Pedagogical Approach

The American Institute of Architects (AIA) issues a Code of Ethics for Registered Architects to follow as members in good standing within this professional organization. Ethical codes outline procedures that encourage and mandate the protection of the community through the mindful consideration of Health, Safety and Welfare and the knowledgeable application of all current regulations within the design of buildings.

Building Codes provide instruction on historically proven methods of construction that increases the safety of our built environment. Familiarizing oneself with the opportunities provided within such guidelines creates a strong foundation of architectural understanding from which a higher level of design and critical thinking may emerge. With an understanding of Code requirements, an Architect will produce more accurate and refined representations of his/her design intent. Construction documents (CDs) contain the synthesis of regulatory, programmatic, and aesthetic consideration within an organized collection of drawings, schedules, and specifications. These instruments of design become a binding agreement between Owner and Builder to determine scope and provisions for a built work.

The process of Architectural design is not an act of isolated creativity despite the pervasive academic fragmentation of design as an individualized design studio endeavor. By investigating and documenting existing building conditions, transferring drawings from hand to digital representation, and through focused technical drawing exercises, the student will become aware of the process of code review and document organization as well as the role of accurate drafting techniques.
Educational Goals and Perspectives

The focus of this course will be to introduce architectural students to the problems, processes and means of project code analysis and technical documentation as a way of thinking through a design problem. Additionally, in 2016, we will focus on REVIT as a teaching platform for technical drawing.

It is the intent of this course to foster a broader knowledge and understanding of codes and for students to acquire a fundamental understanding of the concepts and technical principles necessary for insuring public safety, health, and general welfare in the built environment. It is intended that the use of building codes and fire regulations will be understood as an opportunity and necessity within the process of building design from early planning to construction detailing.

It is also the intent of this course to inspire a design methodology based on generating solutions and enhancing innovations from constraints and restrictions.

The student’s fundamental responsibilities are:

- to be a positive contributor to the course through group and individual work
- to read course handouts and requirements and fully respond to their requirements
- to take notes on lectures, discussions and comments made in class
- to keep track of any changes to project or exercise requirements announced in class
- to attend every class and prepare adequately for each class session
- to complete all required online training for BIM drafting application

CODES AND TECHNICAL DOCUMENTATION EXERCISES AND PROJECTS:

Codes analysis and Technical Documentation projects provide an opportunity to develop and demonstrate understanding of the course content.

There will be multiple on-site and online exercises and projects this semester. They will each follow a prescribed set of procedures which have their own intermediate due dates.

Projects will incorporate codes analysis and technical documentation and the use word processing (Excel or Word) and cadd programs (AutoCad, Revit, MicroStation, etc) for drawing production.

Each student must bring a laptop computer, with network patch cable, to each class for lab. The computer must have a Microsoft compatible word processor program, cadd program(s), and be able to connect to the internet (via the network patch cable) along with access to D2L and SolidProfessor.

- It is essential to follow all procedures thoroughly and in the order in which they are assigned.
- Each project and/or exercise has specific goals and constraints that focus the learning experience.
- Projects and exercises will require the student to organize and present concepts, ideas, calculations and information.
- Projects should be a source of personal motivation, pride, and enjoyment, leading to a final document set archive.

Policy, Procedure, and Credit Hours

Students attend class and lab each week for which they earn three semester credit hours. Class is structured as lecture, exercise, and discussion format in combination with Drafting and Construction Documentation labs. Participation in class discussion, online reading assignments, and in lab assignments is a part of the course grade. The practice project and other exercises are structured to develop a systematic approach to applying codes to the built environment. The technical information covered is integrated with building design and technical documentation through online training exams.

Class

Professional and respectful behavior is expected within the classroom. Keep the class and your area neat and clean. Respect the other students by keeping noise under control. No eating during class time, a break will be provided at the midpoint of class for 15 minutes. You must purchase materials and perform other outside activities like library and online research outside of class time unless specifically noted for in-class project assignments.
Attendance
Attendance is required at every class and is necessary for doing well in this class. More than three (3) unexcused absences will result in a letter grade reduction of your final grade. Students are expected to be on time for the start of the class and lab studio and stay through the end of class and lab. Arriving late, leaving early, or attending class briefly does not count as full attendance. Student attendance will be recorded, by the instructor, for each class. Excused absences are only with written statement from physician or other professional describing reason for absence per KSU guidelines.

