Department of Architectural Technology FALL 2020

ARCH 1112 **SYLLABUS - ARCHITECTURAL DESIGN I: FOUNDATIONS AND VISUAL STUDIES**
1 lecture hour and 8 lab/studio hours, 5 credits

Professor: Prof. Eirini Tsachrelia etsachrelia@citytech.cuny.edu
Prof. Ioannis Oikonomou ioikonomou@citytech.cuny.edu
Course coordinator, academic year 2020-21
Prof. Claudia Hernandez (CHernandez@citytech.cuny.edu)

Course Description: A first-year foundational course that increases students' ability to perceive visual cues, create visual design, formulate concepts, and render ideas in two or three dimensions. Students use a combination of hand and digital skills to aid in the creation and interpretation of three dimensional objects and space, and the delineation of the same using standard projection systems. The Visual Studies component of the course equips students to make aesthetic evaluations and translate information into graphic representations and visual designs.

Course context: This course is a required first step in the Design Studio sequence.

Prerequisites: None

Pre or co-requisites: ARCH 1101

Required Texts: In the form of a reader:
1. Hannah, Gail Greet. Elements of Design: Rowena Reed Kostellow and the Structure of Visual Relationships, *p.*44-57.
2. Elam, Kimberly. *Geometry of Design. p.* 44-75.
4. Benedict, William. *ARCH 121 SYLLABUS. p.* 29-40.
5. *Rhino Level I and II Training Manuals* (Free from: http://download.rhino3d.com/Rhino/4.0/Rhino4Training)
6. Software Primers: *https://openlab.citytech.cuny.edu/fuselab/project-components/digitalspine/*

Recommended Text:

Benedict, William. *Base, 121, 122, 123 Syllabi, Drawing Form, Creating Relationships*. San Luis Obipso, CA: El Corral Publications, 2007. PDF. <www.williambenedict.com>

Ching, Francis D.K. *Architecture: Form, Space, and Order (latest edition).* New York, NY: John Wiley & Sons, Inc., 1996 (or most recent). Print.

Elam, Kimberly. *Geometry of Design: Studies in Proportion and Composition*. New York, NY: Princeton Architectural Press, 2001. Print.

Hannah, Gail Greet. *Elements of Design: Rowena Reed Kostellow and the Structures of Visual Relationships.* New York, NY: Princeton Architectural Press, 2002. Print.

Zell, Mo*, Architectural Drawing Course: Tools and Techniques for 2D and 3D Representation,* 2008, Boston: Barron's. Print.

Ching, Frank, *Architectural Graphics.* 2009, Hoboken, NJ: John Wiley & Sons.

Lupton, Ellen, *Graphic Design: The New Basics.* 2008, New York: Princeton Architectural Press.

Suggested Reference:

Tufte, Edmund, *Envisioning Information.1990*, Cheshire, CT: Graphics Press.

Tufte, Edmund, *Beautiful Evidence*. 2006, Cheshire, CT: Graphics Press.

Samara, Timothy, *A Handbook of Basic Design Principles Applied in Contemporary Design.* 2008, Providence: Rockport Publishers.

McCandles, David, *Visual Miscellaneum. 2009, New York, NY: Collins Design Publishers.*

Websites: Visual Economics, Information is Beautiful, Mathematica, and Google Earth/Maps resources

Suggested Text: Texts will be assigned according to the subject covered that day.

Required Tools: See appendix

Software Applications:

1. Rhinoceros
2. Adobe Creative Suite (Photoshop, Illustrator and InDesign)
3. Zoom
4. Miro

Class Participation Policy: Classes will be fully online but students will be held to the same standards as in in-person classes. No more than 10% absences are permitted during the semester. For the purposes of record, two late arrivals are considered as one absence. Exceeding this limit will expose the student to failing at the discretion of the instructor due to lack of class participation and mastery of class material.

Academic Integrity: Students and all others who work with information, ideas, texts, images, music, inventions and other intellectual property owe their audience and sources accuracy and honesty in using, crediting and citation of sources. As a community of intellectual and professional workers, the college recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension and expulsion.

Course Structure: This course is the first design studio which will include lectures, student presentations, guest critics, in-class workshops, and charrettes. The students will be given problems in a week to week sequence. Each problem will involve a cyclical iteration of the design process in which new skills in a variety of media will be acquired. Students will give verbal and graphic presentations of their designs which will demonstrate agility with vocabulary, concepts, and result in a critical class discussion to assess quality of the work. Work will be completed both in and outside of class. Written evaluation for each week will be provided by the professor and fellow classmates.

