**ARCH 6040**

**Advanced Architectural Design Studio II**

School of Architecture | College of Design | Georgia Institute of Technology | Hinman Research Building

Studio MF 1:10-6:10pm W 1:10-3:10pm

Instructors: Bafna, Cottle, Rudolph, Yocum



The Integrated Design Studio at Georgia Tech

Within the M. Arch professional degree program at Georgia Tech, the Options II Portman Prize Studio is the final in a sequence of four Introductory and Advanced Architectural Design Studios at the School. It culminates the two‐year studio sequence prior to Design and Research Studios, and takes the form of a semester‐long, integrated building design assignment.

An integrated design studio incorporates key aspects of architectural education. Exercises in fact‐finding, observation, analysis, and interpretation are undertaken in response to proposed site, program, and relevant precedent research. These are often conducted individually or collaboratively but always for the benefit of the entire studio. From these initial gathering processes, an approach can be developed to form underlying critical observations and design

ideas. This is often referred to as the architectural “concept”, or “a position and a proposition,” forming the intellectual basis of design work within the framework of the studio.

What distinguishes the integrated design studio from others is the emphasis on collaborative work, testing of ideas and production in a shared laboratory setting, and the use of specific tools in an iterative and deductive process to distill a design proposal that is not only compelling, but in specific response to the problem at hand, and relevant to the greater good. By comparison to previous studios, individual student accomplishment is channeled *through* the problem of the entire studio group rather than *within* the form of a single personal project.

The integrated design studio allows the instructor and students an entire semester to develop a comprehensive approach to a project. The intent of the work is to document a building proposal at multiple scales, with skilled use of traditional and contemporary architectural tools of representation, and through complementary media. A key pedagogical goal is that the student is able to demonstrate a broad and thorough understanding of the technical, material, cultural, and spatial information that is required to describe the potential building.

The Portman Visiting Critic and the Portman Prize Jury

In order to enrich and accelerate the process of the comprehensive building design studio, the semester is guided by a Portman Visiting Critic. Each year, a distinguished practicing architect / educator is invited to participate during the full arc of the semester’s work, visiting multiple times during the semester and guiding the full student cohort through the process of the work. At the conclusion of the semester, following the Final Review for each section, the Portman Critic will convene a Prize Jury of fellow distinguished practitioners, educators, representatives of John Portman & Associates, and peers, during which the best student projects from each section will be reviewed and evaluated for the Portman Prize and other awards of merit.

The winning project should demonstrate a comprehensive understanding of a building proposal, one that shows integrative logic relating to structure, enclosure, and materials. The project should be imbued with conceptual richness, while being responsive to issues of site, circulation, cultural sensitivity, program and use, and spatial development. The final jury will award ranked prizes, each carrying monetary awards. The top prizewinner will also be offered a summer internship in the office of John Portman & Associates. Should the winner be unable to accept the summer internship for any reason, the offer will go to the second or third place winner.

This year’s Portman Prize Critic is Brigitte Shim, FAIA, FRAIC. She is principal of Shim‐Sutcliffe Architects in Toronto Canada, and recipient of awards at the national and international level for the quality, inventiveness, and rigor of the firm’s work. She began her teaching career at the University of Toronto’s Faculty of Architecture & Design in 1988, and is currently a tenured Associate Professor there, actively engaged in the life of the school. She is also an active member of the international design community, participating in numerous international,

national and local design juries, helping to bring attention to exemplary design in many communities. In 2007, she was a member of the Aga Khan Architecture Award master jury.

**Primary Learning Objectives of the Course** (\*see detailed sections below for each)

* Explore structured COLLABORATIVE work amongst students and faculty.
* Incorporation of outside COMMUNITY of specialists into discovery and learning process.
* Identify and experiment with specific TOOLS for integrated thinking and making.
* Create and follow a structured WORKFLOW for innovation and iteration.
* Specific emphasis on EVIDENCE of physical modeling, making, and mock‐ups.
* Distill key findings into a compelling DISCOVERY / PROPOSAL that has a conceptual and physical imperative, and is fully described.

The Program

The project involves the design of a 42,500 GSF multipurpose building on the campus of Georgia Tech. The work of the academic studio will directly parallel the beginning stages of a selection and design process of the exact same program for an actual facility on the campus.

