 10 credits of electives chosen from PHTO115, 300 and others in consultation with adviser.

Cognate requirements—8
8 credits chosen from the following: ART104, 207; JOUR140, 468; COMM320, 456.

By the beginning of the junior year, students in the Digital Multimedia program must have completed the following core courses with a cumulative GPA of 3.00: DGME130, 175, 185, 215, 220, 360; PHTO115. Those who fail to meet these requirements must either retake these core classes to bring the cumulative GPA to 3.00 or drop from the program.

Students must have a cumulative GPA of 2.75 in their major for graduation.

GRAPHIC IMAGING TECHNOLOGY

Revolutionized by the introduction of computer technology into the industry, the term ‘graphic imaging’ is no longer limited to the field of printing. The industry now emphasizes online publishing and interactive multimedia. Students work extensively with computer applications. Three options are available.

Electronic publishing helps students develop skills in the use of computer applications to produce materials for the printed page as well as for Web and CD-ROM publishing and interactive media.

Screen printing provides students with skills needed to work in the field of textile and non-textile applications. This field of graphic imaging is heavily influenced by computer technology.

Web Development. In today’s economy almost everyone has a Web page to help advertise or market a product. This is one of the rapidly growing areas of the job market. Students taking this emphasis will have the needed background to find good paying jobs.

BT: Graphic Imaging Technology

Major requirements—36
DGME130, 175, 220, 340 or 380; GRPH145 plus 20 credits of electives chosen from GTEC395; TCED495 or other upper division courses in consultation with adviser. Web development students must take CPTR125 (6 credits); DGME370; PHTO115, plus 20 credits of electives chosen in consultation with adviser.

Cognate requirements—6
ART207, 214.

Emphasis in Screen Printing—20
GRPH145, 345; TCED485 (8 credits) plus 4 credits of electives chosen from upper division courses in consultation with adviser.

Emphasis in Web Development—20
CPTR460; DGME380; TCED275, 485 (6 credits) plus 3 credits of electives chosen from upper division courses in consultation with adviser.

Cognate requirements—12
ART207; COMM454; EDTE376; INF5428

AT: Graphic Imaging Technology

Major requirements—40
DGME130, 175, 185, 220; GRPH141, 142; INDT315 plus 13 credits of electives chosen from DGME305, 330; GRPH145 and others in consultation with adviser.

PHOTOGRAPHIC IMAGING

Photographic imaging fosters creativity in the production of visual images. The subject of these images and the method used to create them varies.

Commercial imaging develops skills required by the commercial industry through the use of studio work and on-location shooting in medium- and large-format photography.

Digital imaging utilizes computer technology to create, enhance, or modify photographic images.

Photography encompasses elements of digital and commercial imaging, and adds individual creativity and photojournalism.

BS: Photographic Imaging

Major requirements—40
DGME175, 375; PHTO115, 200, 220, 285, 300, 410 plus 9 credits of electives chosen from DGME340, 375; GTEC395; PHTO210, 320, 385, 400, 425; TCED495.

Cognate requirements—26
ART104, 207, 214, 414; BSD210; COMM405, 475; JOUR375.

TECHNOLOGY EDUCATION

Students learn skills for teaching technology education at the secondary level.

BS: Teaching Endorsement (Secondary Education)

Professional requirements—9
TCED254, 350, 456.

Communication Systems*—9
TCED465, plus 6 credits of electives chosen from ARCH171; DGME130; MECT120; PHTO115.

Construction Systems*—7
CNST105, plus 3 credits of electives chosen from ARCH201; CNST115, 120, 135.

Energy Systems*—6
TCED466, plus 3 credits of electives chosen from ELCT151, 171, 205.

Manufacturing Systems*—6
TCED470, plus 8 credits of electives chosen from MECT155; TCED140, 180, 250.

Transportation Systems*—6
TCED464, plus 3 credits of electives chosen from AUTO130, 140, 150.
Cognate requirements—10
ENGR370; PHYS131, 132 or 151, 152.
*Students must fulfill elective requirements for four of the five systems listed above.

Minors
Automotive Technology—20
AUTO120, 130, 345, or 135, 140, 150; TCED140 plus 6-7 credits of electives chosen from auto technology.

Construction—20
CNST105, 115, 120, 135; MECT120 plus 3 credits of electives chosen in consultation with adviser.

Imaging Technology—22
ART207; DGME130, 175, 185; GRPH145 plus 3 credits of electives chosen from DGME, GRPH, and PHTO.

