New Jersey Institute of Technology
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Fall 2018

AD 150-005: Color and Composition

Yulia Veligurskaya

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COLOR AND COMPOSITION: Art + Design 150

Fall 2018 Sections 001/005: Monday 2:30 PM – 5:20 PM
Fall 2018 Sections 003/007: Wednesday 8:30 AM – 11:20 AM
Review/Critique Sessions/Office Hours to be scheduled by individual sections

Lectures: Weston Lecture Hall 2

Labs and Instructors: Sections 001/003 – Glenn Goldman (coordinator)   Campbell 236G
                         Section   005 – Yulia Veligurskaya   Campbell 236C
                         Section   007 – Hannah Kum-Biocca   Campbell 236D

Color and Composition is a foundation-level course that serves as an introduction to basic **two-dimensional design** with attention paid to the **impacts and uses of color in design,** and **an introduction to (two-dimensional) computer graphics**. The multiple-media course combines lectures and videos, in-class laboratory projects, analytic and written work, quizzes, creative and graphic assignments that may span several classes and lasting several weeks, and a final examination. There are no prerequisites for the course but as with any design lab or studio course design projects tend to be open-ended, so a considerable amount of time (in excess of fifteen hours per week on average, with more or less required based on individual's abilities, work habits, efficiency, and schedule) outside of class will be required to complete some projects and assigned labs will be available 24/7 throughout the semester (except on Thanksgiving weekend) to facilitate completion of work requiring the use of digital media.

With the ubiquitous availability of digital color displays and printing devices, architects, artists, game designers, set designers, industrial and product designers, graphic designers, interior designers, and others can now easily integrate color into their design and presentation processes, thereby simulating with greater accuracy proposed final products that may be built, printed, and/or exhibited. Furthermore, with digital designers' involvement in the creation of images and virtual worlds for the web and entertainment industries in addition to printed/physical media, color takes on an increasing importance and an additional set of characteristics with the addition of light-emitting media to the color palettes of reflective media that have been in existence for decades. The course is structured to give participants an introduction to traditional color theory and an opportunity to apply it with laboratory exercises and homework assignments. An additional component/focus of the course is a concentration on digital applications and implications of color theory ("electronic color") that address specifics as they impact, and are impacted by, the computer. The course introduces computer graphics and digital media in a design context.

The course addresses issues of organization, composition, geometry, grids, proportion(s), hierarchy, tension, figure-ground relationships, symmetries, open vs. closed forms, visual balance, and other principles of basic design. Also, the course includes color-focused topics such as psychology of color; design for color-deficient vision; interaction of color; color mixing and color palettes; color reproduction; color models; color composition in art, advertising, product design, interior design, architecture; and so on.

Students will have accounts that will allow all digital work to be accomplished in the School of Art + Design Foundation Labs in Campbell Hall (entrance through the third floor of Weston Hall). Sections are assigned to specific labs. Traditional media work must be accomplished off-site (outside of any NJIT computer labs) and brought to class for critique and submission.

Readings are intended to supplement lectures and class discussions; and the books placed on reserve are many of the sources for the illustrations. Additionally, they are meant to be helpful in the completion of various tasks/assignments and provide insight into some of the topics covered during the in-class analysis.
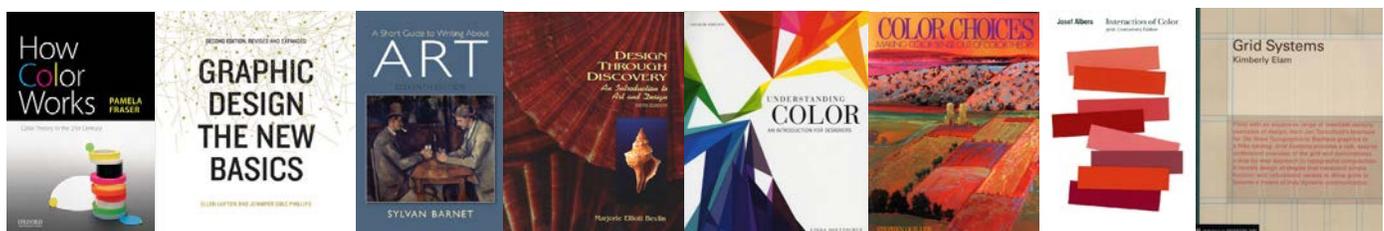
COURSE OBJECTIVES:

- Provide exposure to the formal/organizational principles of composition as well as application and use of color in art and design – including industrial design, interior design, architecture, graphic design, package design, information design and presentation, advertising/marketing, web design, entertainment and game design, etc. – i.e. an essential exposure to the fundamental design principles that underly applications of all design programs and disciplines;
- To enhance overall visual literacy and perception, including an introduction to works of fine art;
- To introduce principles of information literacy and utilize research skills in visual arts;
- To gain perspective and understanding about the history of the use of color in art and design;
- To introduce color models and various ways color can be described that are both media dependent and media independent;
- Provide opportunities to explore color mixing and color analysis with traditional media (e.g. paper, watercolor);
- Gain an understanding of, and provide exercise opportunities to explore, basic two-dimensional design principles using both traditional and digital media;
- To gain an understanding of the differences between color displays and media and how different materials and systems (papers, projectors, printers, etc.) affect the appearance(s) of color;
- To introduce raster computer graphics and an opportunity to learn, practice, and become familiar and relatively proficient (within a limited set of image types/problems) with paint (*Corel Painter*), image processing (*Adobe Photoshop, Corel PaintShop Pro*), two-dimensional illustration software (*Corel Designer*, *Adobe Photoshop*, *Adobe Illustrator*) and two-dimensional compositing software applications (*Corel Draw*, *Adobe Illustrator*);
- Provide exposure to a reflective and iterative design process;
- Provide exposure to criteria used in creating and evaluating 2D composition and the impact color has on the composition(s);
- To develop a sense of quality of craft that is media independent;
- To provide opportunity to practice critical writing and communication skills;
- To provide an opportunity to develop the ability to clearly present a project to others.
- To comply with *NASAD* (*National Association of Schools of Art and Design*) professional standards as they apply to all majors that include: provide an introduction to basic design principles; analyze of works in art and design and the establish an ability to critically evaluate these works; development of a an understanding of the common elements and vocabulary of art and design; provide an introduction to use and integration of technology in art and design; and to provide opportunities for students to gain an understanding, and facility of use, in basic principles of color theory and two-dimensional composition (including an introduction to graphic design).
- To comply with *CIDA* (*Council for Interior Design Accreditation*) 2018 Professional Standards as listed below:
  8b – DESIGN PROCESS: Student work demonstrates the ability to apply knowledge and skills learned to solve progressively complex design problems
  8c – DESIGN PROCESS: Student work demonstrates the ability to apply knowledge and skills learned to identify and define issues relevant to the design problem
  8f – DESIGN PROCESS: Student work demonstrates the ability to apply knowledge and skills learned to explore and iterate multiple ideas
  8g – DESIGN PROCESS: Student work demonstrates the ability to apply knowledge and skills learned to design original and creative solutions
  8k – DESIGN PROCESS: The program includes exposure to methods of idea generation and design thinking
  9b – COMMUNICATION: Students are able to effectively express ideas in oral communication
  9c – COMMUNICATION: Students are able to effectively express ideas in written communication
  9e – COMMUNICATION: Students are able to effectively apply a variety of communication techniques and technologies appropriate to a range of purposes and audiences
  10e – HISTORY AND THEORY: Students understand significant movements, traditions, and theories in art.
  11a – DESIGN ELEMENTS AND PRINCIPLES: Students understand the elements and principles of design, including spatial definition and organization
  11b – DESIGN ELEMENTS AND PRINCIPLES: Student work demonstrates the ability to explore two- and three-dimensional elements and principles of design
  11c – DESIGN ELEMENTS AND PRINCIPLES: Students effectively apply the elements and principles of design to two-dimensional design solutions
  12e – LIGHT AND COLOR: Students have awareness of a range of sources for information and research about color
  12f – LIGHT AND COLOR: Students understand how light and color in the interior environment impact health, safety, and wellbeing
  12g – LIGHT AND COLOR: Student work demonstrates understanding of color terminology
  12h – LIGHT AND COLOR: Student work demonstrates understanding of color principles, theories, and systems
  12i – LIGHT AND COLOR: Student work demonstrates understanding of color in relation to materials, textures, light, and form
  12j – LIGHT AND COLOR: Student work demonstrates the ability to appropriately select and apply color to support design concepts
  12l – LIGHT AND COLOR: Student work demonstrates the ability to appropriately use color solutions across different modes of design communication

