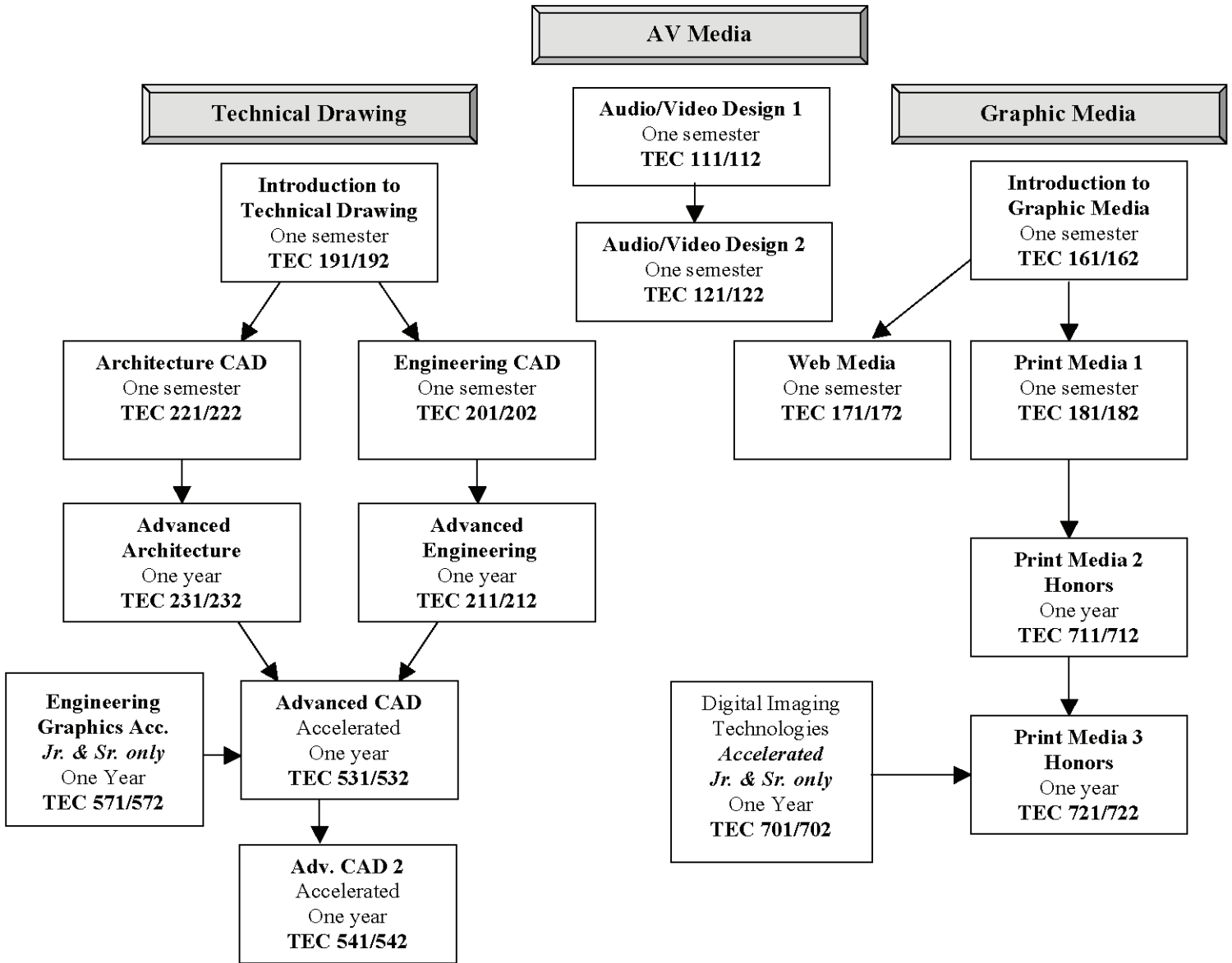


TECHNOLOGY EDUCATION



Suggested Concentration Sequences

* designates 1 semester

<u>Architecture</u>	<u>Engineering</u>	<u>Eng Jr/Sr Opt.</u>	<u>AV Media</u>	<u>Web Media</u>	<u>Graphic Media</u>	<u>Print Media Jr/Sr Opt.</u>
Intro to Tech Draw*	Intro to Tech Draw*	Acc. Eng. Graphics	AV Design 1*	Intro to Grap. Med*	Intro to Grap. Med**	Digital. Imaging Tech.
Arch CAD*	Engineering CAD*	Adv. CAD	AV Design 2*	Web Pub.*	Print Media 1*	Print Media 3
Adv. Architecture	Adv. Engineering				Print Media 2	
Adv. CAD	Adv. CAD				Print Media 3	
Adv. CAD 2	Adv. CAD 2					

TECHNOLOGY EDUCATION DEPARTMENT



The Technology Education Department provides an opportunity for students to explore the latest technological trends in software and hardware of graphic communications, digital media and computer-aided design. Students create practical projects that can enhance their personal and future professional lives.

