Model Making/Design Transition Advising Sheet for

Revised 03/19/09

Design Technology-Model Design

DESIGN TECH B. S. MODEL DESIGN		ALTERNATIVE COURSES
REQUIRED COURSES		**Substitute only for course directly to the left**
IT 1460 Technical Graphics	3	no alternative
IT 1600 Model Communications	N/A	(NTC) MODL1130 Model Communications / 2 credits
IT 1210 Mat & Proc.-Forming	4	no alternative
IT 1220 Mat & Proc.-Separating	4	no alternative
IT 2607 M. Mold, Cast. & Finish.	4	(NTC) MODL1170 Mold & Cast / 3 cr. and MODL1180 Model Finishing / 2 cr.
IT 2608 Computer Control Machining	3	no alternative
IT 3600 Arch./Eng Model Making	4	no alternative
IT 3610 Industrial Prototypes	4	no alternative
IT 4600 Model Culmination	2/4	no alternative

GUIDED ELECTIVES Select min. of 9 credits **(work closely with advisor for pre-reqs)**

IT 1410 Communication Tech.	3	IT 4568 Topics in CAD/Imaging	2	(NTC) MODL2220 Model Processes III	3
IT 3460 Parametric 3-D Modeling	3	IT 4600 Model Culmination	2/4	(NTC) MODL2225 Special Effects	3
IT 3430 3-D Computer Imaging I	4	(NTC) MODL1150 Print Reading/Sketch	2	(NTC) MODL2230 Rapid Prototyping	2
IT 4430 3-D Computer Imaging II	4	(NTC) MODL1190 Create/Innov/Design	2	(NTC) MODL2250 3D Solid Modeling	3
IT 4537 Industrial Design	3	(NTC) MODL2215 Model Processes II	3	(NTC) MODL2245 New Product Dev	2

NTC Model Courses Available for substitution to BSU Students / SEMESTER SCHEDULE

MODEL COURSES	FALL SEMESTER	SPRING SEMESTER
MODL1130 Model Communications (2 credits)	1 section	not offered
MODL1150 Print Reading/Sketching (2 credits)	1 section	not offered
MODL1170 Molding & Casting (3 credits)	not offered	1 section
MODL1180 Model Finishing (2 credits)	not offered	1 section
MODL1190 Create/Innovation/Design (2 credits)	not offered	1 section
MODL2210 Model Processes I (3 credits)	1 section	not offered
MODL2215 Model Processes II (3 credits)	not offered	1 section
MODL2220 Model Processes III (3 credits)	1 section	not offered
MODL2225 Special Effects (3 credits)	not offered	1 section
MODL2230 Rapid Prototyping (2 credits)	1 section	not offered
MODL2235 Model Management (2 credits)	not offered	1 section
MODL2245 New Product Development (2 credits)	not offered	1 section
MODL2250 3D Solid Modeling (3 credits)	1 section	not offered

NTC Model Courses Available for substitution to BSU Students / COURSE PRE-REQUISITES

MODEL COURSES	PRE-REQUISITES for BSU students
MODL1130 Model Communications (2 credits)	none required
MODL1150 Print Reading/Sketching (2 credits)	none required
MODL1170 Molding & Casting (3 credits)	MODL 1130, MODL 2210
MODL1180 Model Finishing (2 credits)	MODL 1130, MODL 2210
MODL1190 Create/Innovation/Design (2 credits)	IT 1460, MODL 1130, MODL 2210
MODL2210 Model Processes I (3 credits)	none required
MODL2215 Model Processes II (3 credits)	MODL 1130, MODL 1150, MODL 2210, IT 1460
MODL2220 Model Processes III (3 credits)	IT 1460, 2608 & MODL 1130, 1150, 1170, 1180, 2210, 2215
MODL2225 Special Effects (3 credits)	IT 1460, IT 2608, MODL 2220, MODL 2230, MODL 2250
MODL2230 Rapid Prototyping (2 credits)	IT 1460 & concurrent MODL 2250
MODL2235 Model Management (2 credits)	IT 1460, IT 2608, MODL 2220, MODL 2230, MODL 2250
MODL2245 New Product Development (2 credits)	IT 1460, IT 2608, MODL 2220, MODL 2230, MODL 2250
MODL2250 3D Solid Modeling (3 credits)	IT 1460 & concurrent MODL 2230