Schedule
The syllabus and class outline represent a tentative outline and schedule for this class. The instructor reserves the right to make changes, deletions, corrections, or additions during the course. You will be given notice in advance of any course changes. It is the student’s responsibility to be in class when changes are given and to check the course page on Desire2Learn (D2L Brightspace) and their university issued email address regularly for any updates.

NAAB Performance Criteria
The following is a list of NAAB criteria for which ARCH 4224 has been assigned responsibility:

<table>
<thead>
<tr>
<th>Critical Thinking and Representation:</th>
<th>A4</th>
<th>Technical Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A10</td>
<td>Cultural Diversity (anti-discrimination)</td>
</tr>
<tr>
<td>Integrated Building Practice:</td>
<td>B2</td>
<td>Accessibility</td>
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<tr>
<td></td>
<td>B5</td>
<td>Life-Safety Systems</td>
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<td></td>
<td>B10</td>
<td>Building Envelope Systems</td>
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<tr>
<td>Leadership and Practice:</td>
<td>C7</td>
<td>Legal Responsibilities</td>
</tr>
</tbody>
</table>

Evaluation
Grading
MODULE 1: Test 20%
MODULE 2: Test 20%
MODULE 3: Test 20%
Drawing and Technical Documentation Projects 40%
+ Class Participation and Lab Exercises (See schedule) 10%
Total 100%

Each exercise and project description will include detailed submittal requirements and deadlines. Projects will be evaluated by the professor and, at times, by other faculty or through automated measures. One assignment letter grade will automatically be deducted if a project is submitted after the grade deadline. An additional 5 points are deducted for each calendar day after any deadline.

Class Progress is an evaluation based on a student’s work improvement, class exercises grades, work habits, motivation and maturity using the following grading scale:

A (95+)
Exceptional work, exceeding the requirements and exhibiting advancement beyond level in design theory, technical understanding, and or work process.
A- (90+)
B+ (88+)
B (85)
Good work, exceeding the requirements & exhibiting creative solutions that respond to the important issues, communicated clearly.
B- (80+)
C+ (78+)
C (75)
Competent work, meeting all of the requirements and exhibiting a consistent effort in research, and design process, communicated clearly. The grade of C can be viewed as "average" accomplishment.
C- (70+)
D+ (68+)
D (65)
Marginal work, meeting some or all of the requirements but exhibiting inconsistency in design research and process; lacking in clarity or poorly communicated and generally understood as below level in sophistication and competency or other metrics
F (0)
Failing work, meeting less than minimum requirements, work done below level in sophistication and competency, failure to turn in work on time, or fulfill the obligations of the course as set out in the syllabus.

A semester-end digital record (Uploaded to D2L) of your assignments (including developmental steps) is required, so save your projects within each module of development.
Textbooks

**Required Texts:**

These textbooks are to be brought to each class for reference and must be purchased prior to class on JAN 22, 2016. You will need physical copies of these resources during exams.

**Solid Professor**  
Subscription to Solid Professor ($75_register online)

(May be acquired at a student discount by joining the International Code Council at: http://www.iccsafe.org  

(Both are available at the Engineer’s Bookstore; The Handbook provides useful commentary text.)

**Georgia Accessibility Code - online:**  
http://ada.georgia.gov/georgia-accessibility-code  
+ The full 2010 ADA ordinance:  

Pg 15 of the document captures commercial and public facilities  
Pg 31 begins in depth summaries via ADAAG for components (grab-bars, ramps, etc.)

+ A good summary of the recent changes with commentary regarding ADA:  
http://web01.spo.ga.gov/ADA/120-3-20A-120-3-20A-.htm  
+ GA ADA Bulletins / Responses to user questions  
http://ada.georgia.gov/georgia-accessibility-code

**OTHER recommendations:**  
Small Business Primer for Commercial Property owners:  

The requirements for GA:  
http://web01.spo.ga.gov/ADA/120-3-20A/120-3-20A-2.htm  

**Strongly suggested companion texts:**


[NOTE: Some scans will be made available for students on Desire2Learn website]

