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Rochester Institute of Technology
Golisano Institute for Sustainability

Architecture Program Report for 2017 NAAB Visit for:
Initial Accreditation

Master of Architecture
105 credit program for students entering Rochester Institute of Technology
with a four-year undergraduate degree in a field other than architecture

Year of the Previous Visit: 2015
Current Term of Accreditation: Continuation of Candidacy

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ARCHITECTURE
Rochester Institute of Technology

Master of Architecture Program

Golisano Institute for Sustainability
College of imaging Arts and Sciences

Architecture Program Report for Initial Accreditation (APR-IA)

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Section 1. Program Description

I.1.1   History and Mission

History, Mission, Founding Principles of RIT

The Rochester Institute of Technology (RIT) marked its founding in 1829, with the formation of the Athenaeum, a cultural association promoting literature, science, and the arts in Rochester, New York. In 1891, the Athenaeum merged with a very different institution—the Rochester Mechanics Institute, founded in 1885 to provide technical training for skilled industrial workers. The marriage of these two organizations—the one promoting arts and letters, the other career education through technical skills—would shape the unique academic portfolio that distinguishes RIT today.

Today, technology, design, application, interdisciplinarity, and innovation are defining features of the RIT educational experience, shaping a distinctive cooperative education program, a diverse academic program portfolio (with such programs as microelectronic engineering, industrial design, and color science), and a highly interdisciplinary research agenda. Once delivered largely in isolation from each other, today's programs in the arts and technology are bridging the divide, thus satisfying the demands of 21st century employers for multi- and interdisciplinary expertise.

The RIT mission links the university's founding purposes with today's certainties and tomorrow's questions.

 • [RIT will] provide a broad range of career-oriented educational programs with the goal of producing innovative, creative graduates who are well-prepared for their chosen careers in a global society….pursue new and emerging career areas….[and] develop and deliver curricula and advance scholarship and research relevant to emerging technologies and social conditions.

 • Teaching, learning, scholarship, research, innovation, and leadership development for promoting student success are our central enterprises.

RIT's "Educational Goals" derive from the university's unique history and shape the character of its academic program portfolio and educational culture. This includes the Guiding Principles of Lifelong Learning and Career Orientation; and its five educational goals of Critical Thinking, Global Interconnectedness, Ethical Reasoning, Integrative Literacies, and Creative and Innovative Thinking, and all academic programs must demonstrably incorporate these goals into their educational objectives and learning outcomes. Thus, they are addressed as part of every annual program assessment. Because of the centrality of these goals to the Master of Architecture program when it was conceived and launched, RIT's Educational Goals are referenced in Section 4.

History, Mission, Founding Principles of the Program

RIT's Master of Architecture program, the first professional architecture program offered by the university, is the product of an interdisciplinary and inter-professional committee (faculty, practicing architects, and administrators) charged in 2008 with exploring and then developing an architecture program for RIT. Like its parent institution, the program combines design, application, interdisciplinarity, and innovation.

The Rochester Institute of Technology's Master of Architecture program enrolled its first cohort of students in the Fall of 2011. It is a three and one half-year, full-time graduate program designed primarily for students with an earned bachelor's degree in a non-architecture field. While primarily housed in GIS the Golisano Insistute for Sustainability (GIS), the program is offered jointly by the College of Imaging Arts & Sciences (CIAS) and GIS, thus drawing upon RIT's founding and enduring strengths in technology, art and design.

Program Character

At a time of significant transition for the architectural profession, developing an academic program "de novo" allows for full incorporation of the skills and knowledge critical to the 21st-century architect. Unlike existing programs in which emerging professional issues must be accommodated through evolutionary modifications to curriculum and pedagogy, the design of this program—its content, methods, and outcomes—were thoroughly shaped by today's most urgent imperatives. Chief among these is the sustainability imperative. Our program was founded upon the principle that the adjective "sustainable" is always the implicit modifier of the noun "architecture." We can no longer afford to teach anything other

than sustainable architecture, regardless of the course title. The curriculum and co-curriculum are suffused with the principles and practices of sustainability.

In addition to programs in GIS, the Rochester Institute of Technology offers a number of synergistic graduate programs in areas related to sustainability. Among these are an MS and ME in Sustainable Engineering; an MS in Industrial Engineering; an MS in Environmental Science; and an MS in Environmental Health and Safety Management. Students are encouraged to consider courses in these programs to fulfill elective options.

Urbanism is a second cornerstone of the Master of Architecture program. By the year 2050, it is estimated nearly 70% of the world's population will live in urban environments, with 93% of the growth occurring in under-developed cities and regions (*Urban Growth in an Age of Globalization*, Cengage Learning, 2009). Because a degraded or under-developed urban environment has grave implications, the program pays particular attention to urban settings and principles. The complexity of the urban environment - of which the built environment is only one of many components - requires an interdisciplinary approach to architectural education - one that references economics, public policy, sociology, and regional culture.

Since the urban fabric of many cities is essentially pre-determined, the program amplifies the practices and principles of sustainable preservation and adaptive reuse. The City of Rochester- as well as other U.S. and international cities where our students will work and study - serve as living classrooms for the students. RIT is fortunate to have strong academic programs in Urban and Community Studies and in Public Policy that provides complementary opportunity for the Master of Architecture program.

Integrated Learning/Integrated Practice make up the third cornerstone of the program. Like all strong architecture programs, the core educational venue for our students is the studio, but a studio that models the same cross-disciplinary, cross-professional integration fast becoming the norm in architectural practice. From the outset, students often approach design problems within teams, learning to value and leverage their collective intelligence and diverse academic backgrounds.

Finally technology provides an anchor for the final cornerstone of our unique degree offering. While today's architects have multiple technological tools at their disposal, understanding the value of these tools and technology's implications on design are an important component of a student's education. With our program residing in one of the country's most respected technology universities, and a part of an institute grounded in sustainability research and thinking, collaborative and cross-disciplinary opportunities thrive.

While the necessity of listing courses in the curriculum mask inevitably suggests a series of discrete experiences, actual instruction in the Master of Architecture program is characterized by continuing cross-reference, contextualization, preview, and review. Critical topics are introduced, applied, and re-visited on a recurring basis, resulting in the continuing integration of architecture skills and knowledge domains.

For example, the design and technical courses are co-requisites and are fully integrated. What the students design in one course sequence are technically investigated in the other. The Integrated Building Systems (IBS) course sequence integrates all the technical knowledge commonly segregated into various courses in other architecture programs - structures; building materials and methods of construction; building codes and standards; mechanical, electrical, and plumbing systems; cost analysis; and site work.

The program combines those same strengths that distinguished RIT at its founding: science, technology, design, and society. Its emphasis on integrated practice - a collaborative, multi-professional approach to the practice of architecture - reflects RIT's abiding consideration of practical, career-oriented education.

The Master of Architecture program mission reads as follows:

Through its curricular and experiential emphases on sustainable design and construction solutions, urban revitalization, and integrated practice, the RIT Master of Architecture program intends to educate broad-thinking architects well grounded in the principles and practices of sustainability, who will be able to create comprehensive projects that solve problems at the intersection of architecture and sustainability.

The five educational objectives of the Master of Architecture program are designed to closely reflect RIT's "Educational Goals" and its Strategic Plan – *Greatness though Difference*. These include:

1. Developing in its students a first-principle commitment to a fully sustainable built environment;
2. Providing students with the technical and practical knowledge necessary to develop innovative and sustainable solutions to urban problems;

3. Habituating students toward critical and creative thinking, problem-solving methods, and design inquiry;
4. Preparing students as leaders in a briskly evolving profession requiring teamwork, business integration, and holistic thinking; and
5. Instilling in students with the knowledge and skills necessary to obtain professional licensure.

Benefit to the Institution

The program benefits RIT in a number of ways, including enriched community relationships, new funding sources, enhancement of the faculty/student exhibit culture, a new cadre of visiting speakers, extension of RIT's applied research portfolio, and a constant sustainability presence.

Interdisciplinary Collaboration. RIT offers a broad range of degree programs many of which are closely related to architecture such as industrial and interior design, engineering and engineering technologies, and urban and community studies. With the addition of an architecture program all these allied programs can be enriched by providing collaboration opportunities for faculty and students.

Community Relationships. AIA Rochester is fully supportive of this program. In fact, it was a letter and recommendation from this organization that first set the program development in motion. A number of area architects regularly volunteer substantial amounts of their time to program development and review activities. The resulting connection between the local architecture community and RIT strongly continues through the participation of AIA Rochester members as adjuncts, mentors, employers (including co-op), and advisory committee members. AIA Rochester has also donated to RIT a valuable collection of original architectural drawings (early 20th century) of important Rochester buildings. These drawings benefit architecture students and faculty, but they are also important for students in Civil Engineering, Industrial Design, and Urban and Community Studies.

The Master of Architecture program closely associates with such community organizations as the Rochester Historical Society, the Landmark Society, and the Community Design Center of Rochester (CDCR). The department head and faculty regularly meet with the local professional commuity at various times throughout the year to discuss and identify program gifts, donations and community engagement opportunities.

Exhibition Culture. From RIT's founding in the 19th century, an important part of the institutional culture has been faculty and student shows and exhibits. This continues to be the case, not only in the areas of photography, crafts, design, and film, but also engineering (senior design projects) and, most recently, RIT's Innovation and Creativity Festival - ImagineRIT - which features inventions, performance, and projects developed by students in every RIT major. The architecture program, with its student and faculty shows, provides a rich addition to this culture.

Distinguished Speaker Series. With support from sponsorships and funding from donors, an architecture lecture series called archiTALKS is offered each term. In addition, the GIS Seminar Series, rounds out an array of guest speakers. Given the interdisciplinary nature of the profession, attendance by students from other RIT majors and the professional community is not uncommon.

Applied Research. RIT's research agenda tends to be applied and interdisciplinary. Both student and faculty projects in the architecture program provide faculty and students in the Golisano Institute for Sustainability a range of real-life problems that are addressed by their work.

Campus Sustainability. Like the Golisano Institute for Sustainability, the architecture program contributes significantly to the campus' environmental conscience. RIT has a stellar track record in this area, including the Sustainability Institute Hall as its second LEED platinum academic building in New York State. RIT is also committed to the Climate Action Plan for a carbon neutral campus by 2030. Many of our students work with RIT's Senior Sustainability Officer whose office is conveniently located within GIS.

Benefit to the Program

Among the benefits provided to the program by the university are reflected visibility, an academic culture hospitable to and experienced with professional degree programs, experience with studio-based instruction, existing exhibit spaces, and excellent facilities.

Reflected Visibility. The strong reputation that RIT enjoys in design and technology automatically provides positive visibility to the architecture program. Likewise, the Golisano Institute for Sustainability, one of a handful of such centers nationwide, provides the program immediate credibility in the sustainability area.

RIT is home to the Vignelli Center for Design Studies, which provides a remarkable new setting for design education, research, and critical examination. The Center also houses the majority of the Vignellis' archival collection of their achievements in industrial design, architectural graphics, interior, and furniture design. Students and faculty from the architecture program have full access to this amazing resource.

Cooperative Education. RIT has an extremely strong cooperative education program, which places students in over 50% of its academic programs in paid, major-related positions for up to a full year. RIT's experience in cooperative education is a substantial advantage to architecture students as they seek co-op placement.

Professional Degree Programs. The university offers a number of professional graduate programs—from the MBA to a Physicians Assistant MS to the MFA to the ME in a number of engineering fields. Many of our MS programs are practice- rather than research-oriented. RIT's familiarity with accreditation, job placement, and capstone projects is directly helpful to administrators of the architecture program.

Studio-based Instruction. RIT is extremely familiar with the space, personnel, and equipment requirements of studio-based programs, and this experience has served us well. Additionally, RIT has a long track record with evaluating studio work (through its NASAD-accredited programs).

Exhibit Space. RIT has an abundance of exhibit space that can be shared with architecture faculty and students, including the Dyer Art Gallery at the National Technical Institute for the Deaf, the Bevier Gallery in the College of Imaging Arts & Sciences, the University Gallery in the Vignelli Center for Design Studies, and exhibit space in the Wallace Center.

Facilities. Space is almost always an issue for new academic programs, and perhaps particularly for new architecture programs. The opening of our architecture program coincided with the closing of a large bay of a printing application lab in a building adjacent to the new building for the Golisano Institute for Sustainability. Over 12,000 sq. ft. of space was re-purposed for studios and classrooms. Additional administrative and faculty offices were originally programmed in the new GIS building, and Sustainability Institute Hall also provides additional shared lab, crit, and classroom space.

Liberal Arts and Practicum-based Learning

While this program is designed for students with a baccalaureate degree in a non-architecture field, we continue to receive numerous inquiries from students with some previous architecture background, and accept some of these students on a selected basis. We attract students from undergraduate majors as diverse as anthropology, engineering technology, urban studies, English, history, design, business, law and art. This model - in part - assures that our students, who regularly work in teams, bring a rich breadth of academic background and intellectual problem-solving perspectives to the studio. We believe that students continually learn from each other, as they share their diverse disciplinary perspectives.

