



Technology, Art, and Design

The Department of Technology, Art and Design offers a variety of programs that span the application of technology, art and design in response to a range of human wants and needs. Courses nurture the development of individual creative expression, critical thinking and problem solving skills. Degree programs foster the development of knowledge and skills to design and develop creative solutions that address operations and future needs in an array of cultural, design, business, technological and industrial settings.

The department offers a nationally accredited* Bachelor of Science program in Industrial Technology, with specializations in Construction Management and Manufacturing Management. Along with the associated Bachelor of Applied Science programs in Applied Engineering and Technology Management, these degree options offer both four-year and transfer students the opportunity to prepare for leadership roles in a wide range of technologically based enterprises including but not limited to the fields of construction, energy, manufacturing and sustainability.

Transfer students have the option to enroll in either the Bachelor of Applied Science program in Applied Engineering or Technology Management. Both degrees are offered as “2 + 2” programs online or on campus for working professionals who have either an Associate of Science degree, Associate of Applied Science degree, diploma or certificate and wish to complete a Bachelor’s degree.

The Bachelor of Science in Art and Design offers students a unique and exciting opportunity to pursue careers that demand excellence in a combination of technical, creative, and artistic capabilities. Students can pursue specializations in either Studio Arts or Digital and Exhibit Design. All Art and Design students benefit from a portfolio review process, a graduation requirement that offers them the opportunity to present their professional portfolios to leaders in their industries from across the nation. Students transferring from a MnSCU Community and/or Technical College with an Associate degree in a related design field may be eligible for articulated transfer into the Art and Design program.

The Department of Technology, Art and Design offers five exhibition spaces that present local, regional, national and international exhibits. The gallery program also maintains permanent collections in ceramics and prints.

*The BS in Industrial Technology is accredited by the Association of Technology, Management, and Applied Engineering (<http://atmae.org>).

Programs

- Applied Engineering, B.A.S. *major*
- Art and Design, B.S. (Studio Arts Emphasis) *major*
- Art and Design, B.S. (Articulated Emphasis) *major*
- Art and Design, B.S. (Digital and Exhibit Design Emphasis) *major*
- Industrial Technology, B.S. (Manufacturing Management Emphasis) *major*
- Industrial Technology, B.S. (Manufacturing Technology Emphasis) *major*
- Industrial Technology, B.S. (Construction Management Emphasis) *major*
- Technology Management, B.A.S. *major*

Career Directions

- Applications Engineering
- Art Director
- Artist/Technician
- Construction Management
- Construction Management Engineer
- Engineer
- Exhibit Designer
- Field Engineer
- Graphic Designer
- Industrial/Architectural Rendering Management
- Manufacturing Engineering
- Model Building
- Multimedia Specialist/Designer
- Pre-press Production
- Print Production
- Process Planning
- Quality Control Engineering
- Research and Development
- Safety Engineer
- Teaching
- Technical Sales
- Web Page Development
- Also: Graduate Study

Preparation

Recommended High School Courses

- Drafting
- Graphic Arts
- Production
- Construction
- Manufacturing
- Electronics
- Robotics
- Art/Fine Arts
- CADD/Computer Programming
- Project Lead the Way classes

Applied Engineering, B.A.S. *major*

The Applied Engineering Program is designed to prepare individuals to work in

a variety of applied engineering career paths in business or industry. The program is designed specifically for individuals who typically possess a two-year technical degree and are interested in advancing their professional career. The program is a “2+2” degree that permits students to apply their 2 year technical degree

credits toward a baccalaureate degree. Coupled with a two-year technical degree providing a focused foundation, students will complete junior- and senior-level courses covering a broad range of applied engineering concepts and applications. This breadth will provide maximum flexibility for graduates to pursue diverse employment opportunities. Completion of the degree is available through a web-based distance delivery format. Students should work closely with an advisor to obtain program and course selection information.

Required Credits: 69

Required GPA: 2.25

I REQUIRED TECHNICAL CORE COURSES

Requires 26 technical credits transferred from an A.S. or A.A.S. degree, or a diploma (e.g., Manufacturing Technology, Automation Technology)

II REQUIRED APPLIED ENGINEERING TECHNOLOGY CORE

COMPLETE THE FOLLOWING COURSES:

- IT 3100 Principles and Practices of Professional Development (2 credits)
- IT 3267 Engineering Cost Analysis (3 credits)
- IT 3460 Parametric 3-D Modeling (3 credits)
- IT 3700 Production Planning and Control (3 credits)
- IT 3877 Engineering Problem Solving (3 credits)
- IT 4460 Design for Manufacturability (3 credits)
- IT 4878 Quality Assurance (3 credits)
- IT 4879 Service Process Design and Improvement (3 credits)
- IT 4897 Project Management (3 credits)