**Recommended Texts:**

The Professional Practice of Architectural Detailing Ed.3; by Watika & Linde (ISBN: 0-471-18016-5)  
Architectural Design Graphics by Marco Ciriello  
Cracking the Codes an Architect’s Guide to Building Regulations by Barry D. Yatt  
Illustrated 2012 Building Code Handbook by Terry L. Patterson  
Working Drawings Manual by Fred A. Stitt  
Construction and Culture: A Built Environment by Donald E. Mulligan and Kraig Knutson  
Fundamentals of Building Construction: Materials and Methods by Edward Allen  
Building Construction Illustrated by Francis D.K. Ching and Cassandra Adams  
Analyzing Architecture by Simon Unwin  
A Manual of Construction Documentation by Glenn E. Wiggins, AIA  
ADAAG / ADA / FAIR HOUSING publications  
Overview will be provided in the Egress and Accessibility Module mid-March, 2016.
Topics that will be covered in this class:
The following are general topics that will be integrated into lectures and lab projects:
A. Contract/construction documents / drafting and documentation quality
B. The 2012 International Building Codes (IBC) with 2012 IBC overview
C. The 2012 Life Safety Codes (NFPA 101)
D. The Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines

International Building Code – Chapter 1, 34, and 35  Administration and Intro
International Building Code – Chapter 2  Definitions
International Building Code – Chapter 3 (with Section 508)  Use and Occupancy Classification
International Building Code – Chapter 5  General Building Heights and Areas
International Building Code – Chapter 6  Types of Construction
International Building Code – Chapter 7  Fire-Resistance-Rated Construction
NFPA 101 / Life Safety Code – Chapter 4  General
NFPA 101 / Life Safety Code – Chapter 7  Means of Egress
ADA Accessibility in Georgia (updated in 2012)  Fair Housing Intro
ADA Accessibility in Georgia (updated in 2012)  People and Scope
ADA Accessibility in Georgia (updated in 2012)  Site
ADA Accessibility in Georgia (updated in 2012)  Entrances Exits and Doors
ADA Accessibility in Georgia (updated in 2012)  Interior Circulation

Course Organization:
MODULE 1
IBC: CH 1, 34, 35  (Admin and intro)
IBC: CH 3 and Section 508  (Use and Occupancy)
IBC: CH 5  (Building Height + Area)
Module 1 labs: Solid Professor Training 01
Schematic Documentation (Observations, As-Built documentation, and Sketching)
  • Line weight, standards, and information: Sequencing and mock-ups
  • Drawing organization and sketching skills
  • Building components, Cover sheet, and other exercises

MODULE 2
IBC: CH 6  (Types of Construction)
IBC: Sections 701-704  (Fire Rated Construction)
IBC: Sections 705-711  (Fire Rated Construction)
IBC: Sections 712-719  (Fire Rated Construction)
IBC: 2006 / 2012 Comparison overview for recently adopted 2012 IBC
Module 2 labs: Solid Professor Training 02
Developmental Drawings (Transferring observations and computer drafting)
  • Line weights, standards, and methods
  • Cover Sheet, required drawings, and code priorities
  • Methods and drafting organization

MODULE 3
ADA; Fair Housing
Energy Code introduction
Module 3 labs: Solid Professor Training 03
Technical Application (Assemblages, code integration, sheet integration)
  • Page organization and numbering verification + layout
  • Cover Sheet, Enlarged Drawings, Sections, Schedules and Details
  • Specifications and Code review
## COURSE SCHEDULE:
**CODES + TECHNICAL DOCUMENTATION – SPRING 2016**