Because this is a graduate program, there is no required liberal arts core in the Master of Architecture curriculum. However, there are a number of liberal arts graduate electives that students may take (e.g., economics, public policy, urban studies, and art history). The program's emphasis on urban environments—of which the built environment is only one of many components—offers an interdisciplinary approach that references economics, public policy, sociology, and regional culture.

From their first semester in the program, students begin work in teams on projects and problem solutions. Our association with the Rochester architecture and design community offers numerous opportunities to students for on-site work, as well as studio projects based upon projects and problems posed by the community. The required cooperative education experience (co-op) is essentially a paid practicum in which students apply their studio learning to the real-world practice of architecture.

I.1.2   Learning Culture

The Master of Architecture program has a strong foundation in, and robust learning opportunity around civic engagement and experiential learning. When asked where the studio resides, all faculty respond by reinforcing the notion that our learning culture resides both inside and outside the studio/classroom environment. Many of our classes, and particularly studio exploration, provide direct contact with the professional and public community, encouraging vital and essential engagement as experiential learning opportunities. This is evident in many of the student assignments and projects.

Learning Culture Policies

Since the program launch, the program has adopted a robust Studio Culture Policy that has embedded a positive learning culture, and this serves as the foundation for an integrated learning environment. Because it is important that there be complete transparency and investment in the various standards and procedures across stakeholders, this policy was originally developed collaboratively by faculty, students, and staff with its original adoption in Fall 2012. The policy includes core values, shared learning goals, time management, implementation, assessment, and arbitration procedures; and undergoes an annual review with formal updating every other year. A copy of the Studio Culture Policy is referenced in Section 4 of the APR (I.5 - A.3.2).

In addition to the Studio Culture Policy, other program policies have been developed to reinforce a positive and equitable learning culture in every area of the program. These policies (also referenced in Section 4) include:

> Global Experience Policy
> Co-op Policy
> Thesis Policy
> Advanced Standing/Course Waiver Policy
> Independent Study

Policy Access

All policies are described and discussed during our annual fall Student Orientation, made available to all students in the Student Manual, are referenced in the department website, and in the student section of MyCourses. These are also maintained on file in the Department of Architecture office for reference, and a copy of the Student Manual is placed in each studio. The Student Manual is included digitally in the Appendix - Section 4 of the APR (I.5 - A.3.3).

Implementation and Assessment

An implementation and assessment process is a routine part of the program's policies to augment, refine, and clarify cultural significance and relevance, and includes both faculty and student input. The means and scheduling of assessment are a part of each policy and typically occur no more than every other year at a minimum.

Harassment and Discrimination

See Policy C6.0 in RIT's *Institute Policies and Procedures Manual:*
http://www.rit.edu/academicaffairs/policiesmanual/c060

Academic Integrity

See Policy D8.0 in RIT's *Institute Policies and Procedures Manual:*
http://www.rit.edu/academicaffairs/policiesmanual/d080

I.1.3   Social Equity

RIT has an Office for Diversity and Inclusion (http://www.rit.edu/diversity/) within the division of Academic Affairs solely dedicated to the successful recruitment of diverse faculty and professional staff to RIT. The Office of Faculty Recruitment oversees every faculty and professional staff search to ensure diverse applicant pools and equity in decision-making. All architecture faculty searches adhere to hiring processes set up by this office and will make use of their resources.

The Office of Faculty Recruitment also maintains a database of minority and women graduate students. This database is used as a referral source for faculty openings and includes individuals in all stages of graduate study. With the recent internal approval of the Master of Architecture degree, architecture and related disciplines has been added to the database.

RIT has set ambitious goals for diversifying our undergraduate and graduate student populations. For the past few years, significant additional funding has been made available to competitive AALANA (African American, Latino/Hispanic, Asian and Native American) and female students. RIT has an active McNair Scholars Program, a federally funded program that supports undergraduate students from under served populations who wish to attend graduate school (https://www.rit.edu/diversity/mcnair/about-dr-ronald-mcnair).

Beginning in 2014, RIT launched its "AdvanceRIT" program, funded through a large institutional transformation grant from the National Science Foundation. The project's goals are to increase the representation of women STEM faculty at RIT and to increase their representation among our campus leadership.

The university is also home to a "Future Stewards Initiative" - an agreement between the university and American Indian/Alaska Native governments and communities for the purpose of providing educational and experiential programs for AI/AN scholars and facilitating their return to tribal communities (https://www.rit.edu/diversity/fsp-dept).

Within the student population, the Master of Architecture program enrollment includes a diverse cross section of students covering gender, race, disability, and ethnicity. Each year at our stakeholder meetings and the faculty advance/retreat we discuss and address social equity, diversity and inclusiveness as a routine part of our self-assessment. In addition, students are asked provide input and comments in these areas during their annual feedback session.

I.1.4   Defining Perspectives

The five defining perspectives that follow correspond closely to RIT's "Educational Goals" and its Strategic Plan in many ways. These reflect RIT's long-standing commitments to teaching, community engagement, technology, application, and innovation, and were interwoven into the Master of Architecture program at the time of its launch. As mentioned above, all academic programs are expected to incorporate these goals into their educational objectives and learning outcomes; thus, they are addressed as part of every program assessment.

The program's five educational objectives, which are derived from these goals, speak both explicitly and implicitly to the five perspectives. Thus the five perspectives are tightly stitched into the curriculum, extra-curricular activities, and culture of the architecture program. Their complement to RIT's Educational Goals further assures their continued centrality.

1. Collaboration and Leadership

The Studio Culture Policy insists upon a relationship of mutual respect, diverse problem solving methodologies, faculty-student and student-student interaction and support, and independent thinking. Adherence to this policy is regularly and routinely reinforced. To succeed in studio work and in on-site group projects, students work productively with peers from diverse backgrounds, to respectfully negotiate differences of opinion, methods, and practice, and to make and adhere to principled decisions. The faculty's continuous modeling of, and teaching about, the requirements of successfully integrated practice enable students to work productively – both as leaders and contributors - within cross-professional teams and to practice the leadership and partnership skills necessary to a team's success. The integrated practice emphasis also serves as a model for global interaction in the business world. Our Mentors and Co-op supervisors oversee student progress in these areas on an annual or bi-annual basis.

RIT has a tradition of faculty-student collaboration in research, scholarship, and applied projects. Because of the integrated association of the architecture program in the Golisano Institute for Sustainability, faculty and student projects are intended to reflect the innovative technologies studied and developed there. In a few short years since the program's inception, many collaborations between GIS faculty, GIS graduate students (M.S. and Ph.D.) and architecture faculty and students have occurred, and continue to occur with regularity. This includes in overlapping and collaborative coursework in the sustainability course series, field trips, and research within Sustainability Institute Hall, commonly referred to as our "living, learning laboratory."

The required sustainability courses, the "Urban and Regional Planning" course, and the social science and art history electives bring considerable interdisciplinary breadth and depth to student learning. The integrated pedagogy, in which course material is regularly recursive, encourages holistic and integrated thinking, as do the five courses in the "Integrated Building Systems" sequence. With the high level of community engagement, students experience the academic and professional realms as fully integrated.

A key goal of the RIT Strategic Plan continues to provide innovation, creativity, research, and scholarship opportunities in a collaborative way. A variety of university resources are available to help to achieve this goal, including a Student Innovation Center, a growing undergraduate research program, an annual Innovation and Creativity Festival (ImagineRIT), a Student Entrepreneur House, and a business incubator

(Venture Creations). Architecture faculty, staff, and students are encouraged to participate in, collaborate with, and assume leadership roles throughout the many opportunities made possible by these programs.

2. Design

The overriding, interweaving and grounding element of the four cornerstones of our program – sustainability, urbanism, technology and integration - is design.

The second of the program's five learning objectives is particularly germane to this second perspective: the program will "provide students with the technical and practical knowledge necessary to develop innovative and sustainable solutions to urban problems." Because of a focus on urban architecture, students are required to explore diverse city neighborhoods and identify and respond to the needs of a wide range of socio-economic and cultural backgrounds.

Students' required global experience is an important first step in the road to becoming global architects and thus global citizens. The program focus on urban architecture is expressed in a number of case studies involving international cities with distinctive sets of economic, cultural, and political forces. As the students' analytical toolbox grows (through coursework and practicum experience) they bring increasingly multi-disciplinary perspectives to the consideration of design and complex urban problems. This is particularly important as we recognize current shifts in the profession with a growing expansion in areas such as design-build, integrated project delivery, and global practice.

The sustainability focus repeatedly reinforces how sustainable design can have a positive aesthetic and environmental impact on the diverse populations of contemporary cities. A primary educational objective of the program is to "develop in…students a first-principle commitment to a fully sustainable built environment." It is our intent that by the time they graduate, students will have developed a deep environmental ethic that is indivisible from design.

The architecture program focuses on methods of integrated practice in such courses as the Integrated Building Systems (IBS) sequence and Professional Practice, and it routinely enlists the teaching and advisory services of individuals from related professions. This includes contractors, builders, and architects who successfully deploy professional integration in major projects, as well as all our professors-of-practice (adjunct faculty). Through the diverse composition of our professors-of-practice, our mentor-mentee program, and our project juries, students are regularly exposed to the priorities and perspectives of design of professionals in architecture and allied fields. With group project work, students practice leadership, facilitation, and implementation skills. Their close association with faculty and students in the Golisano Institute for Sustainability allow them to experience practitioner-researcher relationships.

Because our students come from a variety of undergraduate majors, they bring multiple problem-solving approaches to bear on each project, yielding a rich and integrated end product. We observe that our students learn from one another as the circumstances allow, expanding the perspective around, and critical inquiry within design exploration.

3. Professional Opportunity

Practice-based learning is a hallmark of the RIT education. RIT students in all programs learn theory in the classroom and then have repeated opportunities to put that theory into practice - in later courses and in their multiple co-op placements. Many student assignments are completed in a practicum setting - either within the studio, a local architecture firm, a project site in Rochester, or co-op placement. The program's close association with AIA Rochester puts students in regular contact with professionals fully dedicated to the growth and development of the profession, as will their co-op placements. Participation in AIAS accustoms students to connect to current professional leadership as they help mold the future of the profession.

One of the major goals of the curriculum is to prepare students for the licensure exam, and beginning with new student orientation, licensure and registration are constant themes of the program. A number of courses address the many layers and rationales of building regulations, including (but not limited to) the

ARCH-771 Professional Practice course, the ARCH-741 through ARCH-744 Integrated Building Systems series, and the ARCH-763 Sustainable Building Metrics course.

Students' mandatory co-op assignments provide them with contemporary examples of internship work. Out-of-state and international co-op assignments expose students to other regulatory environments. Through these relationships and the mentor-mentee program, all students have the opportunity to work with licensed architects and other professionals, thus gaining a first-hand understanding of the range of opportunities available to a broad range of professional practice.

In addition, the NCARB AXP exposes students to traditional and alternative career paths. AIA Rochester, one of the strongest regional AIA chapters, has excellent relationships with key NYS licensing officials and regularly helps organize strategically timed information sessions for the students on the topics of internship, licensure, and NYS regulations. This is done in collaboration with the Department of Architecture's in-house Architecture Licensing Advisor, Professor Jules Chiavaroli.

4. Stewardship of the Environment

The Master of Architecture program focus is to address the pressing environmental exigencies of the 21st century. As previously mentioned in I.1.1 above, our program was founded upon the principle that the adjective "sustainable" is always the implicit modifier of the noun "architecture." We can no longer afford to teach anything other than sustainable architecture, regardless of the course title. It derives from the belief that we can no longer afford to teach anything other than environmental stewardship, sustainability and resiliency as explorative vehicles for increasing the value, purpose and significance of design.

Among the required sustainability courses in the curriculum are courses in Sustainability Science, Industrial Ecology, and Sustainable Buildings—all offered in collaboration with graduate programs in GIS' sister department - Sustainability. But beyond these direct forms of exposure, the entire program curriculum is suffused with the principles and practices of sustainability. Virtually every required course—from Integrated Building Systems to Architectural Design to Design Theory—is presented and experienced primarily through the lens of sustainability. Further, architecture students are exposed to the results of cutting-edge research in GIS in such areas as material aging, clean technologies, alternative energy solutions, pollution prevention, and green product assessment. The required sustainability courses develop in students a deep appreciation for the necessity and the challenges of sustainable building. Because in the northeast, sustainable architecture is almost synonymous with adaptive re-use, the program also emphasizes building re-use in primarily urban settings. Several courses in the design sequence, ARCH-763 Sustainable Building Metrics, and ARCH-762 Industrial Ecology Fundamentals equip students with the knowledge and analytical skills necessary to advocate and produce sustainable, resilient, social and environmentally responsive solutions.

The program's sustainability focus and its integration within GIS as an active sustainability research organization encourage intellectual growth and agility. Students are first-hand witnesses to the swift pace of technological solutions to sustainability challenges, thereby recognizing the importance not only of knowledge currency, but also of a capacity for understanding and applying new technologies.