Projects in the studio as well as the actual building on campus will be designed to meet the full standards of the Living Building Challenge Program 3.0, a building certification program, advocacy tool and philosophy that defines the most advanced measure of sustainability in the built environment possible today.

Students and Instructors will use the semester to immerse themselves in the rigors and opportunities afforded by the LBC criteria, using it as a platform for the development of meaningful and relevant comprehensive design building proposals. In addition to the leadership of the primary Studio instructors, the class will incorporate lectures and workshops by sustainability consultants, mechanical engineers, and structural engineers, in order to further immerse the coursework in the challenges of the proposed problem.

Students will develop initial design proposals through the Midterm Review, at which point professional Teams will publically present their same proposals to the leadership of the Institute. Students will then take feedback from their Review, and observation of proposals of the professional firms, and develop their final projects during the second half of the semester, in preparation for the Portman Final Review and Prize Jury process.

REFER TO APPENDIX C BELOW for specific Project Goals as they relate to this Studio and the GT LBC on the Campus.

See Appendix A – Program

See Appendix B – Shared Research Topics (under development)

See Appendix C – GT RFP

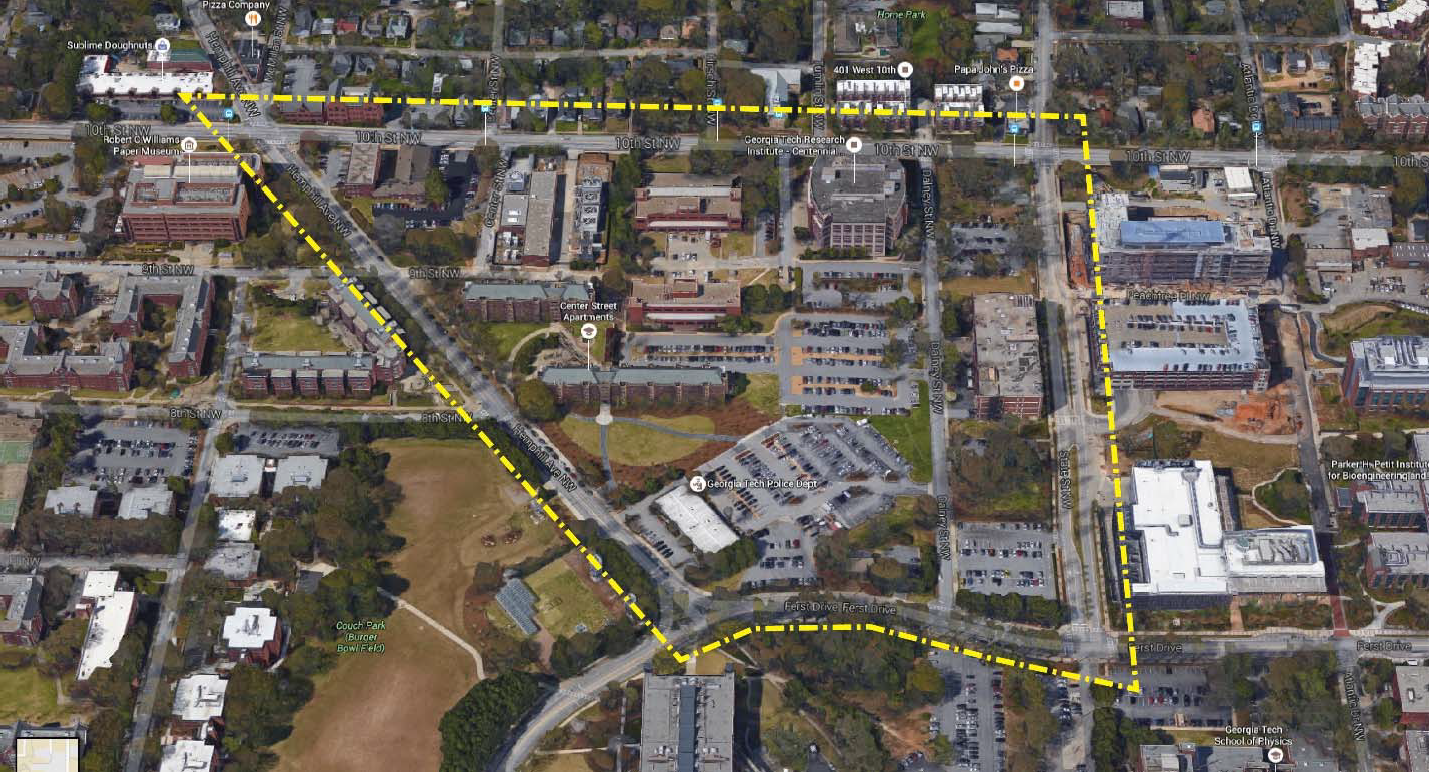
See Appendix D – Living Building program and process summary PDF