III APPLIED ENGINEERING TECHNOLOGY ELECTIVES

SELECT 14 CREDITS FROM THE FOLLOWING WITH ASSISTANCE FROM A FACULTY ADVISOR:

- BUAD 3281 Decision Support Systems (3 credits)
- BUAD 3361 Marketing (3 credits)
- BUAD 3381 Management Information Systems (3 credits)
- BUAD 3771 Financial Management (3 credits)
- ENGL 3155 Professional Writing (3 credits)
- IT 3217 Materials Science And Metallurgy (3 credits)
- IT 3870 Technical Sales/Presentations (2 credits)
- IT 3879 Performance Measurement (3 credits)
- IT 3880 Human Resource Development (2 credits)
- IT 4537 Industrial Design (3 credits)
- IT 4777 Advanced Topics in Quality (3 credits)
- IT 4877 Industrial Maintenance And Safety (3 credits)
- IT 4880 Total Quality Management (3 credits)
- IT 4970 Internship (1-12 credits)

IV REQUIRED ENGINEERING CAPSTONE

COMPLETE THE FOLLOWING COURSE:

- IT4820

Degree Summary

Required Technical Core (26 credits)

Required Applied Engineering Technology Core (26 credits)***

Applied Engineering Technology Electives (14 credits)***

Required Engineering Capstone (3 credits)

Liberal Education (42 credits)

Free Electives (17 credits)

Total = 128 credits

***Applied Engineering Technology Core credits (26) plus Applied Engineering Technology Electives credits (14) = 40 upper division credit requirement.

Note: Upon approval of the Technological Studies staff, certain major courses may be substituted in the Applied Engineering Technology Core and/or Applied Engineering Technology Electives from related Technical and Community College Programs.

Art and Design, B.S. *major* Studio Arts Emphasis

Required Credits: 68

Required GPA: 2.75

REQUIRED CORE COURSES

COMPLETE THE FOLLOWING COURSES:

- TADD 1440 Design and Drawing Foundations (4 credits)
- TADD 2440 2D Digital Foundations (4 credits)
- TADD 3440 3D Digital Foundations (4 credits)
- TADD 3450 History of Modern Design (4 credits)

STUDIO ARTS EMPHASIS

REQUIRED COURSES

COMPLETE 36 CREDITS FROM THE FOLLOWING COURSES:

- TADD 3648 Color Theory (4 credits)
- TADD 3649 Introduction to Painting (4 credits)
- TADD 3658 Advanced Drawing (4 credits)
- TADD 3659 Life Drawing (4 credits)
- TADD 3669 Photography and Digital Imaging (4 credits)
- TADD 3748 Ceramics/Hand Building (4 credits)
- TADD 3749 Ceramics/Wheel (4 credits)
- TADD 4649 Advanced Painting (4 credits)
- TADD 4659 Trends in Visual Arts (4 credits)
- TADD 4749 Ceramics/Non-Vessel (4 credits)

REQUIRED COURSE

- TADD 4450 Studio Arts Senior Culmination (4 credits)

REQUIRED GUIDED ELECTIVES

WITH CONSENT OF PROGRAM ADVISOR SELECT 12 CREDITS FROM

TADD/TADT COURSES AND/OR

TADD/TADT 4970 INTERNSHIP (UP TO 4 CREDITS)

- TADD 4970 Internship (1-12 credits)
- TADT 4970 Internship (1-12 credits)
- TADD****

Art and Design, B.S. *major* Articulated Emphasis

Required Credits: 68

Required GPA: 2.75

REQUIRED CORE COURSES

Articulated students transfer their credits from the related program directly into BSU's Art and Design program as 8 lower level credits in the Required Core and 20 credits into the articulated specialization.

All other transfer credits fulfill general elective requirements for the degree. (maximum of 28 credits accepted into the major)

COMPLETE THE FOLLOWING COURSES:

- TADD 3440 3D Digital Foundations (4 credits)
- TADD 3450 History of Modern Design (4 credits)

COMPLETE an additional 28 upper division credits from Digital & Exhibit Design or Studio Arts emphasis options and the related Senior Culmination (TADD 4440 or TADD 4450) emphasis course.