Also previously mentioned, RIT offers a number of synergistic graduate programs in areas related to sustainability. Among these are an MS and ME in Sustainable Engineering; an MS in Industrial Engineering; an MS in Environmental Science; and an MS in Environmental Health and Safety Management. Students are encouraged to consider courses in these programs to fulfill elective options. Several of these courses are identified in Section II.2.2.

5. Community and Social Responsibility

RIT's strong ties with the Rochester community are regularly reflected in the architecture program. It is largely within the framework of the greater Rochester community that our students learn what it means to be an architect and a contributing community member. This means regular interaction not only with area professionals, but also with city leaders, with highly diverse city neighborhoods, and with active city organizations. As communication skills are emphasized, students are taught to be effective listeners to clients and appropriately respond to their expressed needs.

Among the courses supporting this perspective is ARCH-752 Urban and Regional Planning and its studio sequence. These courses provide students with the skills necessary to critically examine a number of contemporary social issues related to the practice of architecture, including but not limited to universal design, ethnicity in the urban form, ethical decision-making, and the role of the architect in society. In the

ARCH-752 Urban and Regional Planning course, students work with area planning organizations and/or agencies to provide community service in the design process for neighborhoods.

Architecture faculty, staff, and students routinely and continually engage with the Rochester community. Professors-of-practice bring their experience as community professionals to the studio and classroom. Full-time faculty collaborate with professors-of-practice, oversee student projects in the City of Rochester, recruit community architects for juries, and promote the architecture program within AIA Rochester.

All students participate in multiple on-site projects within the City of Rochester, under the supervision of community professionals and RIT faculty. With no other architecture program in the metropolitan area and an urban building stock in need of creative attention, students and faculty from the program have regular opportunities to propose and implement sustainable preservation and adaptive re-use solutions in the city of Rochester. This involvement with community participants, business stakeholders, and policy makers underscores the value and importance of our civic engagement duties and public servant responsibilities as architects and future leaders.

The following table summarizes the five Defining Perspectives and their relationship to the program's educational objectives and goals.

Program Educational Objectives/Goals Supporting the Five Defining Perspectives	NAAB Defining Perspectives				
	A. Collaboration & Leadership	B. Design	C. Professional Opportunity	D. Stewardship of the Environment	E. Community & Social Responsibility
First-principle commitment to a fully sustainable built environment	●	●		●	●
Technical and practical knowledge necessary to develop innovative and sustainable solutions to urban problems		●	●	●	●
Sophisticated skills in design, creative thinking, and problem solving	●	●	●		
Leadership in a briskly evolving profession requiring teamwork, business integration, and holistic thinking	●		●		●
Knowledge and skills necessary to obtain professional licensure	●	●	●	●	

Summary of Co- and Extra-Curricular Activities Supporting Five Defining Perspectives:
- Cooperative education placements in Rochester community
- Collaboration with GIS sustainability students and faculty regarding research and technological investigations
- Participation of professors-of-practice (adjunct faculty) in the routine culture of the program
- Participation in AIAS
- International study/co-op
- Guest lectures both university and community wide
- Neighborhood projects and community service
- Participation in local AIA programs, charrettes, neighborhood studies
- Connection through AIA with the NCARB AXP program
- New Student Orientation each fall

I.1.5   Long-Range Planning

Institutional Long-Range Planning

Since the early 1990's, RIT has relied upon a flexible strategic planning process to chart and correct the institutional direction. Strategic planning, which always begins at the institutional vision and mission, is a community process, with all constituencies represented in the development of a 10-year institutional blueprint. Strategic goals are assigned annual, quantifiable targets and a final target to be reached by the retirement of that strategic plan.

Flexibility is a continuing hallmark of RIT's strategic planning. Embedded in each plan is a process for changing goals and targets as necessitated by unforeseen changes in the external and/or internal environment. For example, when President Bill Destler came to RIT in 2008, he brought with him a vision of RIT as "the innovation university," one that, because of its unique program portfolio, can, in his words, "bring the right and left brain together" to yield truly innovative interdisciplinary programs. The "innovation university" was entirely in keeping with the RIT tradition of career-oriented programs in the arts, technologies, and sciences, but it did drive some modifications to the existing strategic plan, including, for example, a new goal to "grow RIT's reputation in sustainability." The architecture program is a product of this flexible, but always mission-faithful strategic planning, and continues through its current vision.

The recent adoption of the RIT's strategic plan - *Greatness Through Difference: RIT's 2015-2025 Strategic Plan* (https://www.rit.edu/president/plan2025/greatness) was presented to the Board of Trustees in November of 2014 and approved 2015. It boasts RIT being a world leader in experiential education, with its cooperative education program the fourth oldest and one of the largest in the world. It continues to commit to carbon neutrality, LEED certified buildings, and sustainability focused degree programs, and specifically mentions the architecture program as "among the first to consider sustainability as a curricular element equal in importance to design."

During RIT's strategic planning conversations, five intersecting spheres evolved into the cornerstones of the plan:

   Career Education and Student Success – Cultivating student success through the academic enterprise with confidence in the "quality of teaching, learning, research, scholarship and academic support services that are the student's academic environment."

   The Student-Centered Research University – Through inter and cross-disciplinary collaboration, "combining activities of research, scholarship, artistic creation, creative inquiry, teaching and learning."

   Leveraging Difference – Recognizing the importance of diversity and inclusiveness, intentionally developing "practices, opportunities and programs that harness the power of difference to drive creative solutions, innovative combinations, and productive collaboration."

   Affordability, Value, and Return on Investment – Recognizing affordability by providing "the next decade's students with the skills and knowledge necessary to succeed I satisfying and remunerative careers."

   Organizational Agility – Moving quickly and efficiently to change, and staying "abreast of the latest research, to deploy the most current, appropriate, and efficient tools, and to move quickly in responding to sustainability imperatives."

In all of RIT's academic programs, continuous improvement is assured through the annual assessment process (see next section) of a program's goals and objectives against its vision and direction. The architecture program's original vision, mission, and direction continues by aligning with GIS' Strategic Plan (2005-2015), and the Department's individual Strategic Plan.These are complemented, reinforced by, and interwoven with RIT's *Greatness Through Difference: RIT's 2015-2025 Strategic Plan*. In turn, the program vision, mission, and objectives, along with the NAAB performance criteria, inform the program learning outcomes, which is where internal assessment and continuous improvement take place.

Program Long-Range Planning

It is at the foundational level, each of the program's educational objectives is a regular consideration of the long-range direction of the program (see I.1.1). Three key bodies responsible for continually testing and adjusting, continual focus of the direction of the program as reflected in these objectives are the

professional groups at a visionary/strategic level, the program faculty (full and part-time) at both the visionary and execution levels, and the Curriculum Committee at the program and pedagogical level.

With its large number of professional and technology-dependent academic programs, RIT has become adept not only at reacting to external changes, but at anticipating them and adjusting curricula quickly and seamlessly. In most cases, these changes are identified through the collaboration of engaged professionals, including employers who hire our students for co-op and permanent employment, members of professional advisory boards, full-time faculty (for whom currency is an ongoing requirement reflected through research and scholarship), and part-time faculty (professors of practice). The Master of Architecture program is no exception. RIT is well practiced in using its many industrial/professional advisors as critical bellwethers to ensure program currency.

Annually, the program holds a year-end retreat/advance to critically review the program's successes and shortcomings, to assess its direction and growth, and to make program adjustments. We also hold an end-of-year student conversation forum, allowing all students an opportunity to comment and provide feedback on their experience in the program. Informally, the department head has meetings with student leadership at least twice per semester for feedback and updates.

Data and Information Sources

Important sources of information are the results of the annual assessment of learning outcomes, which regularly influence changes in the program (discussed below). For example, consistent under-performance in an outcome can lead to re-thinking of program direction or admissions requirements or faculty-student ratios, while consistently meeting benchmarks are evaluated to address raising standards as the program and profession evolves. Data from multiple sources included input from the RIT community, the progessional community, and our students, faculty and collaborators. This allows for both pedagogical objectives to be assessed along inalignment with the growth and future direction of the profession. This is described in greater detail in the sections that follow.

Role of Five Perspectives

The five defining perspectives discussed are clearly reflected in the program's educational objectives. Long-range, strategic planning for the program occurs within a discussion of these objectives as one of its primary threads, which assists in assuring that the perspectives remain central and foundational in this ongoing activity.

I.1.6.A. Program Self-Assessment

In order to establish a consistent and strong assessment foundation campus-wide, each program at RIT develops a Program Level Outcomes Assessment Plan (PLOAP). Academic programs use a common template, developed collaboratively by the Student Learning Outcomes Assessment Committee (SLOAC), which is comprised of representatives from every college and degree-granting unit (of which the department head is a member). Program assessment plans are created to facilitate continuous program improvement with a focus on teaching and learning.

A PLOAP provides faculty with a clear understanding of how their program is assessed (e.g., who is going to do what, when, and how) with the ultimate goal to foster student learning. Assessment plans reflect specific program goals; measureable student learning outcomes; benchmarks or expected results; the direct and indirect assessment methods used to demonstrate the attainment of each outcome; a well-articulated plan for timely implementation; the intervals at which evidence is collected and reviewed; the individual(s) responsible for the collection and review of evidence; and use of findings to inform, confirm, and support program level change and accomplishments.

Support for assessment-related processes is available to programs from RIT's Office of Educational Effectiveness Assessment (EEA). EEA works directly with programs to provide support for program level assessment, including assistance with assessment planning, development of instruments, workshops, and resources. EEA provides faculty with a variety of easily accessible resources on its website, www.rit.edu/outcomes.

The Student Learning Outcomes Assessment Progress Report at RIT

RIT's academic programs report on their current assessment practices to the university on an annual basis, including outcomes assessment results and use of results for program improvement. This process

is referred to as the Progress Report. The Progress Report is an annual survey that asks academic programs to identify a program level student learning outcome assessed in the prior year and report the results of the assessment along with how the program used the results for improvement. Oversight of RIT's annual Progress Report is provided by the EEA Office. Overarching goals for the annual progress report are to highlight student-learning achievement and to determine how data are used to guide improvements.

The Progress Report results are shared with the provost's office, board of trustees, deans, the SLOAC, departments, and programs. The results from the Progress Report are also used to measure university-wide initiatives on student learning and continuous program improvement and included as a metric in the University's Academic Program Analysis.

At the conclusion of each Progress Report cycle, EEA works directly with respective colleges or departments to share the results and determine the best course of action. In prior years, action plans included meeting with faculty, holding workshops, and presenting information on best practices in student learning outcomes assessment to faculty and administrators.

Any discussion of assessment in architecture education recognizes the role played by studio pedagogy in student learning. The design studio is the pulse of every architecture program: it is the setting for faculty instruction and feedback; for student-to-student mentoring; for collaborative design and problem solving; and for the constantly critiqued iterations of every design experiment and project. Final course and project grades remain the summative forms of evaluation for architecture students, but equally, if not more important, are these continuous formative exchanges that are the engine of student learning.

The dominant idiom of the studio is the language of evaluation and assessment; student work, including incorporation and application of course content as well as the development of skills and abilities, is repeatedly subject to review, comment, suggestion, and evaluation by faculty, professors-of-practice, co-op supervisors and peers. Progress in student learning is possibly more closely monitored in architectural (and art) studios than any other teaching venue. Learning (or its opposite) is everywhere evident and everywhere leveraged as the basis for new learning. In other words, the design studio epitomizes a learning culture of evidence.

These features of studio pedagogy do not obviate the need for formal review and assessment, but any formal assessment plan must derive from the highly applied, visible, and iterative learning that is the studio experience.

For this Initial Accreditation cycle, a copy of the original "Plan for Initial Accreditation" and Candidacy Elgibility letter are included in the Appendix – Section 4 of the APR (I.5 – A.4.1 and A.4.2).

I.1.6.B. Curricular Assessment and Development

Self-Assessment Process

As mentioned earlier under Long Range planning, RIT requires a detailed assessment plan for all program proposals, and the architecture program adheres to these institutional assessment requirements. This is a detailed, evidence-based assessment plan that provides a mechanism for continually reviewing and improving the program. Just as RIT's strategic goals are gounded in the RIT 2015 - 2025 vision and mission, the program learning outcomes derive from a program assessment superstructure—the vision, mission, and objectives presented in Section I.1.1—that is itself informed by the RIT vision, mission, and goals.

At the program level, a broad framework for self-assessment is in place and is being used as the basis for a more detailed self-assessment methodology and metric. The department regularly convenes with the EEA Office, and - through a series of routine meetings - we have outlined a revised set of objectives and characteristics for both program and student assessment to closely align with the recently updated NAAB objectives and SPC. Each year we assess several outcomes and report to the EEA office a set of evaluated metrics.

For the Master of Architecture program, learning outcomes are intended to encompass the broad criteria listed below:

1. Comprehend interrelated sustainability concepts from multiple disciplines such as economic, environmental science, engineering, policy, and social science.