Grading:

Project 01	13%
Project 02	17%
Project 03	25%
Visual Studies Assignments	20%
Weekly sketches Class Participation and Attendance	10%
Course Portfolio	15%
TOTAL	**100%**

General Education Learning Outcomes / Assessment Methods	
Learning Outcomes	**Assessment Methods**
Upon successful completion of this course the student shall be able to:	To evaluate the students' achievement of the learning objectives, the professor will do the following:
1. **Distinguish** between media and **determine** the appropriate method and media required to complete a drawing or model. (Gen Ed)	1. **Review** students' creative process (initial sketches through to the final project) by means of frequent pin-ups. **Observe** students' use and manipulation of computer hardware and software. **Inspect** student digital files for use/application of professional standards. **Review** students' drawing and modeling work where students must exhibit their visual representation skills (2-D and 3-D).
2. **Communicate** ideas and information both verbally and through writing. (Gen Ed)	2. **Assess** the students' use of professional vocabulary during oral presentations. **Review** students' written descriptions of design work and feedback. **Observe** students' progression from simple to complex thinking as shown in sketches and completed projects. **Review** students' drawing and modeling work where students must exhibit their visual representation skills (2-D and 3-D). **Assess** the students' use of professional vocabulary during oral presentations.
3. **Develop** and **apply** professional vocabulary. (Gen Ed)	3. **Assess** the students' use of professional vocabulary during oral presentations. **Review** students' written descriptions of design work and feedback. **Review** students' drawing and modeling work where students must exhibit their visual representation skills (2-D and 3-D).
National Architectural Accrediting Board (NAAB) Students Performance Criteria (SPC)/ Assessment Methods	
Learning Outcomes	**Assessment Methods**
1. (A.5) Ordering Systems [introduced, reinforced] ABILITY to apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.	1. **Review** students' creative process (initial sketches through to the final project) by means of frequent pin-ups. **Observe** students' progression from simple to complex thinking as shown in sketches and completed projects
Course Specific Learning Outcomes / Assessment Methods	
Learning Outcomes	**Assessment Methods**
Upon successful completion of this course the student shall be able to:	To evaluate the students' achievement of the learning objectives, the professor will do the following:
1. **Implement** an <u>iterative</u> design process from problem identification, information gathering, solution generation and evaluation,	1. **Review** students' creative process (initial sketches through to the final project) by means of frequent pin-ups. **Observe** students' progression from

implementation, presentation, and overall project evaluation. (Knowledge)	simple to complex thinking as shown in sketches and completed projects.
2. **Incorporate** design concepts and vocabulary into design process and presentations. (Knowledge)	2. **Review** students' creative process (initial sketches through to the final project) by means of frequent pin-ups. **Assess** the students' use of professional vocabulary during oral presentations.
3. **Produce** both manual and digital orthographic, axonometric, perspective, and architectural vignette drawings. (Skill)	**3. Review** students' creative process (initial sketches through to the final project) by means of frequent pin-ups. **Review** students' 2-D and 3-D manual and digital representation skills. **Inspect** students' portfolios for quality of documentation and editing as well as organization. **Review** students' drawing and modeling work where students must exhibit their visual representation skills (2-D and 3-D).
4. **Utilize** manual and digital media to create drawings and models. (Skill)	**4. Review** students' 2-D and 3-D manual and digital representation skills. **Observe** students' progression from simple to complex thinking as shown in sketches and completed projects. **Review** students' drawing and modeling work where students must exhibit their visual representation skills (2-D and 3-D).
5. Recognize the complexity of the physical world (Knowledge)	**5. Review** students' 2-D and 3-D manual and digital representation skills. **Review** students' drawing and modeling work where students must exhibit their visual representation skills (2-D and 3-D).
6. Demonstrate understanding of computer hardware and software as used in architectural practice (Knowledge)	**6. Review** students' 2-D and 3-D manual and digital representation skills. **Inspect** student digital files for use/application of professional standards. **Review** students' drawing and modeling work where students must exhibit their visual representation skills (2-D and 3-D).
7. Document manually produced materials into digital format and process and edit for presentations and portfolio. (Skill)	**7. Observe** students' use and manipulation of computer hardware and software. **Inspect** student digital files for use/application of professional standards. **Inspect** students' portfolios for quality of documentation and editing as well as organization.
8. Create manual and digital 3-D models of medium geometric complexity. (Skill)	**8. Observe** students' use and manipulation of computer hardware and software. **Inspect** student digital files for use/application of professional standards.
9. Manipulate vector and raster files. (Skill)	**9. Inspect** student digital files for use/application of professional standards.