The Living Building Criteria

The Living Building Challenge 3.0 (http://www.living‐future.org/) is a building certification program, advocacy tool and philosophy that defines the most advanced measure of sustainability in the built environment possible today and acts to rapidly diminish the gap between current limits and the end‐game positive solutions. The Challenge is comprised of seven performance categories called Petals: Place, Water, Energy, Health & Happiness, Materials, Equity and Beauty. Petals are subdivided into a total of twenty Imperatives, each of which focuses on a specific sphere of influence. This compilation of Imperatives can be applied to almost every conceivable building project, of any scale and any location—be it a new building or an existing structure. See Appendix D.

The Site

On the Campus of the Georgia Institute of Technology, within the area defined above. Projects may address the whole or a part of the area defined.



Studio Sections

Each studio will be run as an independent research Section, establishing their own final requirements for the Final Review.

Section Professors will present their specific agenda, interests, tools and workflow during Studio Presentations on the first day of class. Students will make state preferences in ranked order. A lottery will determine studio assignments.

Portman Prize Jury

There will be no common requirements for Final Prize Jury Submittals. Students may work in groups or individually. Each contributing student will be allotted a set amount of wallspace within the school, which may be used in aggregate (collectively) with their fellow collaborators. Mixed media presentations are strongly encouraged, including both digital (monitors or screens), physical (3d models) and graphic (drawings and boards).

Criteria for advancement of two (2) groups to present at the Final Prize Jury will be determined by each Studio Section and Instructor. It is strongly encouraged that the decision regarding advancement incorporates the advice of the Studio Instructor, the Studio Students, and the Studio Final Jury.

\*1 ‐ COLLABORATIVE Work

Students and Professors are makers and contributors. We will experiment with both parties bringing work to the table to discuss and critique as it relates to the process of the studio. Each Studio Section will be considered a laboratory for investigation led by respective Professors.

Projects will flow between Individual and Collaborative throughout the semester.

The semester will start with Collaborative research work shared amongst all of the studio sections, culminating in a presentation with the Portman Critic in week 3 of the studio.

Individual versus Collaborative processes will be defined by Professors and students through the balance of the semester.

Final Submittals for the Studio and the Prize Jury shall be the product of collaboration by a minimum of 2 students, no exceptions.

In the interest of productivity, invention, and progress of the studio as a whole, collaborations between students may be reassigned at any time during the semester by Professors.

\*2 – COMMUNITY of Peers and Professionals (these are in process)

Campus Planning, LBC Project Context

Dan Nemec – Assistant Director CPSM

Michael Gamble – QEP Campus Team Member, LBC Project Leader

Energy / Systems

Mark Walsh Cooke / ARUP

Environmental / Sustainability

Atelier 10

Analysis / Designing with Data

Pattern R+D, Atlanta

Structural / Fabrication

Structural Engineer

Fabrication Specialist

\*3 – TOOLS (Strategized with your specific Professor. Below are examples)

Discussion (talking)

Information Gathering (reading, assembling, organizing)

Thinking (writing)

Sketching (by hand)

Diagramming (Illustrator)

Scaled Drawing / Drafting (ACAD)

Imaging (By hand, Photoshop)

Calculating (Excel)

Distilling and Presenting (Varied Media)

2D in 2D (ACAD)

3D in 2D Modelling (Rhino)

3D in 3D Modelling (by hand, assembly [laser], or 3D printing)

Variations (Grasshopper)

Information Investment (REVIT)

Analysis (energy modeling plug‐ins)

3D in 2D Visualization (VRay)

3D in 2.5D Immersion (Vitual Reality plug‐ins)

3D in 3D Building (mock‐ups)

Documentation (InDesign)

\*4 – WORKFLOW (Designed with and by your specific Professor. Below is an example)

Collaborative Work

Individual Declarations of Ideas

Ideas into Sections

Sections into Images

Images into Critical Concepts

Critical Concepts into Models

Models into Plans

Plans into Strategies

Strategies into Details

Details into Mockups

Etc…

\*5 – EVIDENCE

The Portman Studio is an intense, discovery‐based, research studio, concluding with a public review and Prize Jury process. It is specifically designed to encourage – or demand – the continuous production of process and material, for the benefit of the individual student, the Section, the Studio at large, and the School.