Art and Design, B.S. *major* Digital and Exhibit Design Emphasis

Required Credits: 68

Required GPA: 2.75

REQUIRED CORE COURSES

COMPLETE THE FOLLOWING COURSES:

- TADD 1440 Design and Drawing Foundations (4 credits)
- TADD 2440 2D Digital Foundations (4 credits)
- TADD 3440 3D Digital Foundations (4 credits)
- TADD 3450 History of Modern Design (4 credits)

DIGITAL AND EXHIBIT DESIGN EMPHASIS

REQUIRED COURSES

- TADD 3548 Digital Media/3D (4 credits)
- TADD 3549 Digital Media/Interactive (4 credits)
- TADD 3568 Exhibit Design/Trade Show (4 credits)
- TADD 3569 Exhibit Design/Environments (4 credits)
- TADD 3578 Digital Print/Typography and Grid (4 credits)
- TADD 3579 Digital Print/Branding and Publication (4 credits)
- TADD 4440 Digital Design Senior Culmination (4 credits)
- TADD 4549 Advanced Digital Media Design (4 credits)
- TADD 4569 Advanced Exhibit Design (4 credits)
- TADD 4579 Advanced Digital Print Design (4 credits)

REQUIRED GUIDED ELECTIVES
WITH CONSENT OF PROGRAM ADVISOR SELECT 12 CREDITS FROM
THE STUDIO ARTS EMPHASIS, TADT COURSES, AND/OR
TADD/TADT 4970 INTERNSHIP (UP TO 4 CREDITS).

- TADD 3648 Color Theory (4 credits)
- TADD 3649 Introduction to Painting (4 credits)
- TADD 3658 Advanced Drawing (4 credits)
- TADD 3659 Life Drawing (4 credits)
- TADD 3669 Photography and Digital Imaging (4 credits)
- TADD 3748 Ceramics/Hand Building (4 credits)
- TADD 3749 Ceramics/Wheel (4 credits)
- TADD 4649 Advanced Painting (4 credits)
- TADD 4659 Trends in Visual Arts (4 credits)
- TADD 4749 Ceramics/Non-Vessel (4 credits)
- TADD 4450 Studio Arts Senior Culmination (4 credits)
- TADT 4970 Internship (1-12 credits)
- TADD 4970 Internship (1-12 credits)

Industrial Technology, B.S. *major* Manufacturing Management Emphasis

Required Credits: 81

Required GPA: 2.25

I REQUIRED TECHNICAL CORE COURSES

COMPLETE THE FOLLOWING COURSES:

- IT1100
- IT 1210 Materials And Processes - Forming (4 credits)
- IT 1220 Materials And Processes - Separating (4 credits)
- IT 1310 Mechanical Power (2 credits)
- IT 1350 Electronic Technology (4 credits)
- IT1410
- IT 1460 Technical Graphics (3 credits)
- IT 2250 Construction Technology (2 credits)
- IT 2370 Automation Technology (3 credits)
- IT 3310 Fluid Power (3 credits)
- IT 4537 Industrial Design (3 credits)

II REQUIRED PROFESSIONAL CORE COURSES

COMPLETE THE FOLLOWING COURSES:

- IT 3870 Technical Sales/Presentations (2 credits)
- IT 3880 Human Resource Development (2 credits)
- IT 3890 Material Handling And Plant Layout (2 credits)
- IT 4877 Industrial Maintenance And Safety (3 credits)
- IT 4878 Quality Assurance (3 credits)
- IT 4890 Industrial Organization And Leadership (3 credits)
- IT 4897 Project Management (3 credits)

III REQUIRED FOUNDATION COURSES

TAKE 6 SEMESTER CREDITS OF MATH AT THE 1100 OR HIGHER LEVEL. STUDENTS ARE ENCOURAGED TO TAKE STATISTICS AND CALCULUS.

TAKE 7 SEMESTER CREDITS FROM AMONG THE PHYSICS, CHEMISTRY, OR PHYSICAL SCIENCE (SPECIFICALLY, SCI 1110 AND SCI 1120) COURSES THAT ARE APPROVED TO FULFILL LIBERAL EDUCATION CATEGORY 3. OTHER CATEGORY 3

COURSES

MAY BE SUBSTITUTED IF APPROVED BY THE CHAIR OF THE DEPARTMENT OF TECHNOLOGICAL STUDIES.

MANUFACTURING MANAGEMENT EMPHASIS

BLOCK I-SELECT 12 SEMESTER CREDITS FROM THE FOLLOWING

COURSES:

- IT 3460 Parametric 3-D Modeling (3 credits)
- IT 3877 Engineering Problem Solving (3 credits)
- IT 3879 Performance Measurement (3 credits)
- IT 4870 Production Management (3 credits)
- IT 4880 Total Quality Management (3 credits)

BLOCK II-SELECT 6 SEMESTER CREDITS FROM THE FOLLOWING

COURSES:

IT 4970, select among ACCT and BUAD non-liberal Education courses.