Weekly Course Outline and Schedule:

WEEKLY SKETCHES

A minimum of 10 weekly sketches will be completed per semester as homework. Each sketch has a clearly defined focus and method such as blind contour form study, positive and negative space, shade and shadow, texture, light, depth, perspective, and scale. Sketches will explore a variety of paper and drawing media. Thumbnail study sketches should be completed in a sketchbook prior to preparing the final sketch on min. 8 ½"x11" paper or larger. Hand letter on the back of each sketch the intention, time it took to complete, and the location.

	FOUNDATIONS	**VISUAL STUDIES**
	PROJECT 01 RectilinearF Part A	
Week 1	**Lecture/Skills:** - Course Intro - Icebreaker - Review Syllabus required materials and resources - Intro to Project 01 Part a: 3D composition making **Assignment 01a:** Creation of Rectilinear Forms models with basswood blocks and soap **In Class + HW:** create a minimum of 3 distinct compositions Complete assigned Reading **Sketch exercise day 01:** freehand drawings of parallel lines **Sketch exercise day 02**: freehand drawings of lines converging to a point	**Lecture/Skills:** - course intro - introduce concept of architectural portfolio **Assignment 01:** in class - sketch exercises **HW:** 1. Set up your city tech email account. You MUST email professor from this account before the next class period. 2. Activate your blackboard account (https://cunyportal.cuny.edu/cpr/authenticate/portal_login.jsp) 3. Create a dropbox account (https://www.dropbox.com/) Use Cuny1st login. 4. Create accounts and install Software Apps: Rhino Adobe Suite Zoom Miro

	PROJECT 01 Rectilinear Forms Part A cont.	
Week 2	Continuation: 3D composition Making **Lecture/Skills:** - review 3D composition making - Iterative testing - Craftsmanship - Photographing Models (setting up backdrop, light and camera angle) **Assignment 01a:** Creation of Rectilinear Forms models with basswood blocks and soap In Class + HW: Select best Design and create a final model **Sketch exercise day 03:** Freehand drawing of Cube with 2 point perspective **Sketch exercise day 04:** Freehand drawing of Cube moving in space with 2 point perspective	**Lecture/Skills:** Intro to In Design **Assignment 01:** in class - create template for cataloging rectilinear forms model **HW:** 1. Bring to class the model photos (in digital format) of Project 1.

	PROJECT 01 Rectilinear Forms Part B	
Week 3	Multi-view Drawings **Lecture/skills:** - Use of drafting tools (either analog or digital) - Multiview drawing generation including line projection to construct different views - line weights - drawing composition and organization - Dimensioning and measuring with accuracy - Scanning drawings with phone app. OR extracting PDF presentation quality drawings from Rhino **Assignment 01b:** **In class +HW:** Draw 4 Elevation and top view of the Rectilinear Forms model **Sketch exercise day 05:** Freehand drawing subtractive Cube exercise with 2 point perspective **Sketch exercise day 06:** Freehand drawing additive Cube exercise with 2 point perspective	**Photoshop Basics** **Lecture/skills:** Raster vs. Vector and editing images Image resolution Image cropping Image adjustments: resizing, color mode, color and brightness correction, distortion correction, Cleaning images/drawings File types Scanning drawings on Epson Flatbed scanner OR with scan phone app Inserting Image files into an InDesign file **Assignment 02:** **In class +HW:** Using Photoshop edit and clean model photos and sketches from Foundations Inserting edited image files in the InDesign template generated in class the previous week.