ACADEMIC INTEGRITY:

Honesty is of paramount importance and students are expected to hold the highest standards of academic integrity and comply with the *University Policy on Academic Integrity* (which may be downloaded from: http://www.njit.edu/doss/code-student-conduct-article-11-university-policy-academic-integrity/) All students are responsible for upholding the integrity of NJIT and must bring violations of the policy to the Office of the Dean of Students. To be clear, do your own work (except when group work is assigned), cite sources properly when writing or presenting research, and comply with requirements for examinations, quizzes, and projects. ***UNLESS EXPLICITLY PERMITTED (AND PROPERLY CITED), STUDENTS MAY NOT USE DOWNLOADED IMAGES FROM THE INTERNET OR WORK CREATED BY OTHERS FOR INCORPORATION INTO CREATIVE WORK REQUIRED BY THIS CLASS***. In other words, do your OWN work! The "default" is – if it's not yours, don't use it. (Photography by the student of existing artifacts and objects may be permitted in the process of creating new, original works. ***But derivative work shall NOT be permitted unless explicitly approved by the instructor***.)

ASSIGNMENTS, GRADING, ATTENDANCE POLICY, ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES:

EVERYTHING COUNTS! Some things count only a little, others a lot. But projects and participation are not optional – they are a required component of the course. Individual projects and assignments will be graded, and the overall semester grade will be determined by a combined average, with each project receiving a weighted value roughly in proportion to the time allotted for it. Although the proportions may be adjusted – and additional or modified assignments may be inserted, the *preliminary* plan for distribution is as follows:

• Compositional Exercises	2%
• Compositional Collage	5%
• Color Wheels, Value Charts, Color Mixing	10%
• Painting Project	
Analytical Paper	5%
Digitally Painted Facsimile	15%
• Color Interaction Project	13%
• Design Application/Graphic Design Project	15%
• Analysis-Documentation Project/Presentation	10%
• Class Participation	5%
• Quizzes	5%
• Final Examination	15%

NJIT uses the following grades: A/4.0 (superior); B+/3.5 (excellent); B/3.0 (very good); C+/2.5 (good); C/2.0 (acceptable); D/1.0 (minimum); F/0.0 (inadequate).

ALL students (*regardless of "home program" at NJIT***) enrolled for classes in the School of Art + Design also have an attendance requirement overlaid on the grading criteria**. (This requirement/penalty is separate from the participation component of the grade.) No more than three unexcused absences are permitted without a grade reduction. Each unexcused absence above three (starting with the fourth) will result in a full grade reduction for the semester. In other words, four absences would result in a maximum grade of B (assuming everything done is of "A" quality), five absences would result in a maximum grade of "C", six in a maximum grade of "D", etc. This means if you 7 unexcused absences (about half the semester), you cannot pass the course.) Students do NOT receive extensions for submission of work due to unexcused absences. Acceptance of late work is at the discretion of the individual instructor. Absences for illness to be excused MUST be accompanied by documentation from professional medical personnel who are NOT members of your family and submitted to the Office of the Dean of Students who, upon approval, will notify the appropriate instructor(s). ***Since religious holidays are known in advance, students who expect to be absent due to religious holidays must notify their instructor by the second week of class***. (Note: given the timing of certain holidays in the Fall 2018 semester, students should email the Coordinator of the course at <glenn.goldman@njit.edu> prior to the start of classes if the first class will be missed.)