2. Formulate problem statements and then identify and ascertain the impact and design opportunities for the various influences (such as historic, social, cultural, etc.) on any given design problem.
3. Comprehend the principles of project management, the resources applied to a project, and the process of guiding the project to successful completion.
4. Analyze and synthesize diverse aspects of professional practice.
5. Apply principles of sustainable design and practice to projects.
6. Apply historical, religious, cultural, etc. lessons to contemporary urban problems.
7. Conduct and present business analysis of design choices.
8. Coordinate diverse aspects of professional practice.

Standard Assessment Language: Taskstream (RIT's Assessment Management System)

The tool being utilized for routine assessment is *Taskstream* (www.taskstream.com) and has embedded in it the various NAAB criteria for accreditation, providing clear, measurable metrics and outcomes The Assessment Management System (AMS) is an online web-based system that provides a communication and resource hub for all of the institution's outcomes assessment and continuous improvement initiatives. The AMS system facilitates the documentation and demonstration of the contributions that each of the University's academic programs and support services make towards achieving the goals of the institution as a whole in terms of institutional effectiveness. System features include:

- Organizational planning and reporting
- Online assessment plan creation and review
- Mapping to goals and learning outcomes
- Program level reporting and tracking of recommendations and improvements
- Development of surveys and rubrics
- Curriculum mapping
- Accreditation

Programs are provided with a workspace where their PLOAPs and other assessment-related data can be stored and managed electronically. Training and support for RIT's AMS is provided by the Office of Educational Effectiveness Assessment (EEA).

Assessment Responsibilities

In addition to the program faculty, the following groups are also involved in program review and assessment: These groups add value to provide additional breadth and depth of assessment and input as the program evolves and develops.

The Architecture Program Advisory Council (APAC). APAC is a source of advice and counsel, consisting of professionals in local and national architecture and building positions, and architecture educators. The advisory board serves in an oversight capacity to guide, advise, review and inform the make-up and construct of the program - discussing the degree to which the program aligns with its developing expectations, the future direction of the profession, and to assist in identifying additional relevent metrics for assessment related to practice. Key indicators relate to items such as salaries, hiring patterns, economic forecasts, hardware/software developments, and technological innovation. In addition - trends shaping the design profession, practice techniques and patterns, and emerging professional demography as graduates migrate into various career paths both locally and globally are also identified. Sources for these data are intended to be from professional and government organizations and groups, conference highlights, and professional publications; and assist in informing the long-range direction of the program.

Supervisor/Mentor/Professors of Practice Roundtable - This diverse group is an excellent sounding board to review and comment on the program's growth, success, value to the profession and future direction This also includes such topics such as course value, co-op, and global study choices. Beginning last year we included a recent graduate as a part of the roundtable.

Mentor Matching Program (MMP). During each year all incoming students meets with volunteer mentors through an interactive interview session. Following these "speed mentoring interviews", students are matched with an outside practitioner that serves as a professional guide to assist the

student with her or his academic pursuits. The MMP creates – both formally and informally – a strong, more personalized link between the profession and students.

Thesis Committee. Constituted of program faculty and occasionally an outside professional, the thesis committee advises students throughout the thesis process and the final thesis evaluation.

Professional Juries/Invited Critics. Professional juries involve practitioners in the field who have volunteered to critique student projects. While this practice is a convention of architecture education, it is a deliberate and focused intention to reinforce our integrated learning process.

Alumnae/i Input - At the close of this year we plan to launch a questionnaire to recent graduates who have begun to integerate into the profession.

Assessment Results

Through the use of the PLOAP tool, an overlay mapping occurs annually to tri-annually against the robust and comprehensive program agenda and objectives. Assessment results are documented, recorded and analyzed, resulting in an ongoing and iterative process for self-improvement. These assessment opportunities are used to reflect upon the program mission and vision and to directly influence and inform the key program goals listed below. A complete PLOAP Table is provided in Section 4 (I.4) for reference, and also included in the Digitized Supplemental Material Appendix (I.5 – A.3.7).

Program Goal 1: The program will produce broad-thinking architects well grounded in the principles and practices of sustainability. Students will be able to:

1. Comprehend interrelated sustainability concepts from multiple disciplines such as economic, environmental science, engineering, policy, and social science.
2. Formulate problem statements and then identify and ascertain the impact and design opportunities for the various influences (such as historic, social, cultural, etc.) on any given design problem.
3. Comprehend the principles of project management, the resources applied to a project, and the process of guiding the project to successful completion.
4. Analyze and synthesize diverse aspects of professional practice.

Program Goal 2: Graduates will be able to create comprehensive projects that solve problems at the intersection of architecture and sustainability. This includes the ability to:

1. Incorporate principles of sustainable design and practice to projects.
2. Apply historical, religious, cultural, etc. lessons to contemporary urban problems.
3. Conduct and present business analysis of design choices.
4. Coordinate diverse aspects of professional practice.

The following conceptual assessment chart and flow diagrams summarizes the iterative process curricular assessment and development.

Party: Membership	Role and Responsibility
Architecture Program Advisory Council: predominantly local and national professionals in leadership positions	Oversight of the program to guide, advise, review, and inform primarily from the perspective of the current state of the profession and its future.
Supervisor/Mentor/Professors of Practice Roundtable: membership varies	A more immediately available and practical group of practitioners ranging from emerging to mid-career local professionals. This group is asked to respond to more practical programmatic issues such as co-op, use of current technology, office practice methods, etc.
Mentor Matching Program: membership varies from year to year	This group exists primarily to enrich the experience of our students; however gathering them to share their collective perspective on student progress is invaluable.
Thesis Committee: the faculty of the department	To manage the thesis process.

Professional Juries and Invited Critics: varies by year and by course	To bring outside perspective into the studio courses.
Alumnae/i: to be determined	To bring the unique perspective of assessing what they learned in the program and how well it has prepared them for practice.
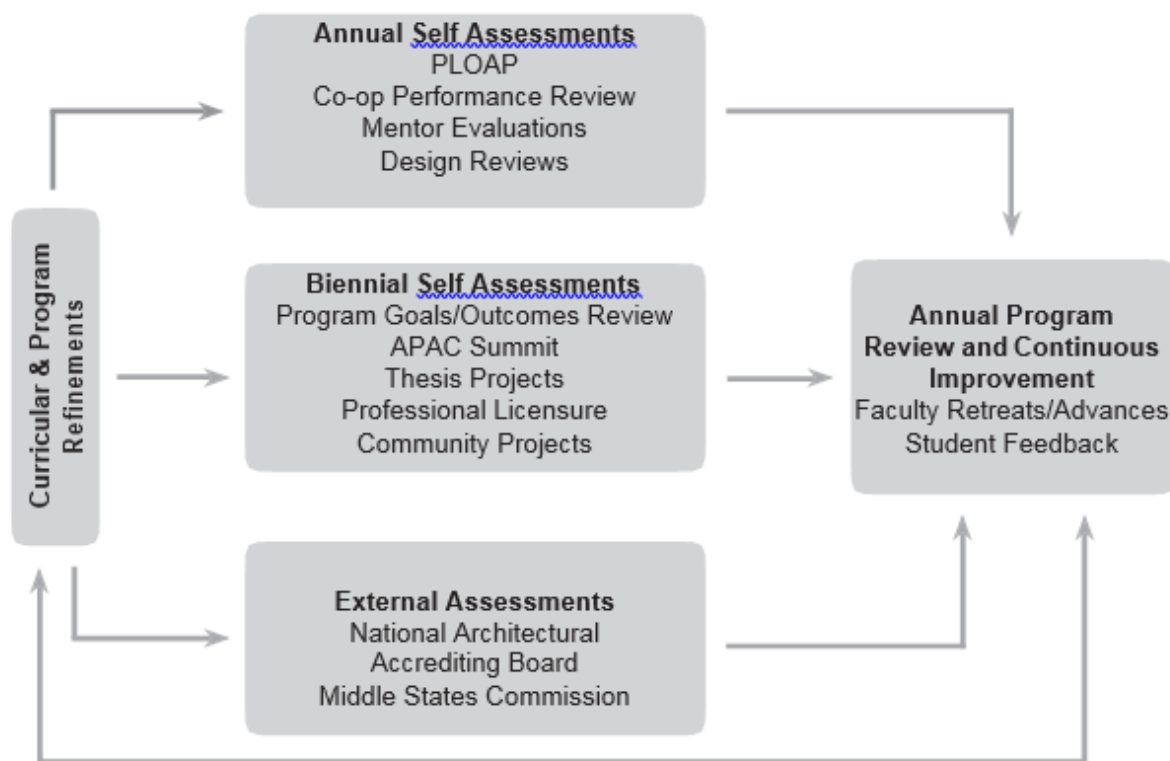
Curricular Assessment and Development Flow Diagram

Section 2. Progress Since the Previous Visit

Progress since the last visit has been ongoing and widely directed to both the program growth and development, but also deliberately focused on the various conditions not met and causes of concern noted in the 2015 VTR. These VTR narratives are discussed in detail below.

2015 Team Assesment: Conditions Not Met

2009 Criterion 1.1.4 Long-Range Planning.

An accredited degree program must demonstrate that it has identified multi- year objectives for continuous improvement within the context of its mission and culture, the mission and culture of the institution, and, where appropriate, the five perspectives. In addition, the program must demonstrate that data is collected routinely and from multiple sources to inform its future planning and strategic decision-making.

[X] The program's processes do not meet the standards as set by the NAAB.

2015 Team Assessment: Earlier this year the university completed and adopted *Greatness Through Difference: RIT's 2015-2025 Strategic Plan*. The GIS 2.0 Academic Unit 2025 Strategic Plan has also recently been adopted. Both provide frameworks for the alignment of the architecture program's development with the strategic vision of RIT and the GIS for the future. While the Architectural Program Advisory Council (APAC) has now been formed and has convened by teleconference, no progress has been made in "identifying a list of key indicators that will be analyzed at regular intervals" as stated in the

APR. As noted by previous visiting teams, the program continues to evolve from its original founding principles. For example, the dramatic rise in the number of advanced-placement students and the significant growth in the international student population are two developments that point to the need to collect data routinely and from multiple sources in order to consider how developments impact the alignment with long-range plans and inform strategic decision-making.

> ### *RIT response to 2015 VTR for 1.1.4 - Long Range Planning.*
>
> *We have now identified a list of key indicators for the Architecture Program Advisory Council (APAC) to focus on as primary elements toward strategically addressing long range planning and growth. These include in part - trends shaping the design profession, practice techniques and patterns, and emerging professional demography as graduates migrate into various career paths both locally and globally. At a local level, our professors of practice and mentors - both as critics and supporters of our co-op program, are routinely solicited to comment on an intern's design, intellectual and educational attributes and competencies as young professionals in our regional workforce (paying attention to both US and international students). Combined, this multi-pronged approach is utilized to better inform long range planning and strategic decision-making.*

1.1.5 Self-Assessment Procedures: The program must demonstrate that it regularly assesses the following:

- **How the program is progressing towards its mission.**

- **Progress against its defined multi-year objectives (see above) since the objectives were identified and since the last visit.**

- **Strengths, challenges, and opportunities faced by the program while developing learning opportunities in support of its mission and culture, the mission and culture of the institution, and the five perspectives.**

- **Self-assessment procedures shall include, but are not limited to:**

  o **Solicitation of faculty's, students', and graduates' views on the teaching, learning, and achievement opportunities provided by the curriculum.**
  o **Individual course evaluations.**
  o **Review and assessment of the focus and pedagogy of the program.**
  o **Institutional self-assessment, as determined by the institution.**

The program must also demonstrate that results of self-assessments are regularly used to advise and encourage changes and adjustments to promote student success as well as the continued maturation and development of the program.

[X] The program's processes do not meet the standards as set by the NAAB.

2015 Team Assessment: The team found evidence that progress has been made since the 2013 NAAB team visit as the program evolves and matures. The program does not have its own strategic plan. Rather, it uses the GIS plan as a guide for the direction of the program. The procedures for self- assessment as defined by the NAAB have been established and are underway, but, because this is a young program, there is not yet sufficient evidence of how the assessments are being used to improve the program. Therefore, the team determined that this condition is Not Met.

> ### *RIT response to 2015 VTR for 1.1.5 – Self-Assessment Procedures*
>
> *As noted in other sections of the VTR, the department works with the RIT Office of Student Learning Outcomes Assessment Office (SLOA) –(now identified as the RIT Office of Educational Effectiveness Assessment (EEA)) - for regular self-assessment. Notwithstanding our data set is presently small and not yet fully statistically significant, we still review and analyze our data as a part of our annual retreat/advance. And of note - the architecture program's self-assessment has been identified by SLOA as one of RIT's "best practices", given our process and having the NAAB Realms directly linked and included as a part of our student learning outcomes. In addition, the department head serves as a member of RIT's Student Learning Outcomes Assessment Council (SLOAC). Finally, last fall the program received a SLOA grant to modify its self assessment*

guidelines to both update it for the newest SPC as well as to focus on both entry (first year) and exit third year Integrative Design) studios to map and evaluate foundational criteria and final design, integrative criteria for student performance and program assessment.