SUGGESTED SEMESTER SCHEDULE FOR INDUSTRIAL TECHNOLOGY MAJOR, B.S.

The following is a list of required Industrial Technology Major, B.S. courses arranged by year. This schedule is intended to help students plan their courses in an orderly fashion; however, these are only suggestions and this schedule is flexible.

Freshman

- IT1100
- IT 1210 Materials And Processes - Forming (4 credits)
- IT 1220 Materials And Processes - Separating (4 credits)
- IT 1460 Technical Graphics (3 credits)
- Liberal Education Courses

Sophomore

- IT 1310 Mechanical Power (2 credits)
- IT 1350 Electronic Technology (4 credits)
- IT1410
- IT 2250 Construction Technology (2 credits)
- IT 2370 Automation Technology (3 credits)
- Liberal Education Courses

Junior

- IT 3310 Fluid Power (3 credits)
- IT 3870 Technical Sales/Presentations (2 credits)
- IT 3880 Human Resource Development (2 credits)
- IT 3890 Material Handling And Plant Layout (2 credits)
- Major Specialization Courses
- Liberal Education Courses

Senior

- IT 4537 Industrial Design (3 credits)
- IT 4877 Industrial Maintenance And Safety (3 credits)
- IT 4878 Quality Assurance (3 credits)
- IT 4890 Industrial Organization And Leadership (3 credits)
- IT 4897 Project Management (3 credits)
- Major Specialization Courses
- Liberal Education Courses

Industrial Technology, B.S. *major* Manufacturing Technology Emphasis

Required Credits: 81

Required GPA: 2.25

I REQUIRED TECHNICAL CORE COURSES

COMPLETE THE FOLLOWING COURSES:

- IT1100
- IT 1210 Materials And Processes - Forming (4 credits)
- IT 1220 Materials And Processes - Separating (4 credits)
- IT 1310 Mechanical Power (2 credits)
- IT 1350 Electronic Technology (4 credits)
- IT1410
- IT 1460 Technical Graphics (3 credits)
- IT 2250 Construction Technology (2 credits)
- IT 2370 Automation Technology (3 credits)
- IT 3310 Fluid Power (3 credits)
- IT 4537 Industrial Design (3 credits)

II REQUIRED PROFESSIONAL CORE COURSES

COMPLETE THE FOLLOWING COURSES:

- IT 3870 Technical Sales/Presentations (2 credits)
- IT 3880 Human Resource Development (2 credits)
- IT 3890 Material Handling And Plant Layout (2 credits)
- IT 4877 Industrial Maintenance And Safety (3 credits)
- IT 4878 Quality Assurance (3 credits)
- IT 4890 Industrial Organization And Leadership (3 credits)
- IT 4897 Project Management (3 credits)

III REQUIRED FOUNDATION COURSES

TAKE 6 SEMESTER CREDITS OF MATH AT THE 1100 OR HIGHER LEVEL. STUDENTS ARE ENCOURAGED TO TAKE STATISTICS AND CALCULUS.

TAKE 7 SEMESTER CREDITS FROM AMONG THE PHYSICS, CHEMISTRY, OR PHYSICAL SCIENCE (SPECIFICALLY, SCI 1110 AND SCI 1120) COURSES THAT ARE APPROVED TO FULFILL LIBERAL EDUCATION CATEGORY 3. OTHER CATEGORY 3 COURSES

MAY BE SUBSTITUTED IF APPROVED BY THE CHAIR OF THE DEPARTMENT OF TECHNOLOGICAL STUDIES.

MANUFACTURING TECHNOLOGY EMPHASIS

BLOCK I-SELECT 12 SEMESTER CREDITS FROM THE FOLLOWING

COURSES:

- IT 2608 Computer-Controlled Machining (3 credits)
- IT 3217 Materials Science And Metallurgy (3 credits)
- IT 3218 Advanced Machining Processes (3 credits)
- IT 3460 Parametric 3-D Modeling (3 credits)
- IT 3877 Engineering Problem Solving (3 credits)

BLOCK II-SELECT 6 SEMESTER CREDITS FROM THE FOLLOWING

COURSES:

IT 4970; courses applicable toward a minor in Computer Science (non-teaching); Physics (may include lower

sequence); Chemistry (not CHEM 2925); or MATH (non-Teaching).