Audio/Video Design 1 (College Prep)

GPA Waiver Option

TEC111-Semester 1, TEC112-Semester 2

Open to 10-11-12

One Semester

Prerequisite: None – Suggested: Computer Applications or Digital Media

Students who enroll in Audio/Video Design are actively involved in learning and designing dynamic multimedia projects using a variety of programs. Students will produce, edit, and optimize video using professional industry editing software. In addition to learning the technical capabilities of the software, students will incorporate digital audio and video theories through student-generated projects.

Audio Video Design 2 (College Prep)

GPA Waiver Option

TEC121-Semester 1, TEC122-Semester 2

Open to 10-11-12

One Semester

Prerequisite: Audio/Video Design 1

Audio/Video Design 2 will allow students to continue working with professional digital video editing software and expand knowledge through advanced use of software and digital video effects. Topics and projects will focus on sound creation, green screen editing, picture in picture effects, and 3D-like effects through a complex digital video production software. Students who complete this course will have the opportunity to receive articulated credit from Triton College.

Introduction to Technical Drawing (College Prep)

GPA Waiver Option

TEC191-Semester 1, TEC192-Semester 2

Open to 9-10-11-12

One Semester

Prerequisite: None

Introduction to Technical Drawing/CAD is an exploratory course that provides students with knowledge of design procedures, basic technical drawing skills, and the ability to read and prepare two and three-dimensional drawings. CAD (Computer Aided Drafting) software plus basic drafting equipment will be used as students create projects following the design steps of product development. This course is the prerequisite for the Architecture and Engineering sequences.

Architecture CAD (College Prep)

New!

GPA Waiver Option

TEC221-Semester 1, TEC222-Semester 2

Open to 9-10-11-12

One Semester

Prerequisite: Introduction to Technical Drawing

Architecture CAD provides students with an opportunity for development in architectural planning and drawing procedures. Students will design and plan a one-story residential home on a given piece of property using sketching skills and ArchiCAD professional software. The project will cover room plans, presentation drawings, elevations, and plot plans in both 2D drawings and 3D renderings.

Engineering CAD (College Prep)**GPA Waiver Option**

TEC201-Semester 1, TEC202-Semester 2

Open to 9-10-11-12

One Semester

*Prerequisite: Introduction to Technical Drawing –**Recommended for students who are interested in a career in the field of Engineering*

Students experience hands-on learning activities that provide them with an opportunity to design, invent, and create. Students will work in teams and individually to explore the basics of engineering design. Geometrical and graphical construction are used in solving problems. Topics that will be covered include auxiliary views, section views, robotic design and 3-dimensional solid modeling.

Advanced Architecture (College Prep)**GPA Waiver Option**

TEC231-Semester 1, TEC232-Semester 2

Open to 10-11-12

Full Year

Prerequisite: Architecture CAD

This second level architecture class provides students with the opportunity to build upon the architectural planning and drawing skills that were introduced in Architecture CAD. This course is designed to reinforce the concepts, theories and practices of the professional architect. Students will use same ArchiCAD software that is used by professional architects to develop skills in residential design including: foundations, electrical, elevations, and structural detail drawings. The course culminates with a comprehensive project that has students design a home from the ground up on a designated plot with specific building constraints resulting in a model and portfolio of both 2D and beautiful 3D renderings.

Advanced Engineering (College Prep)**GPA Waiver Option**

TEC211-Semester 1, TEC212-Semester 2

Open to 10-11-12

Full Year

Prerequisite: Engineering CAD – Recommended for students who are interested in a career field of Engineering

Advanced Engineering provides students with an opportunity to extend their engineering drawing skills while developing assignments to solve real world engineering problems some of which will result in working prototypes. Projects developed stress teamwork, the design process, creative and analytical thinking. CAD software will be used extensively to create detail and assembly drawings.

Engineering Graphics Accelerated (Accelerated)

TEC571-Semester 1, TEC572-Semester 2

Open to 11-12

Full Year

Prerequisite: Physics-College Prep or Accelerated, and either Advanced Algebra or Pre-Calculus Accelerated – Recommended for students who are interested in a career in Engineering and have NO prior drafting experience. This course can be take concurrently with the prerequisites.

Engineering Graphics offers prospective engineering students a hands-on experience, providing students with a background in descriptive geometry, orthographic projection, auxiliary views, section views, geometric dimensioning and tolerancing and engineering drawing techniques. In teams, students will use their creativity to design and build working models of their project designs.