2009 Criterion **A.1. Communication Skills: Ability to read, write, speak and listen effectively.**

2015 Team Assessment: The evidence for communication skills as an ability to read, write, speak, and listen varied widely from high-pass to low-pass, particularly in written evidence displayed in the team room (i.e., overall organization, paragraph and sentence structure, the use of complete sentences, grammar, and spelling). **Therefore, this criterion is Not Met.** Cited coursework was ARCH 621 - Architectural History I and ARCH 622 - Architectural History II.

RIT response to 2015 VTR for A.1 - Communication Skills

We realize that our history course sequence requires considerable writing assignments, and identifying these courses alone to meet A.I was an oversight on our part. We have recently observed diminished writing proficiency, given the increased percentage of international students in our program over the last two years. We have now adjusted compliance with A.1. to the following courses: ARCH 753 Research Seminar/Thesis Prep and ARCH 790 Thesis. In addition, we require all international students to take English testing upon entry into our program, and - if additional skills are warranted - they are required to take our mandatory English language course that has been tailored specifically for architecture students. Additionally, we have added a new elective offering (Expressions in Speaking and Writing for Architects) focused specifically on writing and communication skills, allowing both international and domestic students the opportunity to hone in on tools and techniques as they move through the program. We are also working with the Office of Graduate Studies to more formally explore opportunities for communication skill enrichment at the graduate level.

2009 Criterion **A.6. Fundamental Design Skills: Ability to effectively use basic architectural and environmental principles in design.**

2015 Team Assessment: The student work did not consistently reflect evidence of an ability to effectively use basic architectural and environmental principles in the cited course, ARCH 632 - Architectural Design II. Although these principles are identified in the course syllabus, the student coursework and projects did not consistently demonstrate that the principles were being employed or demonstrate an ability to use them. Therefore, this criterion is Not Met.

RIT response to 2015 VTR for A.6 - Fundamental Design Skills

The Fundamental Design Skills SPC was originally matched to a course that was merged into ARCH 632-Architectural Design II during the recent transitioning from RIT's quarter system to the semester system. This resulted in a limited number of student projects available to sufficiently show compliance with this SPC. ARCH 632 had previously been taught by different adjunct faculty and lacked consistency. With all our full time faculty now a regular and routine part of the studio sequence - and each faculty member having singular oversight with one year of the three-year studio sequence - we are more focused on integrated and sequential design skill development and studio course sequencing across the curriculum. Particular focus on demonstrating the ability to express incorporate fundamental design skills in the first year design studio sequence remains a priority.

2009 Criterion **A. 7. Use of Precedents: Ability to examine and comprehend the fundamental principles present in relevant precedents and to make choices regarding the incorporation of such principles into architecture and urban design projects.**

2015 Team Assessment: As an ability to examine and comprehend fundamental principles in relevant precedents, three courses were cited for student work examples: ARCH 733 -Architectural Studio III, ARCH 734 -Architectural Studio II, and ARCH 751 -Architectural Theory. Although some evidence was found, it did not consistently reflect an ability from low-pass to high-pass projects, and, therefore, this criterion is Not Met.

RIT response to 2015 VTR for A.7 - Use of Precedents

Use of precedents has now been incorporated into all studio courses with clear exercises in course syllabi to both examine and document "best practices", requiring an evaluation, analysis and critique of relevant buildings to more fully inform and direct design exploration. In addition, we will continue to refer to and study precedents in our history and theory classes and include these courses as a part of the total cohort in meeting this SPC.

2009 Criterion **B.1. Pre-Design: Ability to prepare a comprehensive program for an architectural project, such as preparing an assessment of client and user needs, an inventory of space and equipment requirements, an analysis of site conditions (including existing buildings), a review of the relevant laws and standards and assessment of their implications for the project, and a definition of site selection and design assessment criteria.**

2015 Team Assessment: The student work displayed for the primary designated course, ARCH 733 - Architectural Studio III, did not consistently demonstrate the ability to prepare a comprehensive program, and, therefore, this criterion is Not Met.

> ### *RIT response to 2015 VTR for B.1 - Pre-Design*
>
> *ARCH 733 - Architectural Studio III has as its focus "adaptive" design exploration. As a result, it has sometimes been difficult to prepare a comprehensive program where many factors are already pre-established. While we intend to keep programming as an explorative element in each of our studios, we have made adjustments to our curriculum to have this SPC primarily met across all architectural studios, where a more directed and definitive comprehensive program can be appropriately explored, understood and demonstrated.*

2009 Criterion **B. 6. Comprehensive Design: Ability to produce a comprehensive architectural project that demonstrates each student's capacity to make design decisions across scales while integrating the following SPC:**

- **A.2. Design Thinking Skills**
- **A.4. Technical Documentation**
- **A.5. Investigative Skills**
- **A.8. Ordering Systems**
- **A.9. Historical Traditions and Global Culture**
- **B.2. Accessibility**
- **B.3. Sustainability**
- **B.4. Site Design**
- **B.5. Life Safety**
- **B.8. Environmental Systems**
- **B.9. Structural Systems**

2015 Team Assessment: Evidence of comprehensive design skills did not consistently rise to the full required level of ability for the integration of the SPC included in this criterion. This was particularly true for the work displayed in the team room. The team requested supplemental evidence from projects not displayed in the team room, and, to the credit of the program, the additional work provided came closer to the intent of the SPC than that in the team room. However, the evidence did not appear representative of all design sections, and, in the end, the team chose to remain with the original assessment of Not Met.

> ### *RIT response to 2015 VTR for B.6 - Comprehensive Design*
>
> *In 2015 we offered for the first time our comprehensive studio course ARCH 735 - Architectural Studio IV: Integrative. While we were pleased that we believe we came close to satisfying this SPC on our first attempt, we learned how difficult it was to satisfy the 11 embedded SPCs. Following the recent site visit we adjusted the course syllabi and content to reflect the upcoming new Realm C in the 2014 Conditions. We have every confidence in our ability to satisfy the new*

> *C.2 and C.3 criteria and are already implementing these changes in the spring offerings of this course.*

2009 Criterion **B. 10. Building Envelope Systems: Understanding of the basic principles involved in the appropriate application of building envelope systems and associated assemblies relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.**

2015 Team Assessment: Student work for the cited course, ARCH-743 Integrated Building Systems II, did not reflect an understanding of the basic principles in the appropriate application of building envelope systems, and, therefore, this criterion is Not Met.

> ### *RIT response to 2015 VTR for B.10 - Building Envelope Systems*
>
> *This SPC was met during the 2013 site visit, and the course material for ARCH 742-Integrated Building Systems II did not substantially change for the 2015 site visit. Emphasis had been on designing and detailing building envelopes but little focus was placed on selection and application. We have bolstered this aspect of building envelopes in ARCH 742, and are folding B.10 into ARCH 641, ARCH 743 and ARCH 763 (Fundamentals of Building systems, Integrative Studio and Sustainable Building Metrics respectively) so that building envelopes can be explored sequentially across all these courses, providing both basic principles early on, and more technical and detailed explorations later on.*

2015 Team Assesment: Causes of Concern

A. SPC Compliance Threshold: We observed that the threshold for low-pass appears to be below the standard required to meet some of the SPC.

> ### *RIT response to 2015 VTR for Causes of Concern A. SPC Compliance Threshold*
>
> *The request to identify a high and low pass consistently across all courses often proves difficult as in some cases that margin was rather narrow, thus making faculty selected projects that received a relatively high grade as a low-pass due to the lack of poor work in that course, resulting in the threshold for low-pass unfairly high. This is further compounded when cohort sizes are very small. Therefore when such work is compared to work from another cohort where a project was worthy of a low grade, hence a low-pass, it appears that it has fallen below the required standard. Our goal is to keep working toward a consistent level of student work such that the margin between high and low pass is rather narrow. The faculty has identified the importance of mid-project reviews across design studios and other courses as a way to address these issues earlier in the process in order to ensure that the margin between high and low pass is better recognized.*

B. Consistent Integration of Sustainability: For a program focused on sustainability, there appears to be only a conceptual understanding of sustainable design principles demonstrated in the student work, particularly in the design studio sequenc**e.**

> ### *RIT response to 2015 VTR Causes of Concern B. Consistent Integration of Sustainability*
>
> *There may be very few programs of architecture that begin at as high a level of sustainable design inquiry as ours, outlining core sustainable principles at the onset of course delivery. Thus - as a key cornerstone of our program - we have worked to set a high standard in this regard from program launch through each successive year, and to continue to raise the bar as our program grows and develops. We continuously examine ways to integrate and more fluidly weave a robust sustainable discourse throughout our curriculum as a whole.*
>
> *Since the site visit we have increased the collaborative and cohesive efforts among the sustainability, technical, and representation courses into the design courses in each of the three years of the program through project and assignment matching. For example, we have articulated specific explorative opportunities to align assignments in ARCH 762 - Industrial Ecology Fundamentals with ARCH-734 - Architectural Studio II: Urban. In addition, we are inviting additional local architects as outside "experts" into our studios to act as consultants and supporting critics.*
>
> *Finally, we will set sustainability goals for many of our studio projects that must be measurable*

by one of the many available metrics (LEED, Green Globes, 2030 Challenge, Net-zero, etc.). In ARCH-735 Architecrture Studio IV: Integrative for example, the student must meet net-zero standards with his/her design and provide evidence for it using available software tools.

We are appreciative of this observation both as a comment about our curriculum but also a comment on how we articulate our intentions. As our program continues to grow and mature, we receive annual feedback from our students (and now alums), as well as hold an annual retreat/advance to discuss key aspects specific to program improvement. We examine methods to more effectively educate and demonstrably communicate principles of sustainability as a key and essential ingredient to be applied holistically and comprehensively in our curriculum, enhancing cognizant decision making in design exploration, expression and execution- thereby enriching both the design process, and critically reflecting on design outcomes.

Program Response to Changes in Conditions

The timing of the changes in Conditions was actually very helpful for the program. In 2014, after all courses had been run at least once, we conducted a thorough examination of the curriculum. As part of this evaluation we re-organized our matrix and in some cases found it difficult to adequately cover some Student Performance Criteria. Thus, when we first saw the new Conditions, especially the SPCs, we felt much more comfortable with the rearrangement of our matrix. The introduction of the new Realm C, for example, makes a lot more sense to us since our program is integrative by design. The changes by NAAB also provided us with some sense of the thinking that goes into establishing the criteria and how adjustments are made. For example, sustainability was removed because the time had come for it to be assumed to be a critical factor in design.

One might describe our response as natural curriculum development converging with a much better understanding of the intent of the SPCs. There were not wholesale changes, but rather a better distribution of criteria over multiple courses. Under the previous Conditions our curriculum had 15 SPCs addressed by a single course. Under the current Conditions there are now only 4.

Section 3.   Compliance with the Conditions for Accreditation

I.2.1 Human Resources and Human Resource Development

RIT has had little difficulty in attracting the personnel necessary to establish and maintain this architecture program (https://www.rit.edu/overview/rankings-and-recognition). In recent years, new graduate programs at the university have recruited a number of recognized faculty members, including two of our own recent faculty hires in the Department of Architecture.

In the 2017 edition, RIT was recognized as a top-tier national university for the first time in the 34-year history of U.S. News & World Report rankings. The change is a result of the university's reclassification as a "doctoral university" this year due to its rapid increase in research and Ph.D. graduates. (http://www.rit.edu/news/story.php?id=56877)

Recently, RIT was listed in *Princeton Review*'s "Best 381 Colleges" and "Best Northeastern Colleges" Included in *The Princeton Review*'s "Guide to 353 Green Colleges: 2015 Edition" (five consecutive years).

RIT was also recognized for being one of the nation's best colleges for students seeking a superb education with great career preparation and at an affordable price (2016 edition: *Colleges That Pay You Back: The 200 Schools That Give You the Best Bang for Your Tuition Buck).*

RIT is often recognized by The Chronicle of Higher Education on the publication's 2012 list of "Great Colleges to Work." It was also recognized as a great workplace by the publication in 2008, 2009, and 2011. RIT's reputation as an innovative, contemporary institution seems to have reached all sectors of the higher education landscape.

Since the last site visit, courses continue to be taught by three full time architecture faculty, three full time GIS/Sustainability faculty, and adjuncts (Professors of Practice). This faculty profile remains as the core for our program and is in line with the original budget model established at the program launch in 2011. As the

program continues to mature, we expect to add an additional full time faculty line, replacing some of our adjunct faculty positions. This is also in keeping with the original budget model.

To maintain viable continuity with the profession and provide oversight for licensing, NCARB AXP Licensing Advisor is Professor Jukles Chiavaroli.

Faculty-Course Matrix

A Faculty-Course Matrix is included in Section 4.