<table>
<thead>
<tr>
<th>wk</th>
<th>Date</th>
<th>Topic</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>wk 1</td>
<td>JAN 12</td>
<td>Introduction, different codes, history, code organization</td>
<td>Overview of Solid Professor (SP)</td>
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<td></td>
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<td>Triangle Shirt Waist Video and discussion (PIT)</td>
<td>SP: Dept Auto-cad Assessment</td>
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<td>14</td>
<td>Thinking Drawing / Working Drawings: Solid Professor</td>
<td>Assignment #1: As-builts</td>
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<td>SP: Revit for Beginners Section 1</td>
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<tr>
<td>wk 2</td>
<td>19</td>
<td>IBC – Chapter 1, 34, 35</td>
<td>SP: Revit for Beginners Section 2</td>
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<td></td>
<td>21</td>
<td>Drawings, measured and transfer</td>
<td></td>
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<tr>
<td>wk 3</td>
<td>26</td>
<td>IBC – Chapter 1, 2, 3</td>
<td>SP: BIM 101 Section 1</td>
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<tr>
<td></td>
<td>28</td>
<td>Assignment 1 data presented</td>
<td>As Built Review</td>
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<tr>
<td>wk 4</td>
<td>FEB 02</td>
<td>IBC – Chapter 3, 5</td>
<td>SP: BIM 101 Section 2</td>
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<td>04</td>
<td>Due Date for Assignment #1: Drawings 01</td>
<td>05% As Built Drawings Presented</td>
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<tr>
<td>wk 5</td>
<td>09</td>
<td>IBC – 2006 IBC vs. 2012 IBC a review of changes</td>
<td>SP: BIM 101 Section 3</td>
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<tr>
<td></td>
<td>11</td>
<td><strong>TEST 1: IBC 1, 2, 34, 35, 3, 5</strong></td>
<td>Assignment #2: Cover + Sections</td>
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<td>20% MODULE 1: TEST DAY</td>
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<td></td>
<td>05% SP: Assignments (FEB 15th)</td>
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<tr>
<td>wk 6</td>
<td>16</td>
<td>IBC – Chapter 6</td>
<td>SP: BIM 101 Section 1</td>
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<td>18</td>
<td>Design II Guest Speaker: PIT</td>
<td>A Gentry_TVSA</td>
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<tr>
<td>wk 7</td>
<td>23</td>
<td>IBC – Chapter 6, 7</td>
<td>SP: BIM 201 Section 2</td>
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<tr>
<td></td>
<td>25</td>
<td>Assignment #2 development + MIDTERM GRADES DUE</td>
<td>Assignment #2: Cover Plan Callouts discussed</td>
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<td>Assignment #2: Cover Plan Callouts discussed</td>
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<tr>
<td>wk 8</td>
<td>MAR 01</td>
<td>IBC - Chapter 7 (i), (ii)</td>
<td>SP: BIM 301 Section 2</td>
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<td>03</td>
<td>GA STATE SITE VISIT / 1PM-2:30PM</td>
<td>GSU Athletic Center Downtown AT</td>
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<td>05% SP: Assignments</td>
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<tr>
<td>wk 9</td>
<td>08</td>
<td>IBC – Chapter 7 (ii), (iii)</td>
<td>SP: BIM 301 Section 3</td>
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<td>10</td>
<td>Flex day</td>
<td>SP: BIM 302 Section 1</td>
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<tr>
<td>wk 10</td>
<td>15</td>
<td>IBC – Chapter 7 (iv)</td>
<td>Partition development (CH7)</td>
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<td></td>
<td>17</td>
<td><strong>TEST 2: IBC Chapter 6, 7</strong></td>
<td>20% MODULE 2: TEST DAY</td>
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<tr>
<td>wk 11</td>
<td>22</td>
<td>Life Safety Code (NFPA 101) (i)</td>
<td>SP: BIM 302 Section 2</td>
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<td>24</td>
<td>Construction Drawing Lecture</td>
<td>SP: BIM 302 Section 3</td>
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<tr>
<td>wk 12</td>
<td>29</td>
<td>NFPA 101 (ii) + ADA</td>
<td>SP: BIM 302 Section 4</td>
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<td>31</td>
<td>Drawing Discussions and documentation</td>
<td>05% Cover + Sections Presented</td>
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<td>Assignment #3 Stairs &amp; Bathrooms</td>
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<td>05% SP: Assignments</td>
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<tr>
<td>wk 13</td>
<td>APR 12</td>
<td>Design II Guest Speaker: ADA GEORGIA (9:30 DESIGN II)</td>
<td>Kush Patel (5th Year Thesis)</td>
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<td>14</td>
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<td>Progress report on drawings</td>
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<tr>
<td>wk 14</td>
<td>19</td>
<td>Life Safety / Egress drawings and documentation</td>
<td>Energy Code 2009_Exercise in class</td>
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<tr>
<td></td>
<td>21</td>
<td>Energy Code exercise in class</td>
<td>Egress Drawing sheet files finished</td>
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<tr>
<td>wk 15</td>
<td>26</td>
<td>Life Safety recap and Q&amp;A</td>
<td>Drawing set work day / Studio prep</td>
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<td></td>
<td>28</td>
<td>NO CLASS</td>
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<tr>
<td></td>
<td>29</td>
<td>4th YEAR STUDIO FINAL JURY</td>
<td></td>
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<tr>
<td>wk 16</td>
<td>MAY 03</td>
<td><strong>TEST 3: NFPA 101 + ADA DRAWINGS</strong></td>
<td>20% MODULE 3: TEST DAY</td>
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<td><em>TEST 3 @ FINAL EXAM period TBD</em></td>
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<tr>
<td>wk 17</td>
<td>06</td>
<td>THESIS PREP BAZAAR: 9-11AM</td>
<td>Drafting Assignments DUE as set.</td>
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<tr>
<td></td>
<td>12</td>
<td>Drawing sets are DUE: Turn in at office N160 DEADLINE NOON</td>
<td>60% Exams</td>
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<td></td>
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<td>SUBMISSION of Student CD DOCUMENTATION</td>
<td>15% SP:BIM Training</td>
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<td>10% Energy / ADA / NFPA</td>
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<td>10% Drawing Assignments</td>
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<td>5% Participation / Archive</td>
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<td>100% GRADE ISSUED</td>
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</table>
**Materials and Tools**