	PROJECT 01 Rectilinear Forms Part C	
Week 4	Single view drawings: Axonometric and Perspectives **Lecture / Skills:** Day 1: Axonometric drawings Paraline Drawings 3-D view that can be measured Isometric 30/30 vs Plan Oblique 45/45 or 30/60 Day 2: Perspectives Use of vanishing points, understanding station point, horizon line and 1 pt. vs. 2 pt. perspective use of shade and Shadow use of line weights **Assignment 01c:** **In class + HW:** Select the most successful Rectilinear forms model and Construct an Axonometric drawing of it. Draw/construct three 2 point perspectives (birds eye, eye level right, eye level left) of the rectilinear form model. Add line weight and shading. **Sketch exercise day 07:** Axon **Sketch exercise day 08:** Shading	**Photoshop continuation** **Lecture / Skills:** Photoshop as tool for editing images, creating collages, photo composite images, etc. Layers: creation, organization, effects, masking Image editing tools selection tools masking canvas vs. image size inserting background + entourage **Assignment 03:** **In class +HW:** Photomontage rectilinear forms model From

	PROJECT 02 Grids / Cube	
Week 5	Grids/Cube Lecture/Skills **Grid Drawings** - Introduction of grid as system of organization - Review: Rule based design - Review: graphic representation and notation - Review: Composition making based on Basic Design Principals symmetry, asymmetry, rhythm, balance, order, proportion, hierarchy…. **Model:** - Introduction to subtractive model making - Review: Translation of abstract 2D explorations into 3D spatial exploration - Rule based design **Assignment 03a:** Create a series of drawings Within a 5"x5" boundary exploring the grid as system of organization. Use line weight and shading to help express depth in the grid. Concurrently, build a series of cube models exploring the grid drawings in 3 dimensional space. Allow for the drawings and models to inform each other.	InDesign: Portfolio Workday In class + HW: Insert all work generated up to date in the portfolio.

Week 6	Grids/Cube continuation **Lecture/Skills:** Drawing as a tool to show relationship between parts Review: Orthographic projections **Assignment 03b:**Unrolled Cube Drawing. Select the most successful model and continue to refine it. Draw all sides of the cube organized in such a way that the object can be read as if it was unrolled highlighting the relationships between edges	Rhino 3D Modeling with solids **Lecture / Skills:** 3D Modeling Review/Introduce Rhino Basics review: Units workspace Grids, snaps, Osnaps, layers Draw: line, Polyline, rectangle, circle 3D Modeling: Solids and Booleans panels Transform panel: move, rotate, stretch, copy, mirror, scale offset and arrays **Assignment 05:** In class+ homework: Create 3 Iterations of cuboid compositions constrained by a 3D grid
Week 7	**Assignment 04c:** Cube Exploded Isometric Drawing + sectional cuts **lecture/ Skills:** - Drawing as a tool for conveying overarching project design strategy / driver - Review: paraline and sectional drawings - Review: line weights **Assignment 03c**: Cube Axonometric drawing. Create a series of sectional axonometric drawings of the final cube in order to reveal the space with in the volume. Extra credit: generate an exploded axonometric drawing this drawing should help explain the idea being explored while making the composition. For example if the operation being explores is to slide or shift; is it possible to reflect this in a drawing?	**Lecture / Skills:** Rhino 3_D Modeling with Rhino Part II, Saving views and basics of Rhino Render. Upon successful completion of this assignment, the student will: 1. Understand the differences between creating a perspective by hand using the office method/plan projection method (exercise from ARCH 1110) and setting up cameras and rendering digitally in McNeel Rhinoceros and V-Ray. 2. Understand how to set up camera views in Rhino 3. How to save camera views 4. Understand how to apply basic color and materials. 5. Understand how to control lighting. **Assignment 06 In class + HW**: Render all 3 models using the preset saved views. 3 different views for each model, a total of 9. Save all renders should be saved as .png files.