Faculty Resumés

Resumés for faculty teaching in the program during the last two years are included in Section 4.

Recent accolades for some faculty over the last few years include:

> NSF Career Grant (two faculty)
> NSF Sustainable Food Supply Chain Grant
> AIA Rochester Past President Award (two faculty)
> AIA New York State Gold Medal
> AIA Rochester Medal of Distinction
> Blue Ribbon Committee on Diversity Task Force, University of Notre Dame.
> RIT Faculty Scholar Recognition
> Eisenhart Outstanding Teaching Award Nomination
> Provost Outstanding Faculty Mentoring Award Nomination

EEO/AA for Faculty, staff, and students

Diversity and inclusion across all of RIT is a primary institute value. Dr. Keith B. Jenkins, Professor and Interim Vice President & Associate Provost for Diversity & Inclusion is responsible for all intiatives in this area.

The Master of Architecture program is fully committed to equality and diversity as previously discussed in Section I.1.3. These are further outlined in the following policies, with additional information referenced in Section 4.

https://www.rit.edu/academicaffairs/policiesmanual/e011
https://www.rit.edu/emcs/seo/?/employers/handbook

Additional Diversity Initiatives

RIT maintains a well conceived and dedicated agenda regarding diversity and inclusiveness of its faculty, staff, and students. The Strategic Plan continues to set ambitious goals for AALANA (African American, Latino/Hispanic, Asian/Pacific Islander, or Native American) representation among these groups.

RIT's Office of Faculty Recruitment provides comprehensive services to ensure the greatest possibility of hiring diverse faculty and professional staff. The success of this office and its "Future Faculty" program has been cited in the *Chronicle of Higher Education.* The Office of Faculty Recruitment website is noted below.

https://www.rit.edu/academicaffairs/facultyrecruitment/faculty_program.php

The Office of Diversity and Inclusion has developed several programs that recognize and celebrate diversity, including a Global Leadership Certificate program and Partners in Pluralism, all to foster living, learning, and working environments that support and incorporate principles of equity, diversity, inclusion, and community.

Human Resource Development (Professional Development)

RIT's focus on emerging technologies places a premium on faculty currency. RIT's policies on promotion, tenure, and annual review all include expectations for research and scholarship: "All tenured and tenure-track RIT faculty must be actively participating in the scholarship of their disciplines." (https://www.rit.edu/academicaffairs/policiesmanual/e040)

Golisano Institute for Sustainability and the Department of Architecture have dedicated professional development funds available to faculty for travel to professional conferences and other activities demonstrably contributing to individual scholarship, development, research and creative exploration. Each year, faculty are offered support for professional development by offsetting professional membership fees,

or attending conferences or other professional development events. Additionally support is provided when papers are presented at conferences where additional funding may become necessary.

A number of internal programs and grants exist to support faculty in their research and scholarship. These include faculty leaves for professional/career development (sabbaticals), the Provost's Learning Innovation Grant (PLIG) for faculty projects, the Provost's Cultural Diversity Grant, Interactive Learning Grants, the Ronald D. Dodge Memorial Endowment Fund Faculty Grant, Faculty Evaluation and Development Grants, and the FYE/NTID Extracurricular Opportunity Grant.

RIT's Teaching and Learning Center (TLC) in the Innovative Learning Institute (ILI) is charged with promoting and supporting student learning through faculty development and teaching excellence. The TLC supports faculty's disciplinary currency through a number of initiatives and resources, including the Center for Professional Development. Additionally, the Wallace Center is the hub for research and information exchange, housing traditional and digital research materials. The Wallace Center is best described as a high technology, multimedia resource center offering access to a vast array of information resources as well as a place for the RIT community to gather, talk, connect, and explore new ideas.

The TLC also serves as a clearinghouse for information about college teaching and student learning, an advocate for effective teaching, and a provider of programs and services. Services include individual consultation, classroom observation, classroom videotaping, a teaching learning website, informal classroom assessment techniques, formative feedback, small group instructional diagnosis, the Faculty Institute on Teaching, Learning and Technology, experienced faculty workshops, and departmental workshops.

Over the last two academic years, all faculty members have engaged in a variety of scholarly and professional activities, locally, nationally, and internationally, including planned projects and events. A summary of some of the various activities, scholarship and events includes the following:

    AIA National Convention
    AIA New York State Convention
    AIA Rochester, various activities
    Congress for the New Urbanism 22
    Landmark Society New York State Conference
    Community Design Center Rochester (CDCR), various activities
    Fifth International Conference on the Constructed Environment
    NCARB AXP Licensing Advisors Summit
    NCARB Grant (submitted)
    ACSA Administrator's Conference
    The Malmö University - RIT Partnership - both at RIT and in Malmö, Sweden Faculty/Student
        Exchange
    BAU (Istanbul) – RIT Architecture Partnership - RIT Kosovo (planned)
    SUNY Delhi Study Abroad Program
    SAI Faculty Fellowship Program (planned)
    Eight Gulf Research Meeting (GRM), Cambridge, UK (planned)
    Scholarship of Engagement Symposium
    Sustainable City 2016- International Conference on Urban Regeneration and Sustainability
    Cross Disciplinary Conference Urban Spaces, University of Florence
    Building Local Capacity for STEM-Based Innovation; Genesee Country Village and Museum
        Partnership (planned collaborative partnership)
    RIT Consortium for Civic Engagement, Assessment, and Training (C2EAT) (planned collaborative
        partnership)
    Provost Learning and Innovation Grant (PLIG) (submitted)
    Master of City Sciences Program faculty teaching, Dubai, UAE
    Editorial Board member of Aurum Journal Editorial Board
    Editorial Board member of Megaron e-journal

Faculty Appointment, Promotion, and Tenure
RIT provides a complete set of policies on faculty appointments, promotion and tenure.

I.2.2   Physical Resources

General Description

The RIT Master of Architecture program's facilities are well tailored to effectively deliver the program. GIS maintains key studio and support space for the program as well as individual departmental and administrative offices. These core facilities are provided in Louise Slaughter Hall and in GIS' Sustainability Institute Hall. In addition, many facilities needed by the program continue to be available through the extensive existing physical resources of RIT, presently totaling more nearly 6 million gross square feet of academic, common, and residential space.

The Architecture program's primary dedicated studio spaces are in the existing Louse Slaughter Hall building (157,000 g.s.f.). At the program launch in 2011, RIT renovated the current Bay 3 into studio and classroom/support space for the program. Bay 3 is clear-span, high bay space that is inherently flexible and architecturally interesting. The renovation added exterior fenestration to take advantage of the height and flexibility of the relatively new, but industrial-type, steel structure. The space available in Bay 3 totals approximately 8,150 s.f. In addition, Slaughter Hall has nine seminar/conference rooms totaling 8,185 s.f., which are available for architecture program events, studio reviews, seminars, etc. In 2013, two additional areas were upgraded for studio use. This includes Slaughter 1220 totaling approximately 2,600 s.f. and Slaughter 2200 totaling approximately 1,900 s.f..

Each studio provides dedicated student work stations of approximately 50 - 80 s.f. per student with drafting desks, work tables, shelving and storage as well as power and data connections (see diagrammatic plans below).

The Department of Architecture administrative offices, totaling approximately 2,350 s.f., is located in the GIS building. Full time faculty each has dedicated office space, and adjunct faculty share open office cubicles. GIS' Sustainability Institute Hall is a LEED Platinum, high-performance facility. As a living learning laboratory, this state of the art sustainable building totals nearly 81,000 s.f. and includes offices, classrooms, computing facilities, an auditorium, display and galleria areas. All faculty memebrs have full use of these spaces for scholarship, teaching, and service activities. The Sustainable Building Materials Lab (SBML) is one of several labs and has regular usage with architecture students. Along with multiple hand held thermal and luminuous testing devices, it includes a back up plotter, wind tunnel, and environmental chamber. Plotters, scanners, a lazer cutter and heliodon are located in Bay 3. Additional 3D plotters are located in GIS and throughout campus for student use.

Presently, assigned architecture program spaces totals over 16,000 s.f. This is in addition to its shared use throughout Slaughter, GIS, and CIAS. The Master of Architecture program spaces are summarized below.

Master of Architecture Program Spaces	
Bay 3 Studio and support areas	8,150 s.f.
Slaughter 1220 Studio	2,600 s.f.
Slaughter 2200 Studio	1,900 s.f.
GIS Sustainable Building Materials Lab (SBML)	1,400 s.f.
Department of Architecture Suite	2,350 s.f.
TOTAL	16,400 s.f.

Shop Space

The Master of Architecture program shares usage of the "3D Shop" with the Interior and Industrial Design programs in CIAS. This facility totals approximately 1,560 s.f. and has been an excellent resource for our students for small scale fabrication work and has been sufficient to meet current needs. It includes tools for scale wood, metal and plaster work. However, as our program continues to grow - along with additional CIAS needs - this shop resource has become increasingly confining. Because of this, we continue to monitor this resource requirement. We continue to explore additional fabrication space options, both throughout the university as a whole, and within overall GIS space allocation in particular. This would allow

us to expand fabrication space as student enrollment grows. Concurrent with examining alternatives, we have included this as a budget item during RIT's university-wide budget hearings.

Institutional Space

University wide, a breakdown in general physical space is listed below.

Classrooms. Various programs routinely rely on RIT's existing classroom inventory to supply general teaching spaces, auditoria, and seminar spaces as needed and through central scheduling.

Galleries. Major exhibits can be housed in either the Vignelli Design Study Center Gallery (approximately 6,885 s.f.) The Dyer Arts Center (5,750 s.f.), or the Bevier Gallery (3,500 s.f.). Routine pin-up space and critique areas are provided for in the program's own assigned spaces.

Library. Library resources are housed in RIT's Wallace Library (146,254 g.s.f.) as described in I.2.4. We have included a reading/library resource room within the Slaughter Bay 3 space.
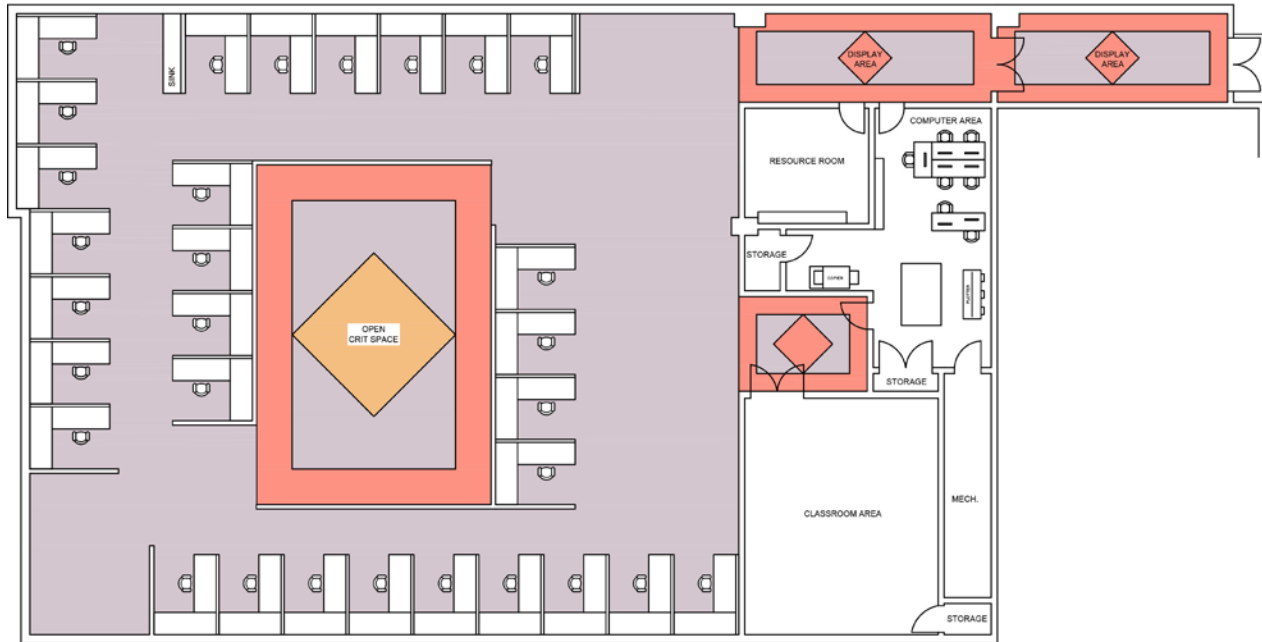
Labs. RIT has many open computer labs and engineering testing facilities that may be used for materials testing, mock-up fabrication, and other probable needs of the Architecture program. In addition, the Architecture program has a dedicated Sustainable Building Material Lab located in GIS (previously identified above).
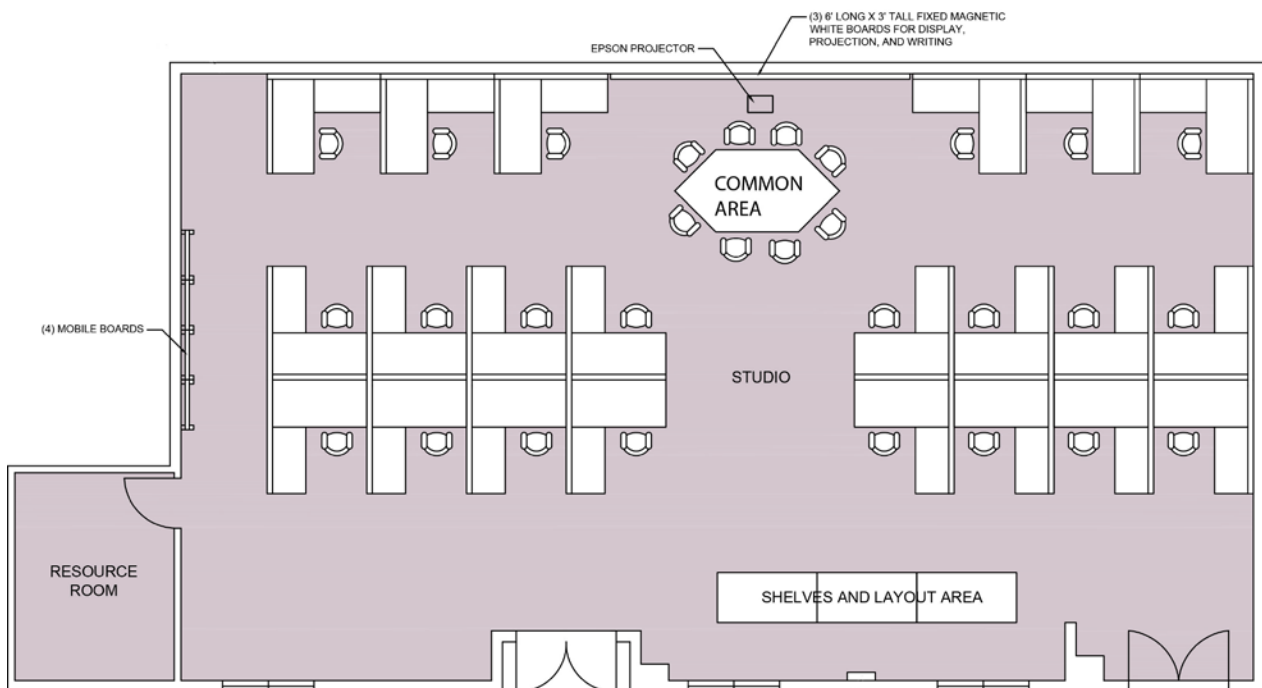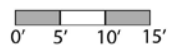
Computing Resources