Each Section will maintain an active, up‐to‐date, process‐oriented, and sharing‐based “studio wall” throughout the semester. There is no limit on the content or format of the wall. The spirit of the sharing is to maintain an “open‐source” approach to the semester’s work.

\*6 – PROPOSAL

Final Submittal for Studio Sections, Collaborative Work, and Grades

The production of a “building proposal” that conforms to:

The Program

The Living Building Criteria (all 7 petals and 20 conditions).

The Site

Beyond the production of a “building proposal” which is required, there will be no common submittal or format requirements between Studio Sections for the semester. Each studio will be run as an independent research Section, establishing their own final requirements for the Final Review. Students may work in groups or individually. Equal presentation area will be allotted to each Section, to be subdivided by Professors to allow for the presentation of work amongst their students. Success for the semester will be based on the following criteria, common to each of the Studio Sections:

Strength of IDEAS.

Depth of Engagement with the TOOLS and the WORKFLOW highlighted in each studio Section.

EVIDENCE of compelling work.

Efficacy of a DISCOVERY and a PROPOSAL, completely described.

Each Studio Section will be required to produce an 11x17 book of each of the Projects produced in the Section. The production of the book is the responsibility of the entire Section. No grades

will be issued to any student in a Studio Section until this requirement is complete and submitted to the Studio Coordinator.

Grading will be conducted amongst all Studio Sections, and conducted by a Grading Team. A total of five (5) persons (4 Studio Instructors and 1 invited SOA Administrator) will form the Grading Team.

Schedule

|  |  |  |  |
| --- | --- | --- | --- |
| WK | DATE | PHASE | Notes (subject to further detail by Section) |
| 1 | J‐11 |  | Collaborative Research between Sections |
| 2 | J‐16 |  | Collaborative Research between Sections |
| 3 | J‐25 | **REVIEW 1 RESEARCH** | Collaborative Research Presentations [PORTMAN VISIT #1] |
| 4 | F‐1 |  |  |
| 5 | F‐8 |  |  |
| 6 | F‐15 | **REVIEW 2 DISCOVERIES** | Internal Reviews by Studio Sections |
| 7 | F‐22 |  |  |
| 8 | F‐29 |  |  |
| 9 | M‐7 | **REVIEW 3 PROPOSITIONS** | [PORTMAN VISIT #2] [PRESENTATION BY 3 PROF. TEAMS] |
| 10 | M‐14 |  |  |
| 11 | M‐21 | *Spring Break* | *Spring Break* |
| 12 | M‐28 |  |  |
| 13 | A‐4 | **REVIEW 4 CONCEPTS** | Internal Reviews by Studio Sections |
| 14 | A‐11 |  |  |
| 15 | A‐18 | **REVIEW 5 FINAL** | [PORTMAN VISIT #3] |

**Studio Expectations, Protocols, and Requirements**

Critical Dates and Associated Requirements Friday, April 22

Portman Studio Final Review by Section (all day) Saturday, April 23

Portman Studio Prize Jury Review by Section (morning) Monday, April 25

Classes as usual (No tests or quizzes) End‐of‐Year Show Prep from 2:00 ‐ 6:00pm Cleaning of Hinman Studios

Tuesday, April 26

Classes as usual (No tests or quizzes) End‐of‐Year Show Prep continues Cleaning of Hinman Studios continues

Wednesday, April 27 (Reading Period)

Portfolios DUE for Graduating Students at Noon Faculty Review of Portfolio from 2:00 ‐ 6:00pm

Thursday, April 28 (AM Reading Period) No classes 8:00 ‐ 2:20

Final Exams start in the Afternoon

End‐of‐Year Show Installation Complete at Midnight Friday, April 29

Final Exams

SoA Awards 4:00 ‐ 6:00pm

End of Year Show and Reception 6:00 ‐ 8:00pm Friday, May 6

SoA Awards and Party for Graduating Students: Time TBD Evening: Masters Commencement Ceremony

Saturday, May 7

AM/PM Undergraduate Commencement

Studio Culture <http://www.arch.gatech.edu/studentlife/studio>

Each student is responsible for the production of his/her own work. This applies to team projects as well as individual projects. Criticism is central to the learning experience of the studio, whether in one‐on‐one scenarios or informal group discussions. Students are expected to be prepared for desk crits as instructors will make every attempt to see as many prepared students as possible on a given studio class day. Creative production is a result of both personal initiative and time management.

