

IMAGING AND APPLIED TECHNOLOGY

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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

SEQUENCE OF TWO-YEAR AND FOUR-YEAR PROGRAMS

The Department of Imaging and Applied Technology plans programs using the “ladder concept,” allowing a student to complete as much education as desired before entering the work force.

Two- and four-year programs are available. Students completing the two-year program may go directly into a four-year program in the same area. The ladder concept allows students to reach the educational goal that best fits their specific needs.

ANCILLARY OPERATIONS

Screen Graphics and LithoTech are ancillary operations of the Department of Imaging and Applied Technology providing students with experience in graphic arts unavailable elsewhere on campus.

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

BT: Digital Multimedia Technology

Major requirements—57

DGME130, 175, 185, 215, 216, 225, 250, 335, 340, 360, 370;
TCED275, 495 plus 12 credits of electives chosen from ART214;
COMM320; CPTR125; DGME305, 345, 385; PHTO115, 300, 365.

Cognate requirements—9

ART104, 207; JOUR140.

Students are accepted into the Digital Multimedia program on a provisional basis until they demonstrate their skills and abilities. By the end of the students' sophomore year they need to have completed ART104, 207; DGME130, 175, 215, 225; and PHTO115 with a cumulative GPA of at least 3.00. They must also submit a portfolio of their work to the department along with a formal application to the Digital Multimedia program.

Applications and portfolios are reviewed by the department during the month of May and the applicant is notified no later than June 30 of acceptance into the program.

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. Two 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.

Web Development. In today's economy almost everyone has a webpage 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—25

ART207; DGME130, 175, 215, 225, 250, 335

Emphasis in Electronic Publishing—32

DGME185, 305; GRPH125, 145; PHTO365; TCED495 plus 10 credits of electives chosen in consultation with advisor.

Cognate requirements—9

ART104, 214; JOUR140

CONSTRUCTION

CNST105 \$ (4)

Residential Construction

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 \$ (3)

Masonry Construction

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 \$ (3)

Electrical Construction

Includes code requirements, design and layout of electrical circuits, wiring methods, and commercial applications. *Fall*

CNST135 \$ (4)

Plumbing Construction

Includes design and layout of waste and water systems, rough-in methods, and trim. Print reading will be covered. *Spring*

DIGITAL MULTIMEDIA TECHNOLOGY

DGME130 \$ (4)

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 raster graphics, interactive multimedia, image acquisition and output, web publishing and e-mail. *Fall, Spring*

DGME175 \$ (4)

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 aesthetic and efficient image enhancement. Prerequisite: DGME130 with a C or better. ART207; PHTO115 recommended. *Fall, Spring*

DGME185 \$ (4)

Desktop Publishing I

Students learn to produce publications on desktop computers, including: brochures, magazine covers, corporate stationery, 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*

DGME215/DGME216 \$ (2+3)

Introduction 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 web applications, and creative audio and video conceptualization. Prerequisite: DGME175. *Fall, Spring*

DGME225 \$ (4)

Digital Vector Graphics

A study of digital vector graphic imaging emphasizing graphic production for print, digital multimedia, and web publishing. Prerequisite: DGME130 or equivalent. *Fall*

DGME250 \$ (4)

Web Publishing I

Exploration of web publishing. Students learn to produce publications on desktop computer using professional desktop publishing software. Prerequisite: DGME130 or equivalent. *Fall*

DGME370 \$ (4)**3-D Animation**

Basic 3-dimensional animation and rendering. Students learn to work with splines, keyframes, 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, 215, 216, 225, 360. *Spring*

DGME385 \$ (4)**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**GRPH125** \$ (3)**Principles of Printing**

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*

GRPH145 \$ (4)**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)**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*

PHTO130 \$ (3)**Fundamentals of Video**

An introductory course in videography emphasizing the terminology, aesthetics, and methods of video production. Prerequisite: PHTO115 or concurrently. *Fall*

PHTO200 \$ (4)**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. *Fall, Spring*

PHTO210 (3)**History of Photography**

Historical study of significant contributors in the development of photography and their influence on art and society. *Fall, Spring*

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)**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*

PHTO300 (3)**Media Ethics**

Understanding the influence and role of the media in who we are and what we value. Provides a language and a forum for discussion on the media and how they influence our lives. *Spring*

PHTO320 (4)**Color Photography II**

An image-oriented course, drawing on the student's background in the use of color comprehension, photographic technical and aesthetic understanding, and working knowledge of emulsion and digital photography. Information in this class is for the sole purpose of comprehensive color image. Prerequisites: DGME175; PHTO220. *Fall*

PHTO365 \$ (4)**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 palettes, and alpha channels for image compositing. Repeatable to 8 credits. Prerequisites: ART207; DGME175 (with a B- or better); PHTO115. *Fall, 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*

PHTO390 (1-4)**Independent Study in Photography**

Further study of photography under direction of instructor. May be repeated. Prerequisites: PHTO115 or equivalent and approval of the instructor. *Fall, Spring*

PHTO400 \$ (4)
Digital Photographic Printing
Study in color printing using traditional emulsion based processes and digital color output. Prerequisites: PHTO220, 365. *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: PHTO285. *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. Photographing people and their land in foreign environments is emphasized. Unique materials and equipment are discussed as they relate to travel photography. Repeatable to 8 credits. Prerequisite: PHTO115.

TECHNOLOGY EDUCATION

TCED140 \$ (2)
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. *Spring*

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

TCED250 \$ (3-4)
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.

TCED390 (1-4)
Internship

Prerequisites applicable to eOTJ. Requirements discussed as