**Advanced CAD (Accelerated)**

TEC531-Semester 1, TEC532-Semester 2

Open to 11-12

Full Year

Prerequisite: Advanced Architecture, Advanced Engineering or Engineering Graphics – Recommended for students who are interested in a career in architecture, building construction, mechanical design, manufacturing or engineering.

Advanced CAD provides students with an opportunity to extend their knowledge of planning and drawing procedures used in the development and preparation of construction plans for a small office building or manufacturing drawings for a variety of mechanical products. Students will prepare a written problem statement, complete a client or product analysis, develop preliminary design sketches, prepare presentation drawings, create architectural or engineering layouts, calculate strengths of materials, select methods of construction or manufacturing procedures, and draw detail, assembly, and installation documents, and produce models or prototypes of their designs.

Advanced CAD 2 (Accelerated)

TEC541-Semester 1, TEC542-Semester 2

Open to 11-12

Full Year

Prerequisite: Advanced CAD – Recommended for students interested in pursuing a career in architecture or engineering

Students are able to choose and study topics of particular interest on an individual basis revolving around the advanced concepts in architecture and/or mechanical engineering. This capstone course allows students to work with their minds, hands and the computer in the design and construction of scale models, computer-generated renderings, and product animation.

Introduction to Graphic Media (College Prep)**GPA Waiver Option**

TEC161-Semester 1, TEC162-Semester 2

Open to 9-10-11-12

One Semester

Prerequisite: None

Introduction to Publishing Media is a beginning course in the use of the computer to generate images for print publishing and web publishing. Students will be instructed on topics of general printing concepts and design, and will be taught the use of graphics software, word processing software, page-layout software and web authoring software. This project-oriented class will provide opportunities in design and creation of individualized projects that will be produced in a printed medium and published on the web.

**Web Media (College Prep)****GPA Waiver Option**

TEC171-Semester 1, TEC172-Semester 2

Open to 9-10-11-12

One Semester

Prerequisite: Introduction to Graphic Media

Web Media is an advanced experience in website design. The class is project oriented using technology as a tool for research, planning, creating, and publishing interactive web pages. Instruction will include the creation and manipulating text, graphics and animation. Articulation agreement with Triton College.

Print Media 1 (College Prep)**GPA Waiver Option**

TEC181-Semester 1, TEC182-Semester 2

Open to 9-10-11-12

One Semester

Prerequisite: Introduction to Graphic Media

This course is designed to focus on the various imaging/printing technologies in the print media industries. Students will use desktop publishing software and computers to learn about preparing and producing text and graphics for print. Work with raster and vector imaging programs, word processing, and page layout applications will be covered. Students will design and produce basic usable projects such as T-shirts, business cards, notepads, and other introductory one-color work using screen printing, offset and digital duplicators, and electrostatic processes.

Print Media 2 (Honors)

TEC711-Semester 1, TEC712-Semester 2

Open to 10-11-12

Full Year

Prerequisite: Print Media 1

This course is designed to introduce the student to the various imaging/printing technologies in the graphic arts industries. Students will use desktop publishing software and computers to learn about preparing and producing text and graphics for print. Work with raster and vector imaging programs, word processing, and page layout applications will be covered. Students will design and produce basic usable projects such as t-shirts, business cards, notepads, and other introductory one-color work using screen printing, offset and digital duplicators, and electrostatic processes.

Print Media 3 (Honors)

TEC721-Semester 1, TEC722-Semester 2

Open to 11-12

Full Year

Prerequisite: Print Media 2

This course is designed to introduce the student to the various imaging/printing technologies in the graphic arts industries. Students will use desktop publishing software and computers to learn about preparing and producing text and graphics for print. Work with raster and vector imaging programs, word processing, and page layout applications will be covered. Students will design and produce basic usable projects such as t-shirts, business cards, notepads, and other introductory one-color work using screen printing, offset and digital duplicators, and electrostatic processes. This course may be taken twice.

Digital Imaging Technologies (Accelerated)

TEC701-Semester 1, TEC702-Semester 2

Open to 11-12

Full Year

Prerequisite: None – Recommended for Juniors and Seniors with a strong interest in Print

Digital Imaging Technologies will provide students with an advanced knowledge of the print media industry and its technologies. Students will learn about desktop publishing, print imaging, digital image assembly, plate making, offset and digital duplicator operation, bindery techniques, and the screen printing operations of stencil making and printing. Students will do assignments that will result in the generation of usable finished products such as T-shirts, business cards, notepads, booklets, flyers, mouse pads, etc. Projects will focus on single and multicolor printing as well as advanced digital imaging processes. This class is intended to combine the content of the first two Print Media classes (Print Media and Print Media 1) so that, at completion of this course, students are prepared for enrollment in Print Media 3.