Exercises and projects may have their own lists of required and/or recommended materials in addition to those required below. For specific information about drawing tools and materials and how to use them, refer to required and recommended texts.

Architect’s scale, engineer’s scale, scientific calculator, computer with Microsoft compatible word processing program (Microsoft WORD suggested), CADD program (MicroStation V8, AutoCad, or Autodesk Architectural Desktop), Ethernet cable, & Microsoft Excel.

**SOME SOURCES FOR SUPPLIES AND TOOLS:**
Kennesaw Campus Bookstore, located at the Student Center (Ph: 678-915-7355)
The Kennesaw State University Bookstore, Building A, Student Center
http://mariettabookstore.kennesaw.edu/ SiteText.aspx?id=24237

Sam Flax Atlanta, 1745 Peachtree St. NE, Atlanta, GA 30309
Phone: (404) 352-7200  Website: http://samflaxsouth.com

**Vendors for Supplies and Tools**
Kennesaw Campus Bookstore / Dick Blick / Sam Flax / Binders

**Additional notes:**
*All student work becomes the property of the Department of Architecture and will be returned at the discretion of the faculty. The faculty also reserves the right to refuse credit for any work that was executed outside the precincts of the School or otherwise executed without coordination with the faculty.* [Kennesaw Academic Catalog, School of Architecture Policies]

Students who feel they made need an accommodation based on the impact of a disability should follow the policies and procedures of the Student Disability Services, online at http://sss.kennesaw.edu/sds/

Disruptive behavior and academic dishonesty will not be tolerated.
Refer to policy in KSU student handbook:

If you feel you need help with time management or need guidance towards academic success, please visit Kennesaw Student Success Services at:
http://www.kennesaw.edu/studentsuccessservices/cps/services.php

In case of emergency, all students should input the following campus police emergency number in their cell phones 470-578-6666 and confirm they have updated information to HORNETALET.

Non-Emergencies: 470-578-6206
Non-Emergency E-mail: police@kennesaw.edu
Tipster Line (Report Anonymously): 470-578-6305
LiveSafe APP for Campus Safety: http://livesafe.kennesaw.edu/index.php

Students will be required to log into the Desire2Learn (D2L) service for class tests and should confirm access within the first week of classes JAN 12, 2016 & should acquire and bring their own Ethernet cables for computer use in class, especially for all testing.

**Academic Conduct:**
KSU has an Honor Code and a procedure for handling cases when academic misconduct is alleged. All students should be aware of them. Information about the Honor Code and the misconduct procedure may be found at http://scai.kennesaw.edu/docs/KSU%20Codes%20of%20Conduct-2015.pdf

END OF DOCUMENT
Acknowledgement of syllabus distribution to be printed and signed:

I, ____________________________ (print name), a student registered within ARCH4224_01, have read (and agree to abide by) the guidelines set forth in this syllabus, issued by my instructor.

STUDENT SIGNATURE: ____________________________________________

DATE RETURNED: ____________________________________________