Photography—20
DGME175; PHTO115, 200, 220, 285.

Screen Printing—20
DGME130, 175; GRPH141, 145, 345.

Web Development—20
CPTR125; DGME130, 170, 380; TCED485 (5 credits)

Courses
See inside front cover for symbol code.

AUTOMOTIVE TECHNOLOGY

AUTO104
Personal Auto Care
$ 2
Stresses the need for proper procedures in routine automobile maintenance. Helps the automobile owner become a wise consumer with emphasis on how to do simple tune-up, maintenance, and minor repairs. Not applicable to a major or minor. Fall

AUTO105
Automotive Consumerism
(1)
Consumer knowledge for the everyday challenges and decisions involved in automobile ownership. Topics include purchasing a new vehicle, how to choose a good repair facility, buying auto insurance, leasing, financing your purchase as well as how to deal with salespeople. When to sell or trade a vehicle along with how to protect your investment is also covered. Not applicable to a major or minor. Fall

AUTO115
General Auto Body Repair
$ (2)
Basic auto body repair procedures are emphasized using individual projects. Helps the individual be a better consumer. Not applicable to a major or minor. Spring

AUTO120
Auto Body Repair I
(was AUTO121, part of AUTO122)
$ (4)
Theory and skill development for metal control in auto body sheet metal repair procedures. Welding, hand tool and power tool skills are developed on mock-ups and selected damage on automobiles. Component alignment and minor panel sectioning will be covered on both unitized body and conventional frame style vehicles. Fall

AUTO130
Auto Body Repair II
(was AUTO125, part of AUTO122)
$ (4)
Fundamentals of spray equipment, its usage and care. Emphasis in finishing materials, procedures and techniques for spot finishing and complete paint jobs. Course covers the preparation of strata and final finishing using automotive urethane finishes. Study will also be made of body component systems and their diagnosis and repair. Prerequisite: AUTO120 or instructor’s permission. Spring

AUTO135
Engine Performance I
(was AUTO134)
$ (4)
A course dealing with general engine diagnosis emphasizing ignition, fuel, air intake, emission and computer controls. Spring

AUTO140
Brakes, Suspension and Steering I
(was AUTO144)
$ (3)
A course dealing with general engine diagnosis and service procedures which covers: starting, charging, lighting, accessories and gauges. Emphasis in computer application and control of the automobile operation. Prerequisite: AUTO130. Fall

AUTO150
Automotive Electrical Systems I
(was AUTO334)
$ (4)
A course dealing with general electrical diagnosis and service which covers: starting, charging, lighting, accessories and gauges. Spring

AUTO325
Engine Repair
(was AUTO124, part of AUTO324)
$ (4)
Includes general engine diagnosis and repair covering cylinder heads, block repair, lubrication and exhaust systems. Fall

AUTO330
Engine Performance II
(was AUTO364)
$ (4)
An in-depth study of engine diagnosis as it relates to ignition, fuel air induction, emission and computer controls. Use of diagnostic tools will be emphasized. Prerequisite: AUTO135. Fall

AUTO340
Brakes, Suspension and Steering II
(was AUTO374)
$ (3)
An advanced study of the hydraulic braking system including ABS diagnosis and repair. In-depth investigation of alignment, steering and suspension will be covered. Prerequisite: AUTO140. Spring

AUTO345
Auto Body Repair III
(was AUTO346, part of AUTO347)
$ (4)
Frame and body alignment theory and techniques with emphasis in the use of frame and body measuring devices, heavy duty floor or rack-pulling equipment. Skill in the repair and replacement of sections and complete structural panels will also be developed. Prerequisite: AUTO130. Fall

AUTO350
Automotive Electrical Systems II
$ (4)
In-depth study of the starting, charging, lighting systems along with accessories and gauges. Emphasis in computer application and control of the automobile operation. Prerequisite: AUTO150. Spring

AUTO355
Auto Body Repair IV
(was AUTO360, part of AUTO347)
$ (4)
Study in advanced finishing systems and spray gun technique for three stage color systems and custom finishes including stripping, taping, air brush, and metal flake. Study and practice will also be made of estimating the cost of repairs of collision damage. Prerequisite: AUTO345 or by permission of instructor. Spring

AUTO380
Heating and Air Conditioning
(was AUTO384)
$ (2)
A study of refrigeration theory and repair. Refrigerant recovery and recycling methods, heating and cooling principles are stressed. Spring