ACCOMMODATIONS FOR DISABILITIES:

NJIT and instructors will endeavor to make any accommodations required and necessary for the success of students with disabilities. However, in order to receive accommodations, disabilities MUST be documented with NJIT Disability Support Services (260 Fenster Hall; dss@njit.edu) and notification of request for accommodation must be made to the instructor by the second week of class. No accommodations can be granted "after the fact" unless due to a situation (injury/illness/etc.) that occurs or is documented during the semester. In those instances, accommodations will commence upon notification or observation of the disability. If approved for accommodation(s), it is at the discretion of the student whether or not to avail him/herself of these opportunities. Failure to utilize approved accommodations will not be considered when preparing final grades or assessments for the course. Please understand that some accommodations are publicly evident (like extended time on project presentations) and utilization of these accommodations will be seen by other students which removes any right(s) to privacy about those accommodations.

CELL PHONE USE AND MISCELLANEOUS POLICIES:

Cell phone use (including texting) is NOT permitted during lectures and presentations at any time! It is a *distraction* that steals the ability to concentrate from students and the presenter. The permission to use cell phones during lab time is strictly and completely at the discretion of the individual section instructor. When permitted, students should go into the corridor to speak. Use of cell phones during periods of student presentations or faculty instruction is not approved at any time.

Lectures may NOT be recorded without permission of the instructor. Due to the inclusion of copyrighted material/intellectual property within "fair use" provisions, visual content of the lectures **may not, under any circumstances, be recorded**.

Food and drink are permitted in the lecture hall but NOT in the labs. **Do not eat or drink in any computer lab. Do not even bring in food or drink**!

BIBLIOGRAPHY

Required Books:

Albers, Josef. *Interaction of Color/Revised Edition*. (New Haven: Yale University Press, 2006)
[The older and original paperback editions from editions dating as early as 1963 are acceptable but the newest edition – the 50th Anniversary/4th Edition from 2013 – has an expanded use of color plates and is, overall, the best version available.]

Lupton, Ellen and Jennifer Cole Philips. *Graphic Design: The New Basics/2nd Edition, Revised and Expanded* (New York: Princeton Architectural Press, 2015)
[The primary text that summarizes many, albeit not all, of the design principles discussed in class. The first edition from 2008 is acceptable. The book is good on basic design principles, a bit superficial for color theory. To get more detail about color theory read Fraser's book, *How Color Works* (see below)]

Recommended Books:

Barnet, Sylvan. *A Short Guide to Writing About Art/11th Edition*. (Upper Saddle River, NJ: Pearson/Prentice Hall, 2014)
[The 10th and 9th editions/used versions are acceptable – this text is useful if you have never written about art and/or are inexperienced in analytical writing. The 10th edition adds material applicable to the analysis of architecture not available in earlier volumes. The 11th edition adds material about digital resources.]

Fraser, Pamela. *How Color Works: Color Theory in the 21st Century*. (New York: Oxford University Press, 2019)
[A thorough explanation of almost all things color – from sources to the effects of colors in combination.]

Quiller, Stephen. *Color Choices: Making Sense Out of Color Theory*. (New York: Watson-Guptill, 1989)
[The text is particularly useful in explaining traditional color theory and the use of physical media, especially watercolor, for those students inexperienced in the creation of art with such media.]

Suggested Books/Reference Books:

Adams, Sean. *The Designer's Dictionary of Color*. (New York: Abrams, 2017)

AdamsMorioka and Terry Stone. *Color Design Workbook: A Real-World Guide to Using Color in Graphic Design*. (Beverly, MA: Rockport Publishers, 2006)

Ambrose, Gavin and Paul Harris. *Colour: the sensation produced by rays of light of different wavelengths, a particular variety of this*. (Switzerland: AVA Press, 2005). Distributed in the United States by Watson-Guptill Publications.