Master of Architecture Handbook <http://www.arch.gatech.edu/graduate/handbooks/march>

Readings

Required reading materials will either be provided as hard copy or will be placed in a studio folder or uploaded to a common folder. Instructors may make readings available on other electronic sites and may distribute other readings in their section seminars. Reasonable time will be given to complete readings prior to discussion.

Studio Attendance

Attendance is mandatory throughout the studio class period (MWF 2‐6pm) as well as lectures (W 6‐7pm). Studio sessions begin promptly and end as determined by each instructor. This may at times fall beyond the 6pm hour, due to the time spent with each student at the desk crit.

Each student is required to attend regularly scheduled class meetings and to participate in all class discussions and group meetings. Each student is also expected to attend scheduled reviews and pinups, and to complete project requirements as per the Schedule. Students are required for the full duration of the scheduled class time. Arriving late, or leaving early, will not

be tolerated without prior approval. You must address any scheduling conflicts with your studio instructor at the beginning of the semester.

Studio is a laboratory course. Not all classes will include direct instructional time; independent work will be assigned. There will be periods of studio, and full studio sessions, through the semester where you are expected to attend and to complete your assigned work, without direct instruction. These are independent working periods, often prior to major pin‐ups or reviews, and are critical to the progress of your work.

Missing three studio classes, excused or unexcused, will result in a meeting with your Instructor and the Architecture Program Office to determine a course of action.

Missing more than three studio classes without an approved excuse will result in a letter grade reduction.

Studio Work and Documentation

The work produced in studio is the property of Georgia Tech and may be collected for archival purposes or for representation in the accrediting process. The faculty strongly recommends that each student document his/her work upon completion (electronically) and that they submit a copy of work to their instructor at the end of the semester. Individual instructors may require a digital copy of all final work prior to the issuance of a grade.

# Academic Integrity and Conduct

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. All Georgia Tech students should familiarize themselves with and abide by the Georgia Tech Honor Code <http://www.catalog.gatech.edu/rules/18/>.

Student work that presents the ideas or words of others as the student’s own adversely impacts the whole school and may lead to immediate dismissal. Academic dishonesty, including cheating, plagiarism, commissioning academic work by others, or performing academic work on behalf of another student, is strictly prohibited. All persons in the classroom are expected to behave with courtesy towards others and in a way that does not interfere with the regular conduct of the class. Cell phones are to be turned off when students enter the classroom and should remain off for the duration of class: <http://www.catalog.gatech.edu/rules/19/>

# Special Needs

# Any student with a disability, that may require accommodation, should contact Office of Disability Services at 404-894-2563 or visit <http://disabilityservices.gatech.edu> to make an appointment to discuss his or her special needs and obtain an accommodations letter. He or she should also schedule an appointment to speak with the course instructor.

# Emergencies

In case of emergency (e.g., fire, accident, or criminal act), please call the Georgia Tech Police at 404-894-2500. Please note that Perry Minyard, IT Support Administrator for the College of Architecture, is also a firefighter and an Emergency Medical Technician (EMT) certified in performing CPR.

# Ownership

Physical copies of student work submitted to the school to satisfy course requirements—including, but not limited to digital files, papers, drawings, and models—become the property of the school. It is assumed as no obligation to safeguard such materials and may, at its discretion, retain them, return them to the student, or discard them.

# Archiving

In some courses, selected students may be required to submit physical examples of their work or digital examples (on a clearly labeled CD), no later than one week after the end of term, to their instructors or administration for archiving. By enrolling, each student grants a license to reproduce and display his or her work. This is a chance for students to have their work shown online and potentially featured in forthcoming publications.

# College of Design Facility Rules and Guidelines

Please consult the Georgia Tech Student Handbook regarding the use of facilities and all Institute policies. Aerosol sprays of any kind are strictly banned from the studio and surrounding areas. A new spray painting booth is now in operation in the College of Design shop, on the ground floor of the East Architecture Building.