SUGGESTED SEMESTER SCHEDULE FOR INDUSTRIAL TECHNOLOGY MAJOR, B.S.

The following is a list of required Industrial Technology Major, B.S. courses arranged by year. This schedule is intended to help students plan their courses in an orderly fashion; however, these are only suggestions and this schedule is flexible.

Freshman

- IT1100
- IT 1210 Materials And Processes - Forming (4 credits)
- IT 1220 Materials And Processes - Separating (4 credits)
- IT 1460 Technical Graphics (3 credits)
- Liberal Education Courses

Sophomore

- IT 1310 Mechanical Power (2 credits)
- IT 1350 Electronic Technology (4 credits)
- IT1410
- IT 2250 Construction Technology (2 credits)
- IT 2370 Automation Technology (3 credits)
- Liberal Education Courses

Junior

- IT 3310 Fluid Power (3 credits)
- IT 3870 Technical Sales/Presentations (2 credits)
- IT 3880 Human Resource Development (2 credits)
- IT 3890 Material Handling And Plant Layout (2 credits)
- Major Specialization Courses
- Liberal Education Courses

Senior

- IT 4537 Industrial Design (3 credits)
- IT 4877 Industrial Maintenance And Safety (3 credits)
- IT 4878 Quality Assurance (3 credits)
- IT 4890 Industrial Organization And Leadership (3 credits)
- IT 4897 Project Management (3 credits)
- Major Specialization Courses
- Liberal Education Courses

Industrial Technology, B.S. *major* Construction Management Emphasis

Required Credits: 81
Required GPA: 2.25

I REQUIRED TECHNICAL CORE COURSES

COMPLETE THE FOLLOWING COURSES:

- IT1100
- IT 1210 Materials And Processes - Forming (4 credits)
- IT 1220 Materials And Processes - Separating (4 credits)
- IT 1310 Mechanical Power (2 credits)
- IT 1350 Electronic Technology (4 credits)
- IT1410
- IT 1460 Technical Graphics (3 credits)

- IT 2250 Construction Technology (2 credits)
- IT 2370 Automation Technology (3 credits)
- IT 3310 Fluid Power (3 credits)
- IT 4537 Industrial Design (3 credits)

II REQUIRED PROFESSIONAL CORE COURSES

COMPLETE THE FOLLOWING COURSES:

- IT 3870 Technical Sales/Presentations (2 credits)
- IT 3880 Human Resource Development (2 credits)
- IT 3890 Material Handling And Plant Layout (2 credits)
- IT 4877 Industrial Maintenance And Safety (3 credits)
- IT 4878 Quality Assurance (3 credits)
- IT 4890 Industrial Organization And Leadership (3 credits)
- IT 4897 Project Management (3 credits)

III REQUIRED FOUNDATION COURSES

TAKE 6 SEMESTER CREDITS OF MATH AT THE 1100 OR HIGHER LEVEL. STUDENTS ARE ENCOURAGED TO TAKE STATISTICS AND CALCULUS.

TAKE 7 SEMESTER CREDITS FROM AMONG THE PHYSICS, CHEMISTRY, OR PHYSICAL SCIENCE (SPECIFICALLY, SCI 1110 AND SCI 1120) COURSES THAT ARE APPROVED TO FULFILL LIBERAL EDUCATION CATEGORY 3. OTHER CATEGORY 3 COURSES MAY BE SUBSTITUTED IF APPROVED BY THE CHAIR OF THE DEPARTMENT OF TECHNOLOGICAL STUDIES.

CONSTRUCTION MANAGEMENT EMPHASIS

BLOCK I-COMplete THE FOLLOWING COURSES:

- IT 3240 Construction Materials And Practices (3 credits)
- IT 3250 Print Reading and Project Documentation (3 credits)
- IT 3260 Project Bidding And Estimating (3 credits)
- IT 4259 Construction Management (3 credits)

BLOCK II-SELECT 6 SEMESTER CREDITS FROM THE FOLLOWING COURSES:

IT 4970, select among ACCT and BUAD non-liberal Education courses.

SUGGESTED SEMESTER SCHEDULE FOR INDUSTRIAL TECHNOLOGY MAJOR, B.S.

The following is a list of required Industrial Technology Major, B.S. courses arranged by year. This schedule is intended to help students plan their courses in an orderly fashion; however, these are only suggestions and this schedule is flexible.