Ashford, Janet and John Odam. *Start with a Scan: A Guide to Transforming Scanned Photos and Objects into High Quality Art*. (Berkeley, California: Peachpit Press, 1996)

Beccia, Carlyn. *The Digital Renaissance: Classic Painting Techniques in Photoshop and Painter*. (Burlington, MA: Focal Press, 2014)

Bevlin, Marjorie Elliott. *Design Through Discovery: An Introduction*. (Florence, Kentucky: Cengage Learning/Wadsworth Publishing, 1994)

Birren, Faber. *Color and Human Response*. (New York: Van Nostrand Reinhold, 1978)

Bucklow, Spike. *Red: The Art and Science of a Colour*. (London, UK: Reaktion Books, Ltd., 2016)

Cabarga, Leslie. *The Designer's Guide to Color Combinations: 500+ Historic and Modern Color Formulas in CMYK*. (Cincinnati, Ohio: North Light Books, 1999)

Chen Design Associates. *One-Color Graphics: The Power of Contrast*. (Gloucester, Massachusetts: Rockport Publishers, Inc., 2002)

Clifton-Mogg, Caroline. *The Color Design Source Book: Using Fabrics, Paints, & Accessories for Successful Decorating*. (New York: Rylands Peters & Small, Inc., 2007)

Eckstut, Joann and Arielle Eckstut. *The Secret Language of Color: Science, Nature, History, Culture, Beauty of Red, Orange, Yellow, Green, Blue & Violet*. (New York City: Black Dog and Leventhal Publishers, Inc., 2013)

Eiseman, Leatrice. *Pantone Guide to Communicating with Color*. (Cincinnati, Ohio: North Light Books, 2000)

Elam, Kimberly. *Geometry of Design/2nd Edition*. (New York, NY: Princeton Architectural Press, 2011)

Elam, Kimberly. *Grid Systems: Principles of Organizing Type*. (New York, NY: Princeton Architectural Press, 2004)

Eskilson, Stephen J. *Graphic Design: A New History/2nd Edition*. (New Haven, Connecticut: Yale University Press, 2012)

Feisner, Edith Anderson. *Color Studies*. New York: Fairchild Publications, 2001)

Finlay, Victoria. *Color: A Natural History of the Palette*. (New York: Ballantine Books, 2002)

Finlay, Victoria. *The Brilliant History of Color in Art*. (Los Angeles: J. Paul Getty Museum, 2014)

Frankel, Felice C. and Angela H. DePace. *Visual Strategies: A Practical Guide to Graphics for Scientists & Engineers*. (New Haven, Connecticut: Yale University Press, 2012)

Giorgianni, Edward J. and Thomas E. Madden. *Digital Color Management: Encoding Solutions*. (Reading, Massachusetts, Addison Wesley Longman, Inc., 1998)

Hollis, Richard. Graphic Design: *A Concise History/2nd Edition* (*World of Art* Series). (New York: Thames & Hudson, 2002)

Holtzschue, Linda. *Understanding Color: An Introduction for Designers/4th Edition*. (New York: Wiley & Sons, 2011)

Itten, Johannes. *The Elements of Color*. (New York: Van Nostrand Reinhold, 1970)

Jacobus, Frank. *The Visual Biography of Color*. (New York: ORO Editions, 2016)

Jasper, Caroline. *Power Color: Master Color Concepts for All Media*. (New York: Watson-Guptill Publications, 2005)

Kasten, David Scott with Stephen Farthing. *On Color*. (New Haven, Connecticut: Yale University Press, 2018)

Kozak, Gisela and Julius Wiedemann. *Package Design Now!* (Köln, Germany: Taschen GmbH, 2008)

Krause, Jim. *Color Index*. (Cincinnati, Ohio: F&W Publications, 2002)

Krause, Jim. *Design Basics Index*. (Cincinnati, Ohio: F&W Publications, 2004)