RIT is consistently ranked as one of the most "wired" campuses in the United States, and the university prides itself as being a leader in IT resources. RIT presently has 8 computer workstations in the architecture program area, as well as having access to two existing computer graphics labs in the College of Imaging Arts and Sciences. Software includes such tools as SketchUp, Formit 360, Rhino, Maxwell, ArchiCAD, Vasari, the entire Autodesk suite, the Adobe Creative Suite, ArcGIS, Means Cost Data, Microsoft Office suite, a variety of scientific sustainability applications, and numerous miscellaneous applications and plug-ins.

In Sustainability Institute Hall, the Decision Theater is fully equipped with 32 work-stations for continuous access to all GIS students in both the Sustainability and Architecture departments.
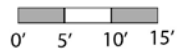
Following are illustrations of much of the Master of Architecture program facilities mentioned above.
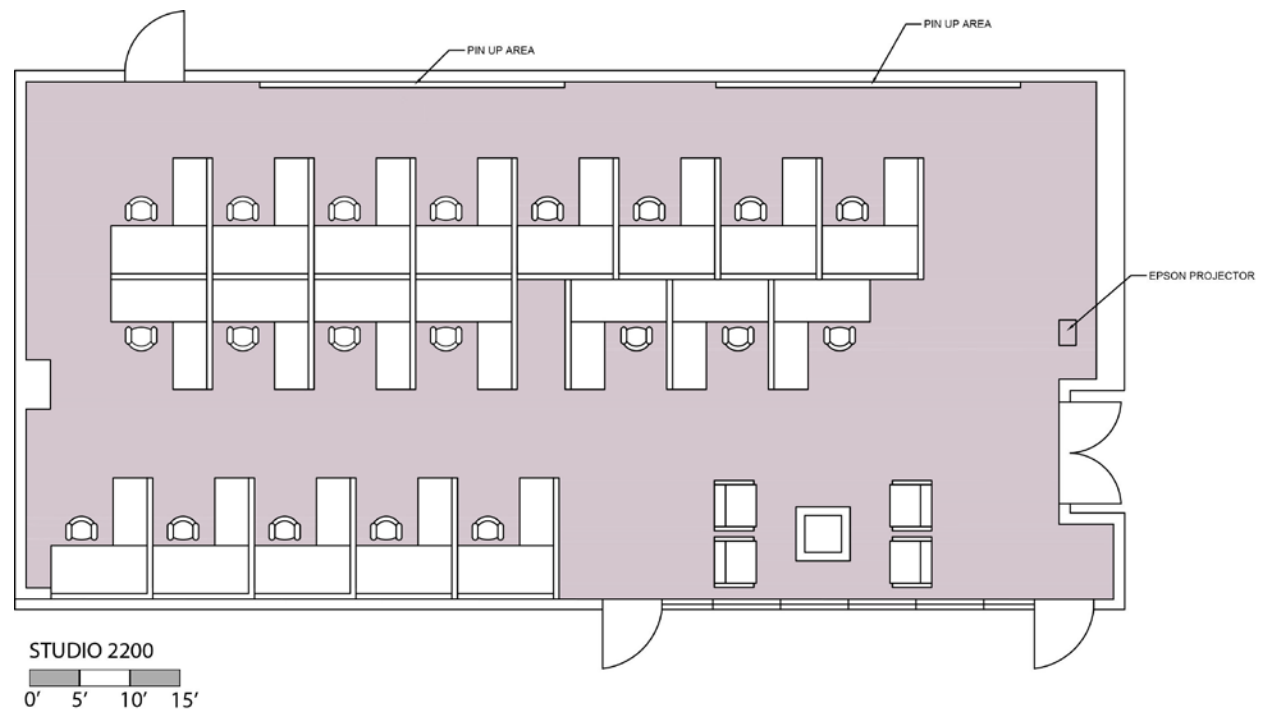
BAY 3 STUDIO

0'   5'   10'   15'

STUDIO 1220

0'   5'   10'   15'

PIN UP AREA

PIN UP AREA

EPSON PROJECTOR

STUDIO 2200

0'   5'   10'   15'

Galleria Space

Department Office Suite

Department Office Suite

Heliodon

Typical Classroom

Typical Classroom

Decision Theater-Computer Lab

GIS Auditorium

GIS Auditorium

Laser Cutting Lab

Plotting and Scanning Lab

Collaboration Space

Studio 2220

Studio 1220

Bay 3 Studio Space

Bay 3 Studio and Crit Space

Bay 3 Exhibition Space

Bay 3 Studio

GIS Collaboration Room

Woodshop

Woodshop

Sustainable Building Materials Lab

Sustainable Building Materials Lab

Typical Faculty Office

I.2.3   Financial Resources

RIT provides all programs an initial "permanent budget" based on the needs of the program and the institutional funding available. For the Master of Architecture program, this budget was established when the program was launched in 2011. The permanent budget is carried forward from year to year. Annually, the institution has a budgeting process where all programs develop a list of funding needs, categorized as either permanent or one-time, for the following academic year. The requests are presented to the Budget Committee by the program Dean/Director during the budget hearing process. The Budget Committee reviews all institutional requests and approves an allocation for the items that will be funded in each program. Budget allocations are based on the institutional funding available. Institutional funding available is based on the original budget model established when the program was launched in 2011.

The Master of Architecture program has control over all direct expense categories based on the budget allocation and development funds available. This includes salary, lab supplies, hardware/software, equipment, membership, student recruitment/marketing, travel, student support, tuition assistance and staff development. The program also has control over generating development funds and how they are best utilized to support the students in the most effective way.

The program has multiple fellowship, scholarship and general gifts funds that are used annually to provide tuition support in addition to the funding available from the university for tuition assistance. To date, the program has generated over $250,000 in support from outside contributions. The program also has a separate funding line to assist faculty development for new faculty, and continues up to the time of tenure review.

At this time there are no anticipated reductions in funding expected as the permanent budget rolls from year to year. Increases in funding are based on the universities annual budgeting process, and increases in funding for salaries are expected during the annual merit increase process. No other funding increases are expected for the AY17-18 year. As has been reported in previous APR's and during site visits, the program has the financial resources necessary for the program to be successful, and the upper administration has been very supportive to assure the success of the program. There are no changes in funding models for faculty compensation, instruction, overhead, or facilities since the last visit and the funding model used by RIT is expected remain much the same in the coming years.

With the onset of RIT's Greatness through Difference Strategic Plan, an institute wide capital campaign has been initiated to align with several dimensions of RIT's strategic priorities. While RIT is prioritizing its foci on the institute wide capital campaign, colleges are being asked to address capital campaign opportunities. Within GIS several broad areas of exploration include endowed professorships, sustained student fellowships, and - as our programs continue to grow – space, facilities, and equipment upgrades. This initiative this is being led by the GIS Director Dr. Nasr.

I.2.4   Information Resources

RIT Libraries' resources address the curricular needs of all programs within the nine RIT colleges, including the Master of Architecture program. In recent years, RIT Libraries has adopted a flexible budget model to account for increases in electronic resources, while allowing book-based disciplines such as those in the Master of Architecture program to be adequately supported.

Services - Hours of Operation

During the academic year, RIT Libraries is open 125 of the possible 168 hours in a week. When classes are in session RIT Libraries is open more hours than any other service point on the RIT campus. Normal library hours are extended during the final examination period and shortened during break periods.

Convenient Access through Library Catalog

The entire library collection is catalogued and accessible through the library's web-accessible catalog (http://albert/rit.edu). The catalog is integrated with the library's circulation and acquisitions systems, all products of Innovative Interfaces. The catalog is accessible through all computers in the library in and via the library's wireless network as well as to on-site and off-site RIT users via the web, 24 hours a day, seven days week. Access to all journal titles, both print and electronic, can be accurately determined by searching the interface Journals@ RIT. In addition, the above-mentioned approximately 250 databases,

including all art and design-specific databases, are available 24/7 from the library's Database finder. Summon, a discovery tool, allows users to simultaneously search all library holdings - articles, books, journals, databases and media - providing unprecedented access to the collections.

Staff

RIT Libraries staff is comprised of 57 total staff members with 32 professional positions. Staff members from the acquisitions, cataloging, circulation, and interlibrary loan departments play an important role in supporting the architecture program.

RIT Libraries has a librarian solely devoted to the architecture programand to the College of Imaging Arts and Sciences. This is a professional position requiring a master's degree in library or information science and extensive knowledge through education or experience in the visual arts. Kari Horowicz, the current CIAS librarian has a BA in art history from the University of Rochester and an MS in library service from Columbia University. She has been working professionally in art and architecture libraries for more than 20 years. In addition to the librarian devoted to the architecture program, the students and faculty have the additional expertise of the Engineering Librarian who also serves the Sustainability programs in the Golisano Institute for Sustainability.

RIT Libraries also has a media/reserve specialist who maintains the media collections. Romea Montanaro serves as the media/reserve specialist and is responsible for purchasing media for classroom use, monitoring the media budget and maintaining both physical and electronic reserves. Romea has been working with the media collections for 22 years.

Facilities

The Wallace Center of the Rochester Institute of Technology houses the RIT Libraries (Wallace Library, Cary Collection, RIT Archives). The Wallace Center is a separate and centrally located building on the RIT campus. In addition, the library web page, catalog, and all of the databases are available 24 hours a day/7 days a week, providing complete access to the collections. The media collection is part of the reserve collection, and all computers have DVD drives for watching media.

The architecture and sustainability collections are integrated into the general library collections. With the exception of the materials housed in special collections areas (RIT Archives and Cary Graphic Arts Collection), all items may be brought to any location within the building for examination. All books in the circulating collection can be checked out. The five-level Wallace Center encompasses a total of 130,000 square feet. It has 1,009 seats that provide a variety of study situations, including enclosed individual carrels, open study tables, and 27 rooms of various sizes for group and individual use. In addition, the building's 184 windows provide natural light for patrons.

In the summer 2013, the first floor of the library underwent a physical transformation to provide a more modern space for collaborative learning. The seating area capacity on the first floor was increased by 40%, and the renovated area reflects student input. The themes of discovery, community, scholarship, and technology were based on students' interactions on how they view the library today. To enhance students' academic learning, a laptop "bar" was installed as well as a new Mediascape collaboration station that allows students to work together on projects and assignments by sharing what's on their laptop screens via a large flat-screen display.