Week 8	**DAY 01** Photomontage extract a series of interior perspective views Lecture / Skills: Review Photoshop skills **Assignment 08 VS:** - In class + HW: Using a rendering from your cube model create a photomontage including context and entourage InDesign: **DAY 02:** **MIDTERM PRESENTATION** Final presentation of both Projects 01 and 02	**Lecture / Skills:** WORKFLOW: Rhino > Illustrator > InDesign Rhino Modeling cont. + Rendering basics Strategies for using multiple software applications to create composite presentation drawings New Rhino tools/commands: Saving views make 2D and exporting as an Illustrator file from Rhino Illustrator: Creating composite drawings using rendered image and Vector Make2D drawing from Rhino InDesign: Creating catalog layout and pacing and linking Illustrator files **Assignment 07 In class + HW:** In class+ homework: output vector drawings and renderings using Rhinoceros of the model iterations. Using illustrator create composite drawings overlaying the vector drawing over the rendering. Create a catalog of all the composite images in InDesign.
	PROJECT 03 Paper Landscapes Part A	
Week 9	Drawing Representation and Diagramming **Lecture / Skills:** - Introduction to diagramming and mapping techniques. - Process of observation through a critical and analytical lens. - Graphic representation / visualization techniques to convey information: Development of graphic language to represent or highlight a specific observation or idea. - Review the use of drawing techniques: line types and weight, shading in order to extract and highlight specific information - Iterative testing **In class + HW:** Basic Pattern recognition Fashion Abstracted; using a base image generate a series of drawings to highlight different aspects of that image; solid vs. void; edge and boundary; pattern and texture	InDesign: Portfolio Workday In class + HW: Insert all work generated up to date in the portfolio.
	PROJECT 03 Paper Landscapes Part B	
Week 10	Geometry and Hierarchy Analysis **Lecture / Skills:** - Introduction to systems of organization, proportions and rule based analysis - Establishing hierarchy with in a composition - Review: Graphic representation / visualization techniques to convey information: Development of graphic language in order to represent or highlight a specific idea; Process of observation through a critical and analytical lens. - Review the use of drawing techniques: line types and weight, shading in order to extract and highlight specific information - Iterative testing **In class + HW:** Basic Geometry Recognition: Fashion Abstracted: Using the same base image and referencing the reading generate a series of three analytical drawing reflecting different systems of organization within the image. Select one to continue to develop and add line weights and shading to establish a hierarchy and relationships within the system.	Rhino and Illustrator: Raster vs. Vector Drawing **Lecture / Skills:** Raster vs. vector drawings. Differences between Photoshop, Illustrator and Rhino line drawings. **Rhino Review:** Units workspace Grids, snaps, Osnaps, layers Draw: line, Polyline, rectangle, circle Curve editing: trim, split, explode, mirror, copy, array, scale exporting as ".ai" files Inserting bitmap Image **In class + HW:** Using Rhino recreate the geometry analysis generated in Foundations and export it into Illustrator

	PROJECT 03 Paper Landscapes Part C	
Week 11	Paper Landscapes: Translation from a 2-dimensional working plane to 3- Dimensional Space **Lecture / Skills:** Introduction to architectural scale Introduction to principals of design: order, rhythm, proportion, hierarchy, balance… in three dimensional space Rule creation in order to generate a fluid composition strategies for making models **In class + HW:** Paper landscapes: Using the geometry analysis generated in assignment 2b as a base explore 3 dimensional and spatial composition.	**Illustrator Review:** Cleaning and editing .ai files extracted from Rhino layers Pen tool selection tool direct selection tool outline/fill stroke panel and options (thickness, dashes, arrows) linking images **In class + HW:** In Illustrator continue to work on the Geometry Recognition drawings using line weights and shading. Articulate the drawing in such a way that it reflects the rules being applied in the model. Model and drawing should help inform each other.
	PROJECT 03 Paper Landscapes Part C cont. + Intro Part D	
Week 12	**DAY 01:** Continuation Model making Paper landscapes **DAY 02: Introduction to sectional drawings** **Lecture and Skills:** **- Introduction to architectural sections** **Assignment 02c:** Finalize model **Assignment 02d:** Draw a section of your model - select a moment in your model that best represent the vertical spatial relationships below and above ground that are being investigated.	Vector Drawing cont. **Lecture / Skills:** Illustrator Part II: review and practice skills introduced during the previous class **In class + HW:** In Illustrator continue to work on the Geometry hierarchy drawings using line weights and shading. Articulate the drawing in such a way that it reflects the rules being applied in the model. Model and drawing should help inform each other.
	PROJECT 03 Paper Landscapes Part D	
Week 13	**DAY 01:** Architectural sections continuation **Lecture and Skills:** - Review architectural sections - Review: Drawing with accuracy - Review: Line weights - Review: Use of projection lines (minimize measuring) - Review: Page organization (help tell relationships between parts) - Shading **Assignment 05b:** Finalize the architectural section of your paper landscapes model Prepare for Midterm presentation	**InDesign:** Portfolio Workday **In class + HW:** Insert all work generated up to date in the portfolio.
Week 14	Work Week - Portfolio and Final Presentation **Assignment 10:** Portfolio	**InDesign:** Portfolio Workday **In class + HW:** Insert all work generated up to date in the portfolio.
Week 15	**Final Presentation**	**Final Presentation : Portfolio**

CITY TECH

FALL 2020, ARCH1112 Architectural Design I

LIST OF SUPPLIES AND MATERIALS, 08/17/2020

Prof. Eirini Tsachrelia, etsachrelia@citytech.cuny.edu

Prof. Ioannis Oikonomou, ioikonomou@citytech.cuny.edu

FAQ

Do I need ALL items listed?