AUTO425
Automotive Services
(merges AUTO320, 420)
$ (1-4)
Designed to provide experience in automotive diagnosis, estimating, and repair. Students will work on assigned projects. Prerequisites: 20 credits of auto courses with a 3.00 GPA and listed in at least one specialty area by ASE. Repeatable to 8 credits. Fall, Spring

CONSTRUCTION

CNST105
Residential Construction
(4)
Emphasis in house-framing. The use of the steel square as it relates to rafter and stairway construction. Reading of prints, safe and proper use of hand and power tools will be covered. Energy efficient houses and other modern methods of construction are introduced. Spring

CNST115
Masonry Construction
$ (3)
Emphasizes the proper use of the trowel, laying block and brick to the line and building of corner leads. Vocabulary, theory, safety, and practical applications are stressed. Fall

CNST120
Electrical Construction
$ (3)
Includes code requirements, design and layout of electrical circuits, wiring methods, and commercial applications. Fall
DIgITAL MULTIMEDIA TECHNOLOGY

DGME130 $ (4)
(was DGME125, part of GRPH120)
Introduction to Digital Graphics
An introductory survey of professional digital and
conventional graphics covering understanding the
Macintosh computer, electronic publishing, basic
printing principles, sound digitizing, vector and
gerater graphics, interactive multimedia, image
acquisition and output, web publishing. Prerequisite: DGME130. ART207, PHTO115
recommended. Fall, Spring

DGME175 $ (4)
(was DGME255, part of DGME355)
Digital Imaging
A study of raster graphic fundamentals as they
apply to scanned images. Emphasis on image
manipulation, restoration, tonal enhancement, on-
screen graphics and image acquisition and output.
Visual and procedural problems relating to digital
imaging will be covered, along with techniques of
effective and efficient image enhancement.
Prerequisite: DGME130. ART207, PHTO115
recommended. Spring

DGME185 $ (4)
(was DGME180, part of 300)
Desktop Publishing I
Students learn to produce publications on desktop
computers, including: brochures, magazine
covers, corporate stationary, book covers etc.
Course topics incorporate: Effective page layout,
basic color theory, monitor calibration, gray
balance, tone compression, GCR and UCR, digital
proofing, image acquisition, and final output.
Applications of color theories and color separation
are stressed. Prerequisite: DGME175. Fall,
Spring

DGME215/DGME216 $ (2+2)
Intro to Digital Sound/Digital Video Editing I
A study of digital sound and video acquisition,
manipulation, and storage techniques. Students
learn sound and video terminology, audio
digitizing, video capture, nonlinear audio and
video editing, audio and video applications for
interactive and World Wide Web applications,
and creative audio and video conceptualization.
Prerequisite: DGME175. Fall

DGME220 $ (4)
(was DGME200, part of DGME300)
Digital Vector Graphics I
A study of digital vector graphic imaging
emphasizing graphic production for: print, digital
multimedia, and web publishing. Students learn to
produce images using digital tools and techniques.
These images are implemented in assignments that
mimic real-world situations, such as: compact disc
illustrations, corporate logo creation, product
illustration, etc. Color reproduction techniques
emphasized include process and spot color
separation, color trapping, and proofing.
Perquisite: DGME130. Fall

DGME305 $ (4)
(was DGME310, part of DGME435)
Desktop Publishing II
An advanced study of desktop publishing prin-
ciples including: grid based layout, typographic
applications, layout techniques for printing and
web publications, effective electronic file prepa-
ration, preflighting, and tips for consistent color
reproduction. Prerequisite: DGME185. Spring

DGME330 $ (4)
(was DGME320, part of DGME435)
Digital Vector Graphics II
A course designed to enhance students’ ability to
produce eye-catching graphic images for publishing,
interactive media, and web applications. Students learn techniques for
producing appealing charts and graphs, technical
and informational graphics, realistic image
rendering, and image format conversions.
Prerequisite: DGME220. Spring

DGME340 $ (4)
(was DGME304 plus new material)
Interactive Multimedia I
A survey of leading multimedia techniques using
state of the art software and covering principles of
effective digital multimedia production, interactive
new media concepts, basic scripting,
animation, digital imaging, and sound
manipulation. Students produce digital interactive
presentations, kiosks, and web-ready programs.
Prerequisites: DGME175. Fall

DGME345 $ (4)
(was TCED275, part of DGME325)
Digital Video Editing II
An emphasis on nonlinear video editing,
implementing modern video editing suites.
Students learn video composition, the use of
filters, transitions, alpha channels, video formats
and their application, video recording/capturing,
broadcasting techniques, and the advantages and
limitations of this medium. Prerequisites:
DGME215, 216. Spring