Shop Use: All students using shop facilities must first have completed an orientation. Safety first, always! Noise should be kept to a minimum. Music may be listened to only through headphones, including evenings and weekends.

Studio Housekeeping: Students should feel free to organize their space creatively and expressively, but with respect to others around them. Try to prevent clutter from becoming a nuisance, distraction, or a hazard. The cleaning staff makes every effort to determine what is and is not trash, but their job can be made easier if you keep drawings and models off of the floor.

Correspondence

Your Georgia Tech email address is considered your official address. Please use it and not third‐ party services. Email is a form of official correspondence. Failure on your part to receive email sent, or failure on your part to send email, does not constitute an acceptable excuse for failure to complete required work or attend required class. When in doubt, contact your Instructor in person, in addition to confirming receipt of any time‐sensitive or urgent correspondence.

Environmental Concerns:

Aerosol sprays of any kind are strictly banned from the studio and surrounding areas. A spray painting booth is in operation in the COA shop, on the lowest floor of COA East. Use no high‐ VOC solvents or other noxious or hazardous chemicals in studio.

Shop Use

All students using shop facilities must first have completed an orientation. Students must comply with all shop procedures or they will lose shop privileges.

Phones and Digital Media in Studio

During class hours, students should cease or strictly limit their use of devices for personal matters and/or entertainment purposes. All electronic devices should be muted. If you must take or initiate a telephone call or other message, step outside of studio.

Music in Studio

Headphones must be used during studio hours. After studio hours, headphones should be used in consideration of others.

Media in Studio

Be judicious of your time and attention, and be considerate of others. Do not view entertainment media during studio hours. Instructors maintain the right to limit or remove media that is distracting to the work of the studio.

Studio Housekeeping

Keep your assigned areas clean of debris and trash. Do not store materials on the floor. Keep all common areas clear of your personal belongings. Please be mindful that you are sharing space with others, and that their personal work environment is as important as your own.

Course Grading

Attendance, participation, timely completion of work, the depth of engagement in studio issues, and the making of progress in your work provides the foundation for your grade. Conceptual rigor, project development and refinement, drawing and model‐making requirements, and craftsmanship all matter greatly and factor in the evaluation of your performance. Grades are earned by you –not given by your Instructor.

A grade of “F” represents “failing” work. This grade reflects a failure to meet the studio requirements, including attendance, minimum requirements concerning presentation and fulfillment of studio requirements. In case of an “F”, the studio will need to be repeated.

A grade of “D” represents “unsatisfactory” work. This grade reflects that you have significant attendance problems, poor studio performance, failure to meet deadlines, non‐fulfillment of the basic requirements of the studio, and/or your project is not plausible. In case of a “D”, the studio will need to be repeated.

A grade of “C” represents “satisfactory” work. This grade reflects that you have met the basic requirements of the studio, and your project is plausible, even if substantially under‐developed.

A grade of “B” represents “good” work. This grade reflects that you have met the full requirements of the studio, and that your project is developed to the point where evaluation can be made relative to the studio’s essential themes and criteria.

A grade of “A” represents “excellent” work. This grade reflects that your project represents both a clear understanding of studio themes and criteria, and is a self‐motivated exploration

beyond the basic course requirements. Projects that receive grades of “A” are exemplary projects in terms of concept, production, and craft.

Midterm grades will be assigned following the Midterm Review. Receipt of a passing grade at Midterm does not guarantee a passing Final grade. Before initiating any grade dispute, contact the Program Office, and review Institute policies.

General Institute Standards and Guidelines

Course Catalog: <http://www.catalog.gatech.edu/index.php>

Counseling: <http://www.counseling.gatech.edu/>

Rules and Regulations: <http://www.catalog.gatech.edu/rules/1.php>

Disabled Assistance: <http://www.catalog.gatech.edu/genregulations/assist.php>

<http://disabilityservices.gatech.edu/>

Academic Honor Code: <http://www.honor.gatech.edu/content/2/the>‐honor‐code Code of Conduct: <http://www.policylibrary.gatech.edu/student>‐affairs/code‐ conduct

Student Bill of Rights: <http://www.catalog.gatech.edu/rules/22.php> Please note that GT is a Tobacco Free Campus.

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