Leland, Nita. *Exploring Color*. (Cincinnati, Ohio: North Light Books, 1998)

Lidwell, William with Kritina Holden and Jill Butler. *Universal Principles of Design: 125 Ways to Enhance Usability, Influence Perception, Increase Appeal, Make Better Design Decisions, and Teach through Design*. (Beverly, MA: Rockport Publishers, 2003)

Livingstone, Margaret. *Vision and Art: The Biology of Seeing*. (New York: Harry N. Abrams, 2002)

Lupton, Ellen. *Thinking with Type: A Critical Guide for Designers, Writers, Editors & Students/2nd Revised and Expanded Edition*. (New York: Princeton Architectural Press, 2010)

Mahnke, Frank H. *Color, Environment, Human Response*. (New York: John Wiley & Sons, 1996)

Martin, Bella dn Bruce Hanington. *Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions*. (Beverly, MA: Rockport Publishers, 2012)

Miller, Marc D. and Randy Zaucha. *The Color PC: Production Techniques*. (Indianapolis, Indiana: Hayden Books, 1995)

Miller, Mary C. *Color for Interior Architecture*. (New York: John Wiley & Sons, 1997)

Newall, Diana. *Art in Detail: The Impressionists*. (New York: Metro Books, 2008)

Norman, Richard. *Electronic Color: The Art of Color Applied to Graphic Computing*. (New York: Van Nostrand Reinhold, 1990)

Page, Hilary. Color: *Right from the Start – Progressive Lessons in Seeing and Understanding Color*. (New York: Watson-Guptill Publication, 1994)

Pastoureau, Michel. *RED: The History of a Color*. (Princeton, NJ: Princeton University Press, 2017)

Pring, Roger. *www.color: Effective Use of Color in Web Page Design*. (New York: Watson-Guptill Publications, 2000)

Prokhorov, Nikita. *Ambigrams Revealed: A Graphic Designer's Guide to Creating Typographic Art Using Optical Illusionsk, Symmetry, and Visual Perception*. (San Francisco, CA: New Riders Publishing/Peachpit a division of Pearson Education, 2013)

Rivard, Peter. *Digital Color Correction*. (New York: Thomson Delmar Learning, 2006)

Sato, Tomoko. *Art in Detail: Japanese Art* (New York: Metro Books, 2008)

St. Clair, Kassia. *The Secret Lives of Color*. (New York: Penguin Books, 2016)

Stone, Maureen C. *A Field Guide to Digital Color*. (Natick, Massachusetts: A.K. Peters, Ltd., 2003)

Sutherland, Rick and Barb Karg. *Graphic Designer's Color Handbook: Choosing and Using Color from Concept to Final Output*. (Gloucester, Massachusetts: Rockport Publishers, 2003)

Tebbe, Friederike. *Understanding Color: Hear Green, Think Yellow*. (Berlin, Germany: Jovis, 2017)

Thomson, Laura. *Art in Detail: The Surrealists*.(New York: Metro Books, 2008)

Triedman, Karen and Cheryl Dangel Cullen. *Color Graphics: The Power of Color in Graphic Design*. (Gloucester, Massachusetts: Rockport Publishers, Inc., 2002)

Walch, Margaret and Augustine Hope. *Living Colors: The Definitive Guide to Color Palettes through the Ages*. (San Francisco: Chronicle Books, 1995)

Wheeler, Alina. *Designing Brand Identity: A Complete Guide to Creating, Building, and Maintaining Strong Brands*. (Hoboken, New Jersey: John Wiley & Sons, 2003)

Wissler, Virginia Bowman. *Illuminated Pixels: The Why, What, and How of Digital Lighting*. (Boston, MA: Cengage Learning, 2012)

Wong, Wucius. *Principles of Color Design: Designing with Electronic Color/2nd Edition* (New York: John Wiley & Sons, 1997)

Wilcox, Michael. *Color Mixing Swatch Book*. (Bristol, England: School of Color Publications, 2001)