DGME360 $ (4)
(was DGME280 plus new material)
3-D Modeling
A study of basic 3-D modeling principles and
techniques. Students learn 3-D modeling
terminology, points and polygonal manipulation,
model construction, and surfaceing. Students also
implement geometric manipulation tools such as:
Lathe, extrude, boolean effects, metamorphs, text
manipulation and more. Prerequisites: DGME175,
220. Basic drawing skills a plus. Fall

DGME370 $ (4)
(was DGME280 plus new material)
3-D Animation
Basic 3-dimensional animation and rendering.
Students learn to work with splines, keygames,
and to manipulate object geometry on the
computer as they animate and texture 3-D objects.
Basic lighting, compositing and other effects also
implemented. Prerequisites: DGME175, 220.
Spring

DGME375 $ (4)
(was DGME355, part of DGME455)
Advanced Digital Imaging
In-depth manipulation using leading industry
software, emphasizing high quality image
acquisition and output. Students learn to: Produce
duotones, create raster graphic collages, perform
critical image enhancement, create custom
tolettes, and alpha channels for image
compositing. Prerequisites: ART207, DGME175.
Repeatable to 8 credits. Fall, Spring

DGME380 $ (4)
(was DGME400, part of TCED275)
Web Publishing and Graphics
Exploration of the design, storage, retrieval, and
delivery of electronic information using text and
graphic images. Emphasis on publishing via the
World Wide Web, kiosks, HTML authoring,
and digital formats. Effective organization and
planning of data for delivery, efficient design, and
ethics are examined. Prerequisite: DGME340.
Fall, Spring

DGME385 $ (4)
(was DGME405 plus new material)
Interactive Multimedia II
An intermediate multimedia production course
using leading industry software. 2-D and 3-D
image manipulation and animation are
implemented. Topics include interactive new
media presentations, television commercials,
digital video, kiosks, animation for web pages,
and other computer-based presentations. Moderate
Lingo scripting is also covered. Prerequisite:
DGME340. Spring

GRAPHIC IMAGING TECHNOLOGY

GRPH141, 142 $ (4,4)
(merges GRPH131, 132 with part of
DGME125)
Principles of Printing I and II
A study of the graphic arts industry including prepress
concepts, color science, digital printing, digital image
capture and color management. Also more traditional
methods in design, layout, text and page composition,
film assembly, imposition, and many different
printing techniques to produce images on a substrate.
Some business aspects and career possibilities will be
explored. Open to all students. Fall, Spring

GRPH145 $ (4)
(was GRPH140, part of GRPH315)
Screen Graphics I
Basic screen printing principles and practices with
emphasis on stencils, fabric selection, frames,
inks, squeegees, screen reclamation, photography,
digital and conventional artwork to produce
screened projects. The sign industry, large format
digital printing, UV and curved printing sequences
will be explored. Open to all students. Fall

GRPH345 $ (4)
(was GRPH316, part of GRPH315)
Screen Graphics II
In-depth study on making process, simulated
process, index and spot separations for screen
printing. Other decorating methods will be
explored such as transfers, foil, athletic
numbering, glow in the dark, puff and UV. Non-textile applications will also be explored, decorating substrates such as plastics (binders, CDs, etc.) and glass (simulated etch, etc.) and many other substrates. Prerequisite: GRPH145. Spring

PHOTOGRAPHY

PHTO115 $ (4)
Introduction to Photography
Basic introduction to the principles of the camera and darkroom techniques with consideration toward composition, psychological, and aesthetic attitudes in black-and-white photography. Fall, Spring

PHTO200 $ (4) (was PHTO206, part of PHTO207)
Advanced Photography I
Develops the art of photographic perception and use of photography as a visual language. Emphasizes craftsmanship and awareness of tools available, as well as aesthetics, and the art of seeing creatively. Developing skills beyond introductory camera usage is emphasized. Prerequisite: PHTO115. Spring

PHTO210 $ (3)
History of Photography
Historical study of significant contributors in the development of photography and their influence on art and society. Fall

PHTO220 $ (4)
Color Photography I
Designed to acquaint students with color materials, their handling and exposure. Aesthetic and communicative aspects of color photography stressed in producing visually effective color transparencies. Prerequisites: PHTO115 or by permission of instructor. Fall