YES this is a MINIMAL list of must-have items for this class, that have been very carefully selected for you.
** We ask that you buy the materials and tools EXACTLY as specified - do not replace items with 'similar' looking ones.

By WHEN do I need to have these?

We recommend that you buy all the meterials listed at once, and have them available for the first class.
** If you are ordering materials online, please carefully check the shipping dates to ensure timely delivery.
** Consider curbside pickup if available in your location.

What is the cost?

**You will use the tools listed throughout your studies in architecture.
The selection was carefully made with low-cost options in mind where possible. The total cost for the tools is approx. $130.
In addition, you will be required to purchase model making materials, the estimated cost is approx. $50-60 for all projects this semester.
** Request student discount

WHERE can I buy?

** It is recommended that you buy the items from Blick Art Supplies and Michael's as specified, by following the links below.
** See below additional art supply stores for your reference.

	Item #	Description		QTY
	MODEL-MAKING MATERIALS ***HIGHLY IMPORTANT FOR DAY 1*			
1	10040417	10-PIECE WHITTLER'S KIT-SOLID BASSWOOD	michael's	1
2	10634788.htm	NATURAL WHITE SOAP 2lb	michael's	1
	DRAFTING TOOLS			
3	20675-1001	FABER CASTEL TK 9400 CLUTCH LEAD HOLDER	blick	1
4	21411-1025	ALVIN ROTARY LEAD POINTER	blick	1
5	22828-2061	STAEDTLER LEADS/2H	blick	1
6	22828-2031	STAEDTLER LEADS/2B	blick	1
7	22828-2051	STAEDTLER LEADS/HB	blick	1
8	22063-0129/	COLORED PENCIL SET	blick	1
9	20702-2005/	MICRON PEN, BLACK, 08	blick	1
10	20702-2102/	MICRON PEN, BLACK, 005	blick	1
11	20702-2003/	MICRON PEN, BLACK, 03	blick	1
12	21500-0000	STAEDTLR MARS PLASTIC ERASER	blick	1
13	21547-1020	DESIGN ARTGUM ERASER/LARGE	blick	1
14	55447-1012/	TRIANGLE 30/60 12IN, TRANSPARENT	blick	1
15	55447-1145/	TRIANGLE 45/90 12IN, TRANSPARENT	blick	1
16	55415-3000	PROFESSIONAL ARCHITECTURAL TRIANGULAR SCALE	blick	1
17	56009-1018	STAINLESS STEEL RULER, CORK BACKED, 18IN	blick	1
18	10535-1012	WHITE TRACING PAPER, 12INCH X50YD	blick	1
19	10613-1026	GRIDDED PAPER 11X17", 50 SHEET PAD	blick	1
20	22784-1023	BIENFANG SKETCHBOOK, MIXED MEDIA, 12X9 INCH	blick	1
21	512211	11X17 REGULAR PLAIN PRINTER PAPER FOR DRAFTING	staples	1
22	24123-4034	DRAFT TAPE 3/4 INCH X 60 YDS	blick	1
	MODEL-MAKING TOOLS			
23	58991-1006	CUTTING MAT 18X24	blick	1
24	57435-1180	OLFA SNAP-OFF BLADE CUTTER 9MM	blick	1
25	23882-1004	BLICK WHITE GLUE 4OZ	blick	1

OTHER ART SUPPLY STORES FOR YOUR REFERENCE:

DICK BLICK ART MATERIALS	536 Myrtle Avenue, Brooklyn, NY 11205
Utretcht Art Supplies	1-5 BOND STREET, NEW YORK, NY 10012
Michaels	148 Lafayette Street, New York, NY I 0013
WC ART & DRAFTING SUPPLY CO	252 Atlantic Ave, Brooklyn, NY 11201
Artist & Craftsman Supply	351 JAY ST, BROOKLYN, NY 11201
www.cheapjoes.com	761 Metropolitan online store