Freshman

- IT1100
- IT 1210 Materials And Processes - Forming (4 credits)
- IT 1220 Materials And Processes - Separating (4 credits)
- IT 1460 Technical Graphics (3 credits)
- Liberal Education Courses

Sophomore

- IT 1310 Mechanical Power (2 credits)
- IT 1350 Electronic Technology (4 credits)

- IT1410
- IT 2250 Construction Technology (2 credits)
- IT 2370 Automation Technology (3 credits)
- Liberal Education Courses

Junior

- IT 3310 Fluid Power (3 credits)
- IT 3870 Technical Sales/Presentations (2 credits)
- IT 3880 Human Resource Development (2 credits)
- IT 3890 Material Handling And Plant Layout (2 credits)
- Major Specialization Courses
- Liberal Education Courses

Senior

- IT 4537 Industrial Design (3 credits)
- IT 4877 Industrial Maintenance And Safety (3 credits)
- IT 4878 Quality Assurance (3 credits)
- IT 4890 Industrial Organization And Leadership (3 credits)
- IT 4897 Project Management (3 credits)
- Major Specialization Courses
- Liberal Education Courses

Technology Management, B.A.S. *major*

Required Credits: 44

Required GPA: 2.25

I REQUIRED TECHNICAL CORE COURSES

SELECT 26 SEMESTER CREDITS FROM THE FOLLOWING COURSES:

- IT1100
- IT 1210 Materials And Processes - Forming (4 credits)
- IT 1220 Materials And Processes - Separating (4 credits)
- IT 1310 Mechanical Power (2 credits)
- IT 1350 Electronic Technology (4 credits)
- IT1410
- IT 1460 Technical Graphics (3 credits)
- IT 2250 Construction Technology (2 credits)
- IT 2370 Automation Technology (3 credits)
- IT 3310 Fluid Power (3 credits)
- IT 4537 Industrial Design (3 credits)

II REQUIRED PROFESSIONAL CORE COURSES

COMPLETE THE FOLLOWING COURSES:

- IT 3870 Technical Sales/Presentations (2 credits)
- IT 3880 Human Resource Development (2 credits)
- IT 3890 Material Handling And Plant Layout (2 credits)
- IT 4877 Industrial Maintenance And Safety (3 credits)
- IT 4878 Quality Assurance (3 credits)
- IT 4890 Industrial Organization And Leadership (3 credits)
- IT 4897 Project Management (3 credits)

Courses

All-University Courses

The course numbers listed below, not always included in the semester class

schedule, may be registered for by consent of the advisor, instructor, or department chair, or may be assigned by the department when warranted. Individual registration requires previous arrangement by the student and the completion of any required form or planning outline as well as any prerequisites.

1910, 2910, 3910, 4910 DIRECTED INDEPENDENT STUDY
 1920, 2920, 3920, 4920 DIRECTED GROUP STUDY
 1930, 2930, 3930, 4930 EXPERIMENTAL COURSE
 1940, 2940, 3940, 4940 IN-SERVICE COURSE
 1950, 2950, 3950, 4950 WORKSHOP, INSTITUTE, TOUR
 1960, 2960, 3960, 4960 SPECIAL PURPOSE INSTRUCTION
 1970, 2970, 3970, 4970 INTERNSHIP
 1980, 2980, 3980, 4980 RESEARCH
 1990, 2990, 3990, 4990 THESIS

Technology, Art and Design - Design Courses

TADD 1440 Design and Drawing Foundations (4 credits)

Two-dimensional visual design and problem solving through introductory drawing experiences. An introduction to the various methods and techniques along with use of materials and understanding of the elements of design and drawing. Students gain a psychological understanding of the connection between humans and nature and the influence of natural forms in the creative process. Liberal Education Goal Area 6

TADD 2440 2D Digital Foundations (4 credits)

An introduction to 2D digital techniques used to create and edit bitmap, vector, and metafile graphic images for various print and digital outputs. Students gain experience in the ideation and critical thinking process used to design and analyze imagery.

TADD 2931 Experimental Course (4 credits)

A course proposed for inclusion in the University curriculum. May not be offered more than two times as an experimental course.

TADD 3251 Watercolor/Aqueous Media (3 credits)

Concentration on the study of composition, color and light, leading to an understanding of watercolor and/or acrylics. Prerequisite: VSAR 2250 or consent of instructor.

TADD 3440 3D Digital Foundations (4 credits)

A comprehensive study of 3D computer modeling and rendering as it relates to spatial definition and form in exhibition design. Prerequisite: 2.75 overall GPA or consent of instructor.