PHTO285 $ (4) (was PHTO280, part of PHTO370)
Studio
Study of lighting techniques in standard-equipped studio, emphasizing portraiture, commercial illustration, and experimental techniques in both black-and-white color mediums. Prerequisite: PHTO200. Spring

PHTO385 $ (4)
Advanced Studio
An individual approach to an advanced level of studio photography. The student will be able to choose a concentration in the following areas: Portraiture, People/Fashion, Still-Life, Advertising/Illustration, and Location Photography. This course is designed specifically to learn visual concepts and solve visual problems of the commercial photo industry. Repeatable to 12 credits. Prerequisite: PHTO285. Fall, Spring

PHTO400 $ (4)
Digital Photographic Printing
Study in color printing using traditional emulsion based processes and digital color output. Prerequisite: DGME175. Fall

PHTO410 $ (4)
Advanced Photography II
A course designed for the advanced photographer to investigate personal potential in visual exploration, experimentation, and technical excellence. Discussion involves expanding personal vision and exploring new techniques to achieve goals. Repeatable to 8 credits. Prerequisite: PHTO200. Spring

PHTO425 $ (4)
Travel Photography
Designed to be done in conjunction with on-location photography, and provides a background in the specific needs related to travel. Photographic people and their land in foreign environments is emphasized. Unique materials and equipment are discussed as they relate to travel photography. Prerequisite: PHTO115.

TECHNOLOGY

EDUCATION

TCED140 $ (2) (was TCED141, part of TCED142)
Welding Technology
Oxyacetylene and electric welding processes including oxyacetylene welding, cutting, and brazing; basic shielded metal arc welding and basic gas metal arc welding. A limited amount of out-of-position welding will be stressed. Fall

TCED179 $ (2)
Woodturning
Instruction and practice on the wood lathe covering safety and the basic operations used in spindle and face-plate turnings. Projects are of a useful and artistic nature. Spring

TCED180 $ (3-4)
Fundamentals of Woodworking
Emphasis in design, wood identification, and the construction of appropriate projects from drawings. Safety and proper use of wood-working machines and common hand tools stressed. Fall

TCED194/494 $ (1-3)
Project Course
Development of a skill in a given area by working independently under the supervision of the instructor. Prerequisite: Permission of instructor. Repeatable to 12 credits. Fall, Spring

TCED250 $ (3-4) (was TCED251, part of TCED252)
Machine Shop
Basic set-up and operation of lathes, milling machines, grinders, drilling machines, and shapers; safety, machine maintenance, off-hand grinding, drill sharpening, layout, and inspection emphasized. Spring

TCED254 $ (3)
Technical Space Utilization
Acquaints students with the planning and organization of technical facilities. Consideration given to space requirements, building structure, material flow, equipment needs, site location, and environment control of such facilities. Spring

TCED350 $ (2)
Teaching of Technology Education
Teaching methods and strategies applicable to the teaching of technology education at the secondary level. The developing of specific learning experiences and learning through problem-solving is covered. Prerequisite: Permission of instructor.

TCED456 $ (3)
Safety and Loss Control
Safety and the fundamentals of accident prevention with emphasis on schools, school laboratories, and industrial applications. Introduction to the total program of loss control in industry, including the legal implications for both school and industry. Emphasis on the problem of accident prevention and control. Spring

TCED464 $ (3)
Transportation Technology
The field of transportation as related to technology education at the secondary level. Material handling, transportation involving space and atmospheric, marine, and terrestrial modes included.

TCED465 $ (3)
Communication Technology
Study in the field of communications as related to the secondary level in technology education. Emphasis on broadcasting, computers, drafting, photography, graphic arts, telecommunications, and their effect on society.

TCED466 $ (3)
Energy Utilization
Study of different types of energies used by modern society, how they have changed society, and implications for the future.

TCED470 $ (3)
Manufacturing Technology
Study of the manufacturing process as it relates to the teaching of technology education at the secondary level. Emphasizes materials and processes, research and development, management, marketing, and sales.

TCED275/485 $ (1-3)
Topics in
Repeatable in various areas.
TCED495 (1-3)
*Portfolio Development*
Helps the student develop a traditional or electronic portfolio for employment or continuing educational purposes. Emphasis in direction, development, and refinement of the individual portfolio. Repeatable to 12 credits. Prerequisites: minimum of 30 credits in a major and permission of the instructor. *Spring*

TCED597 (1-3)
*Independent Study*
Individual study or research under the direction of a staff member. Repeatable to 6 credits.
Prerequisite: Permission of department chair.