MATERIALS LIST

Throughout the term there will be several projects requiring the use of digital and/or traditional media. The traditional media projects will primarily be created with watercolor and cut paper collage. Some of the traditional tools listed below are what a student or designer would typically use in the creation of these products. For example, one expects to cut paper in a collage and then glue to a backing material so an Xacto knife, straight edge for cutting, and rubber cement are listed. The watercolor projects don't require you to lay out diagrams before you apply paint, but you may wish to. For those who are accomplished in watercolor and have a steady hand, it may be possible to complete the work "by eye" without any preliminary pencil layout. Others may want to use a light pencil, triangle/straight edge, compass, and/or scale to lay out the work prior to the application of paint. The lists proposed include most of what you would need to accomplish the work. And the list assumes you have almost nothing. If you have a triangle, for example, that is a different size than the one specified, you may use it instead of purchasing a new one – it should have no impact whatsoever on the quality of the assignments you complete for this class. If you have watercolor brushes, use them. On the other hand, materials used for the actual project submission are required. Everyone must submit watercolor work on the 9" x 12" watercolor paper specified and must use watercolor paints. Everyone will need to cut paper for collage. And everyone will have to submit digital work for archiving on CDs and/or DVDs and/or USB flash drives.

Digital:

- USB Flash Drives - 16GB or larger recommended - for temporary back-up and to facilitate off-network file transfer. ALWAYS have files backed up on at least two physical drives. (Flash drives do fail and files are generally unrecoverable.)

- *OPTIONAL*: You may turn in work via USB flash drive (make sure you have another one or two to use until the instructor returns the one you submitted). Submission policies may vary by section and you may have, at your discretion, the option to turn in digital work on DVD or CD. If you desire to turn in work this way, you will need blank DVD-Rs or DVD+Rs for submission of work. (Note: Beware of "generic" media - they are not always successful in recording. Experience has shown that "brand name" (e.g. Maxell, Verbatim, Sony) blank DVDs tend to be more reliable.) NOTE: Depending on the instructor, you may also use off-site storage (e.g. Google Drive) to share work with your instructor.

- Paper sleeves for submission of DVDs. (Media that are not protected may scratch and become unreadable. *Needed only if you are turning in work on DVD or CD*.)

- External USB hard-drive (500 GB minimum) with USB cable for back-up of work. USB 2.0 or 3.0 drives will work with the lab machines. While power may be available for externally powered drives, its availability is not guaranteed. Solid state drives that do not need power weigh less and are more easily transported. This will prove valuable in future courses as well.

Traditional:

- A minimum of four different watercolors (*tube preferred*) that will give you three "primaries" and at least one complement. Recommended colors for the primaries are: cadmium yellow light, ultramarine blue or phthalocyanine (phthalo) blue, and cadmium red or alizarin crimson. You may substitute (if you are having difficulty obtaining the preferred colors) with colors such as lemon yellow or aureolin yellow, cobalt blue and/or cadmium red medium or light, or vermillion. You may, at your discretion, supplement your collection by adding colors such as phthalo green or viridian green, cerulean blue, magenta, cadmium scarlet (cadmium red orange), etc. NOTE: **You will be using watercolors in very limited amounts so students may share tubes of colors**. You may purchase the smallest tubes available (unless you plan to create a lot of watercolors outside of this class for personal use). However, **unless directed otherwise, work shall be individual**. Complements should be selected carefully to make sure that mixing two complements will provide you with a neutral gray. Some complement pairs are: cadmium yellow light and ultramarine violet, phtyalocyanine blue and cadmium scarlet, alizarin crimson and viridian green, cadmium red medium and phthalo turquoise (green-blue), cerulean blue and cadmium red light, and ultramarine blue and cadmium orange. STUDENTS MAY WISH TO DELAY PURCHASE OF WATERCOLORS UNTIL THE RELEVANT IN-CLASS LECTURE.

- Mixing palette for watercolors.