TADD 3450 History of Modern Design (4 credits)

An advanced level survey of major movements and tendencies, and key figures in the development of graphic, craft, and industrial design between the mid-nineteenth century and the present day. Prerequisite: 2.75 overall GPA or consent of instructor. Liberal Education Goal Area 6

TADD 3548 Digital Media/3D (4 credits)

Includes topics on advanced 3D modeling and digital video editing techniques. Focuses on 3D modeling, materials, lighting, and rendering. In combination with the 3D elements, also includes topics on video production, menu design, and video delivery methods. Prerequisites: TADD 1440, TADD 2440, TADD 3440, and 2.75 overall GPA, or consent of instructor.

TADD 3549 Digital Media/Interactive (4 credits)

Focuses on digital media development tailored towards interactive design. Includes topics on digital-signage, flash/web design, and application development. Prerequisites: TADD 1440, TADD 2440, TADD 3440, and 2.75 overall GPA, or consent of instructor.

TADD 3568 Exhibit Design/Trade Show (4 credits)

Focused study of the essential components of exhibition design as they relate to designing for the trade show industry. Engages the exhibit designer in project proposal and design of trade show booths of various types and sizes. Includes concepts relating to "green," modular/portable booths, fabric design solutions, and designing from an RFP. Prerequisites: TADD 1440, TADD 2440, TADD 3440, and 2.75 overall GPA, or consent of instructor; Corequisite: May be taken concurrently with TADD 3440.

TADD 3569 Exhibit Design/Environments (4 credits)

Focused study of the essential components of the exhibition design industry as they relate to designing for three-dimensional environments such as corporate lobbies, educational/museum exhibits, outdoor installations/museums, visitor centers, etc. Prerequisites: TADD 1440, TADD 2440, TADD 3440, and 2.75 overall GPA, or consent of instructor; Corequisite: May be taken concurrently with TADD 3440.

TADD 3578 Digital Print/Typography and Grid (4 credits)

A theoretical and practical study of the visual nature and expressive potential of digital type forms as a fundamental tool of the graphic designer. Students also practice digital print production that includes preparation of all digital typographic and/or graphic assets, and digital layout assembly to create single, spot, and process color documents. Prerequisites: TADD 2440 and 2.75 overall GPA, or consent of instructor.

TADD 3579 Digital Print/Branding and Publication (4 credits)

A theoretical and practical study of the visual and conceptual problems related to branding and packaging. Students also practice digital print production management techniques for all digital assets, and digital layout assembly to create 3D package design, visual identity systems, and related marketing materials. Prerequisites: TADD 2440 and 2.75 overall GPA, or consent of instructor.

TADD 3648 Color Theory (4 credits)

Addresses basic principles of color theories and applications of color in drawing, painting, and design. Using a variety of materials, tools, and techniques, students work on projects that demonstrate concepts such as color mixing, color interaction, color space, color emphasis, and color emotion. Prerequisites: TADD 1440 and 2.75 overall GPA, or consent of instructor. Liberal Education Goal Area 6

TADD 3649 Introduction to Painting (4 credits)

Gives students a basic foundation in painting. Students investigate basic materials, techniques, and form and content as applied to painting. Prerequisite(s): TADD 3648 and 2.75 overall GPA, or consent of instructor. Liberal Education Goal Area 6

TADD 3658 Advanced Drawing (4 credits)

A continued study and application of design elements and principles with a focus on expressive drawing. Drawing materials, papers, and techniques are explored, with an increased use of color. Prerequisites: TADD 1440 and 2.75 overall GPA, or consent of instructor.

TADD 3659 Life Drawing (4 credits)

Expanded instruction in drawing the human figure. This course allows the student to expand his/her knowledge and technical fluency on an individual basis, and encourages personal expression and development. Prerequisites: TADD 1440 and 2.75 overall GPA, or consent of instructor.

TADD 3669 Photography and Digital Imaging (4 credits)

Explores digital photography and imaging techniques with special application to art, design, and communication, with an emphasis on understanding the control and effects of light. Prerequisites: TADD 1440, TADD 2440, and 2.75 overall GPA, or consent of instructor.

TADD 3748 Ceramics/Hand Building (4 credits)

The study and application of hand building for 3-dimensional visual design and problem solving that is integrated with the introduction to basic forming methods, glazing and firing of ceramic forms. Prerequisite: 2.75 overall GPA or consent of instructor. Liberal Education Goal Area 6

TADD 3749 Ceramics/Wheel (4 credits)

Three-dimensional visual design and problem solving is integrated with an introduction to potters wheel forming methods, glazing, and firing of ceramic forms. Prerequisite: 2.75 overall GPA or consent of instructor. Liberal Education Goal Area 6

TADD 4250 Advanced Painting (1-4 credits)

Emphasis on individual understanding of painting media with special attention to creating a body of work appropriate to the individual painter. Prerequisite: VSAR 3252.