NTC Industrial Model Making Course Descriptions

MODL 1130 - Modeling Communications (2 credits)
This course is an introduction to three dimensional communication techniques for the model making profession. Utilizing hand tools, project construction will include an awareness of attention to detail, design and technical problem solving.
Pre Requisites: None required

MODL 1150 - Print Reading/Sketching (2 credits)

This course will provide the student with an understanding and working knowledge of architectural and engineering prints and specifications. Also included are principles and techniques of preparing technical sketches without the use of instruments.
Pre Requisites: None required

MODL 2210 - Model Processes I (3 credits)

An introduction to model making equipment and operation fundamentals. This course includes the safe operation of traditional woodworking and metal machining equipment.
Pre Requisites: None required

MODL 1170 - Molding/Casting (3 credits)
The course includes patternmaking, molding and casting with the applied use of silicone rubber, understand principles of parting line blocks and technique of building parting line blocks, and casting of urethane resins.
Pre Requisites: MODL1130, MODL2210 & concurrent with semester II

MODL 1180 - Model Finishing (2 credits)

The purpose of this course is to provide the student an understanding of materials, principles and techniques of spray finishing required to complete a professional model. Processes may include surface preparation, material selection and paint application.
Pre Requisites: MODL1130, MODL2210 & concurrent with semester II

MODL 1190 - Creativity/Innovation/Design (2 credits)

Organize creative teams, conduct creative team sessions and brainstorming sessions, and use creativity to solve team problems.
Pre Requisites: MODL1130, MODL2210, IT1460 & concurrent with semester II

MODL 2215 - Model Processes II-Engineering (3 credits)
Emphasis on advanced machining to produce detailed 3D components for mechanical or engineering model applications using traditional and non-traditional machine techniques.
Pre Requisites: MODL1130, MODL1150, MODL2210, IT1460 & concurrent with semester II

MODL 2220 - Model Processes III-Architectural (3 credits)
Emphasis on construction of a highly detailed architectural model. Students will learn techniques and determine materials used to transform drawings into models using traditional and non-traditional machine techniques including use of the laser system.
Pre Requisites: IT1460, IT2608, semester I & II and concurrent with semester III

MODL 2230 - Rapid Prototyping (2 credits)
Overview of rapid prototyping technologies that automatically construct physical models from Computer-Aided Design (CAD) data. This technology aids designers to quickly create tangible prototype patterns used in molding and casting of their designs.
Pre Requisites: IT1460 and concurrent with MODL2250

MODL 2250 3D Solid Modeling (3 credits)
This 3D Modeling course will present the student with the basic tools used to create and edit three dimensional computer drawings in SolidWorks. Following a systematic sequence of material, the student will complete extensive "hands-on" exercises.
Pre Requisites: IT1460

MODL 2225 - Special Effects (3 credits)
Using imagination, creativity, and an understanding of the science of perception, the student will utilize techniques and unique materials to create special effects models for the movie industry.
Pre Requisites: semester I & II & III and IT1460, IT2608, concurrent with semester IV

MODL 2235 - Model Management (2 credits)
Review business ethics and management structure of the model making industry. In addition to portfolio and resume preparation, presentation techniques will be explored.
Pre Requisites: semester I & II & III, concurrent with semester IV

MODL 2245 - New Product Development (2 credits)

Exploration of the entire set of activities required to develop a new concept through the understanding and implementation of research, design and manufacturing that influence creation of the model.
Pre Requisites: semester I & II & III and IT1460, IT2608, concurrent with semester IV

MODL 2290-Culmination Project (3 credits)
Construct a highly detailed professional model utilizing a culmination of skills that demonstrate individual student talents.
Pre Requisites: semester I & II & III and IT1460, IT2608, concurrent with semester IV