- 9" x 12" cold press watercolor paper (12 to 15 sheet block; ≈ 140 pound weight)

- heavy paper stock or illustration board (white) for collage (assignments will not require sizes larger than 11" x 17" but you may cut larger sheets into several smaller ones)

- X-Acto Knife: #1 Knife with 15 (or more) #11 blades (note: interior designers and industrial designers are likely to use these throughout their academic career and will find that a box of 100 blades will be more economical over time)

- 12" architects triangular scale

- Rubber cement and rubber cement pick-up

- 18" steel straight edge for cutting (cork bottom suggested)

- 12" x 18" or 18" x 24" cutting mat (required if you do any cutting on NJIT-owned desks or tables) <Note: regardless of where you choose to work – home or dorm or design studio – protecting the furniture is a good idea.>

- Lead holder and lead pointer for sharpening lead holder leads

- 2H leads

- Vinyl eraser and eraser shield

- 2 watercolor brushes (#8 and #2 are recommended sizes)

- 8" – 30°-60° plastic triangle and/or 10" – 45°-45° plastic triangle (The triangles will be used to help layout some work created with traditional media. Industrial Design and Interior Design students are likely to want both since they will be building physical models throughout their educational career. Students who do not wish to purchase these may share/borrow from one another.

- Compass (optional)

Students do _not_ need to bring traditional media tools or materials to class unless instructed otherwise.

Students who have already taken AD 111 – Communication in Art + Design: Traditional Media or ARCH 161 – Introduction to Design and Digital Media (or its predecessor, ARCH 163 – Modes of Design Communication I) will have most of the materials required. Students who are or will be taking either of those courses will use most of the traditional tools and consumable materials in those courses as well as this one. Students in Industrial Design and Interior Design will continue to use these tools in their respective design studios. Digital Design students may use these tools, but in more limited applications and in special courses and subjects (e.g. storyboarding, physical computing, etc.).

Books:

NJIT Bookstore (973-596-3200)
Amazon.com (http://www.amazon.com)
Barnes & Noble http://www.barnesandnoble.com/)
Taschen Books (http://www.taschen.com)

Supplies:

DICK BLICK ART SUPPLIES
65 Route 4 West (35 Plaza, Unit #4), Paramus, NJ, 07652
201-843-7702
also:
650 6th Avenue and 20th Street, New York, NY 10011
212-524-9611
also:
148 Lafayette Street; New York, NY 10013
212-431-3864
also:
237 West 23rd Street, New York, NY 10011
212-675-8699
also:
21 East 13th Street; New York NY 10003
212-924-4136
also:
536 Myrtle Avenue, Brooklyn, NY 11205
718-789-0308
http://www.dickblick.com/

JERRY'S ARTIST OUTLET
Essex Green Shopping Plaza
495 Prospect Avenue
West Orange, NJ   07052
973-669-0995
email: info@jerrysartistoutlet.com
http://www.jerrysartistoutlet.com/

NJIT BOOKSTORE (973-596-3200)

CoAD AIAS SUPPLY SHOP

NOTE: Bergen County (NJ) malls, supply shops and bookstores are generally closed on Sundays. This county includes the towns of Englewood, Hackensack, Fort Lee, Paramus and Ramsey as well as others. Not all retail outlets in New York City or Essex County, NJ (Newark and West Orange) are open on Sundays. Check with individual stores to confirm hours of operation.

It is recognized that not all students have cars. If you have transportation, please help your colleagues who need a ride. Also, upper classmen make frequent trips to get supplies – especially to Jerry's Artist Outlet which is the closest to campus. New York City stores are accessible via mass transit.

The list above is provided as a service to students. No specific retail outlet is endorsed, and the order of the listing is alphabetical (except for onsite NJIT outlets). Stores open and close all the time. The New York/Northern New Jersey metropolitan area has lost four art supply retailers in the last two years: A.I. Friedman, Lee's Art Shop, New York Central Art Supply, and Pearl Paint. There may be other sources for supplies. Check addresses and hours prior to visiting a store.