TADD 4440 Digital Design Senior Culmination (4 credits)

Focuses on the preparation and presentation of a professional portfolio and interviewing techniques. Students also gain an understanding of personnel management issues, leadership and management styles, basic business principles, and models. Prerequisites: TADD 4549, TADD 4569, TADD 4579, and 2.75 overall GPA, or consent of instructor.

TADD 4450 Studio Arts Senior Culmination (4 credits)

An examination and application of the functions and means of developing a well-designed art exhibition, culminating in an on-campus individual or group exhibition of an Art and Design major's personal art work. Thesis projects may culminate in research or experiential activities. Prerequisites: Senior status and 2.75 overall GPA, or consent of instructor.

TADD 4549 Advanced Digital Media Design (4 credits)

Focuses on combining several digital media elements. Combines 3D modeling, video-production, audio-production, and interactive delivery methods in order to produce advanced digital media content. Prerequisites: TADD 3548, TADD 3549, and 2.75 overall GPA, or consent of instructor.

TADD 4569 Advanced Exhibit Design (4 credits)

Advanced application of exhibit industry design concepts. Includes custom booths, exhibit construction systems, and flexible modular/portable designs. Students are also engaged in various aspects of project management, cost estimation, and budgeting. Prerequisites: TADD 3568, TADD 3569, and 2.75 overall GPA, or consent of instructor.

TADD 4579 Advanced Digital Print Design (4 credits)

A practical study of digital print design production systems within a design team structure to solve practical and complex design problems. Prerequisites: TADD 3578, TADD 3579, and 2.75 overall GPA, or consent of instructor.

TADD 4620 Topics in Studio Arts: [subtitled] (2-4 credits)

Research, advanced exploration, and/or applied study of various topics related to studio arts. Prerequisite: 2.75 overall GPA or consent of instructor. May not be offered every year. Repeatable up to 8 credits

TADD 4630 Topics in Digital Design: [subtitled] (2-4 credits)

Research, advanced exploration, and/or applied study of various topics related to digital design. Prerequisite: 2.75 overall GPA or consent of instructor. May not be offered every year. Repeatable up to 8 credits

TADD 4649 Advanced Painting (4 credits)

Further develops students' understanding of painting. Students investigate use of materials, techniques, form, and content as applied to painting. Prerequisites: TADD 3649 and 2.75 overall GPA, or consent of instructor.

TADD 4659 Trends in Visual Arts (4 credits)

Through lectures, readings, gallery visits, and hands-on activities, students develop an understanding of the elements and principles of art, a basic vocabulary for describing visual art, a general understanding of the role art has played throughout history, and contemporary trends. Prerequisite: 2.75 overall GPA or consent of instructor.

TADD 4749 Ceramics/Non-Vessel (4 credits)

Two- and three-dimensional visual design and problem solving is integrated with the making of non-vessel ceramic forms such as sculpture and tiles. Glazing and firing of ceramic forms is also addressed. Prerequisite: 2.75 overall GPA or consent of instructor. May not be offered every year

TADD 4808 Special Readings (2 credits)

Reading assignments related to studio research. Prerequisite: Consent of instructor.

TADD 4970 Internship (1-12 credits)

The following description may apply: The Visual Arts Internship program gives students the opportunity to spend a semester working one-on-one with an artist or for a major cultural institution. Each field experience is individually designed to meet the needs of the student.

All-University Courses

The course numbers listed below, not always included in the semester class schedule, may be registered for by consent of the advisor, instructor, or department chair, or may be assigned by the department when warranted. Individual registration requires previous arrangement by the student and the completion of any required form or planning outline as well as any prerequisites.

1910, 2910, 3910, 4910 DIRECTED INDEPENDENT STUDY

1920, 2920, 3920, 4920 DIRECTED GROUP STUDY

1930, 2930, 3930, 4930 EXPERIMENTAL COURSE

1940, 2940, 3940, 4940 IN-SERVICE COURSE

1950, 2950, 3950, 4950 WORKSHOP, INSTITUTE, TOUR

1960, 2960, 3960, 4960 SPECIAL PURPOSE INSTRUCTION

1970, 2970, 3970, 4970 INTERNSHIP

1980, 2980, 3980, 4980 RESEARCH

1990, 2990, 3990, 4990 THESIS