Computers are available in the library in computer labs, quiet alcoves on the upper floors and for loan at the Circulation Desk with the following breakdown:

Technology Area (1st floor)	36 Windows-based computers with dual monitors
VIA Teach (2nd floor)	30 Windows-based computers + instructor station
VIA Computer Area (2nd floor)	23 Windows-based computers; 8 Macs
Biblab (3rd floor)	25 Windows-based computers
Various Alcoves (3rd/4th floor)	9 Windows-based computers
Lending Laptops (Circulation Desk)	38 Windows-based computers + 10 MacBook Pro laptops

The library has three, color copiers with scanning capabilities along with three scanners and a microfilm reader/scanner/printer.

Four gallery spaces exist in the RIT Libraries: 1.) RIT Museum and Exhibit Space (3rd floor); 2.) Cary Graphic Arts Exhibit Space (2nd floor); 3.) The Gladys Taylor Gallery (1st floor); and 4.) the Sunken Gallery (2nd floor). While three of the spaces are primarily devoted to visual material in the special collections, the sunken gallery space is used by architecture students and faculty for exhibition of individual work or class projects. Since the building is centrally located on campus this affords other disciplines to be able to view and respond to the architecture students' work.

RIT Libraries continues to strategically develop information resources in architecture and sustainability. Titles serving the architecture and sustainability programs have grown to over 247,000. The subject scope of the architecture and sustainability collection includes all aspects of the history, theory, and contemporary and historical practice. Materials in all formats are collected, including books (print and electronic), images, digital images, periodicals (print and electronic), audio and DVD recordings and electronic access to text, image, and video databases.

The library maintains access to critical architecture and sustainability databases including, but not limited to, *Avery Index to Architectural Periodicals*, *ARTstor*, *Building Green*, *Environmental Science and Pollution Management* (Proquest), *GreenFILE*, *JSTOR*, *Sustainability Science Abstracts* (Proquest), and *PAIS International* (Proquest).

Along with this, the ConnectNY library consortium continues to grow and expand, and is becoming increasingly popular among students. The Connect NY program, initially funded by the Andrew Mellon Foundation has been in existence since 2003, and provides unprecedented access to monographs quickly and easily for RIT students and faculty. ConnectNY libraries included the following libraries with strong architecture holdings – Rennselaer Polytechnic Institute, St. Lawrence, Colgate and Pace University and Pratt Institute. In addition to ConnectNY, RIT Libraries has a robust Interlibrary Loan system allowing architecture students and faculty access to an unprecedented variety of resources.

Since 2014, the RIT Libraries has implemented a strong patron driven acquisition model within their Interlibrary Loan system whereby any student, faculty or staff member can select **purchase** as an option instead of borrow within the Interlibrary Loan system.

RIT Libraries continues to strive to provide and sustain a vibrant, growing collection to support the program in architecture. RIT Libraries staff is dedicated to supporting GIS and architecture needs, and strives to provide a vibrant, growing collection to support the program in architecture. This includes the following initiatives:

- Targeted Collection Development with Faculty and Students – monthly emails to faculty and students for their requests and research interests;

- Working with faculty to create assignments for students to actually use the print journal collection, particularly 1st year students;

- Exploring the possibility of circulating architecture journals; and

- Taking "Bookmobile" twice a semester with new books to Sustainability Institute/Slaughter Hall for ease of access and check-out.

In support of the Investigative Skills (SPC A.3), first-year architecture students are shown the information literacy tool developed by the library called LIV@RIT. LIV@ RIT is intended to help students maximize their ability to effectively use the RIT Libraries information resources and the World Wide Web. http://library.rit.edu/liv/.

LIV@ RIT is also included on the Information Guide for Architecture http://infoguides.rit.edu/arch along with a recently developed website on Academic Integrity. http://www.rit.edu/twc/academicintegrity/.

1.2.5 Administrative Structure and Governance

Administrative Structure of Program and Home Units

Program. The major academic unit at RIT is the college, and GIS is formally considered equivalent to a college equal to the nine other college units within the institute. Colleges contain both academic departments and academic programs. Sometimes programs are in departments, and sometimes they are free-standing. Programs are led by chairs and departments by heads, who are responsible for evaluating

faculty, managing the budget, and maintaining the highest academic standards. Some programs also have associate chairs or coordinators, who normally perform administrative tasks related to students and oversee student advising.

The Master of Architecture program in the Department of Architecture is led by the department head. The head's responsibilities include supervising all faculty and staff (including conducting annual evaluations); making final decisions about faculty and staff hiring; program oversight; accreditation supervision; budget management; coordinating development for fundraising; and facilitating and directing the program's growth and vision.

Because the Master of Architecture program is jointly under the Golisano Institute for Sustainability and the College of Imaging Arts and Sciences, the head engages with both the GIS director *and* the CIAS dean, while the program is administratively housed and financially structured within GIS. This unusual relationship bears some explanation. First, those full-time faculty who have taught during its first year were tenured in CIAS, thus it made sense to begin with a strong tie to their college. Second, the discipline of architecture is closely related to the design-based programs in CIAS, and the Vignelli Center for Design Studies, which is also closely associated with the architecture program, resides in CIAS. At the same time, the focus on architectural sustainability is arguably the most unique and marketable feature of the program—a feature that is inextricably reflected by a formal relationship with GIS. The original program development committee, the provost, and the president strongly believed that the best way for the program to continue to launch, grow and develop into its unique identity was to maintain its connection to both high-profile units through this arrangement.

GIS Administrative Structure. The Golisano Institute for Sustainability is led by the Director and Associate Provost (one person, Dr. Nabil Nasr.). Dr. Nasr sits on the Dean's Council to represent GIS. All research faculty report to the director, as do the department heads – both Architecture and Sustainability – GIS' sister department. Currently, the Department of Sustainability has one Ph.D. program in Sustainability and a Master of Science program in Sustainable Systems. In addition to the Dean's Council, an Associate Deans Cabinet complements the upper administrative structure. GIS has representation on the Associate Deans Cabinet with the Master of Architecture program head serving in this role.

GIS has its own tenure and promotion committees. Both the Architecture and Sustainability departments convene their own curriculum and admission committees that meet regularly for the development of the program and courses. The Master of Architecture program and curriculum was approved by the New York State Education Department in 2011.

CIAS Administrative Structure. CIAS is led by a dean, to whom that college's department chairs and many administrative and professional staff report. Some of the departments in CIAS exist within a school; in these situations, the school chair reports to the dean and the department chair to the school chair.

Academic Affairs Administrative Structure. RIT's nine deans (along with the Dean of Graduate Education - Office of Graduate Studies) and the GIS Director report directly to the Provost and Senior Vice President for Academic Affairs, who reports to the President. The chart below indicates how the architecture head and deparement faculty fit into this arrangement.
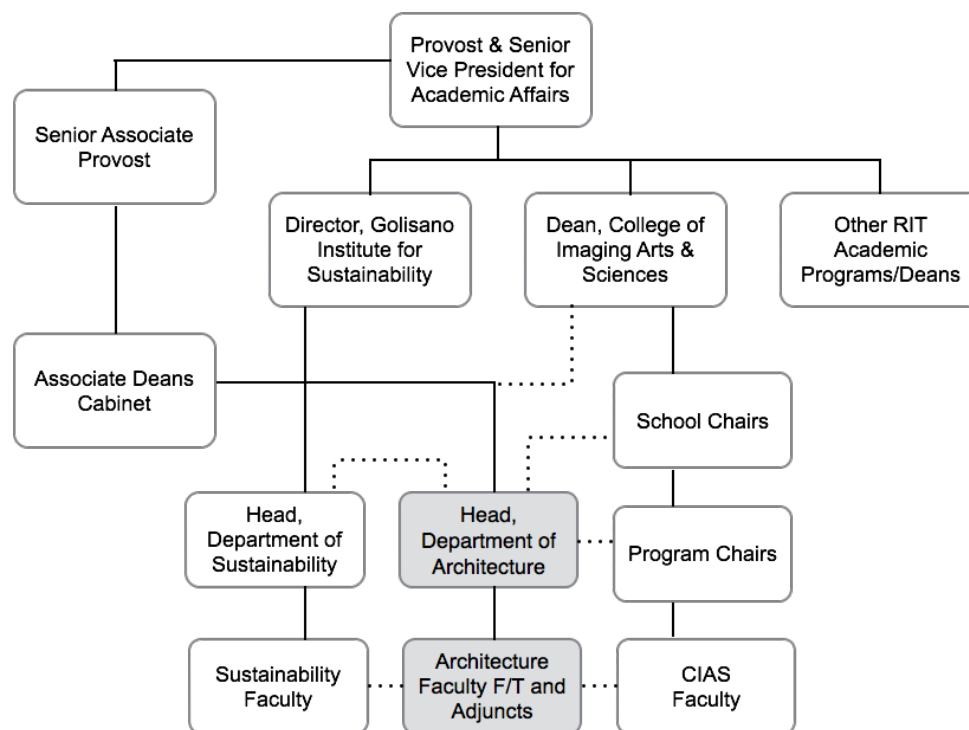
Academic Affairs Administrative Structure

Governance Opportunities

Architecture students are represented in student government through the Office of Graduate Studies and the Student Association, which is constituted of students elected from a range of graduate programs. Program student leadership meets with the department head at least once each term to discuss program progress, and student agenda items.

In 2013, the Academic Senate voted to include the Golisano Institute for Sustainability (GIS) in the charter and with all policies where "colleges" are referred to and referenced. As such, GIS has direct faculty representation in fall faculty governance and on university wide committees, and multiple sub-committees and task groups. A table identifying university wide committee assignments is referenced in Section 4.

Degree programs offered in home units

CIAS degree programs. CIAS offers a number of degree programs at the BS, BFA, MS, and MFA level. See the college website for a complete listing: http://cias.rit.edu.

GIS degree programs. In addition to the Master of Architecture, GIS offers a Ph.D. program in Sustainability and an M.S. in Sustainable Systems (http://www.rit.edu/gis/).

II.1.1 Student Performance Criteria

The vision, program goals, and learning objectives of this program have been outlined in Section I.1.6, Self-Assessment Procedures. The program has one track, emphasizing sustainability, urbanism, technology and integration. All full course outlines contain a list of the NAAB criteria applicable to the course, and are provided in Section 4. The SPC matrix that follows represents the coverage of performance criteria by each course offered in the curriculum.

Addressing Realm C in the program was a fairly straightforward endeavor because the curriculum was designed to be integrative. The three criteria of this realm fully cover the first three phases of architectural practice.

C.1 addresses the **programming & analysis** phase,

C.2 addresses the **project planning & design** phase, and
C.3 addresses the **project development & documentation** phase.

Research (SPC C.1) is introduced at the *understanding* level in several courses and then applied and reinforced in the design studios. The four core studio courses include the application of research, but the criterion is most robustly met in the Urban Studio given its focus.

SPCs C.2 and C.3 are addressed more integratively in the architectural studio sequence of courses (Site, Urban, and Adaptive). They build student skills in the **programming & analysis** and the **planning & design** phases of practice. All design related SPCs are addressed in these three courses that prepare students for the culminating ARCH 735 Architectural Studio IV: Integrative course.

The Fundamentals of and Integrated Building Systems (IBS) course sequence (ARCH 641 and ARCH 741/2/3/4) is literally a series of courses that integrates site, structure, building systems, and building services. Students complete term projects of increasing complexity that focus on the **development & documentation** phase of practice. Thus over the two years leading up to the Integrative Studio course students are prepared on the technical execution of an architectural design.

The Integrative Studio course is where the design studio experience and the technical course experience converge. We are confident that by the time our students reach this course they will posess all the necessary skills to explore and synthesize a complete architectural solution and meet the requirements of C.2 and C.3.

Assessing student work is also relatively straightforward. Student learning outcomes for each course are directly related to SPCs and are the basis for selecting representative work. High pass examples are elementary – they are simply the best works of the entire class. Low pass examples require more scrutiny. As a general guide, a grade of "C" is considered low pass. While "D" is technically a passing grade, Institute policy does not recognize it as such for graduate work. Thus, "C" work is considered as a starting point. However, faculty double-check work against course objectives to be certain that it represents a minimally acceptable outcome.

Student Performance Criteria Matrix

Rochester Institute of Technology

◆ ARCHITECTURE

● = measurable
○ = introduced and/or reinforced

Level of accomplishment:
U = Understanding
A = Ability

Student performance criteria expected to have been met in baccalaureate program. Advanced stood students may be granted credit for A.1, A.4, and A.7, based on courses taken and skills demonstrated in portfolio.
Student performance criteria to be met in Master of Architecture program in the following courses.

Course	A.1	A.2	A.3	A.4	A.5	A.6	A.7	A.8	B.1	B.2	B.3	B.4	B.5	B.6	B.7	B.8	B.9	B.10	C.1	C.2	C.3	D.1	D.2	D.3	D.4	D.5
	A	A	A	A	A	A	U	U			A	A	A	A	U	U	U	U	U	A	A	U	U	U	U	U
ARCH-611 Architectural Representation I	●	○			○														○							
ARCH-612 Architectural Representation II	●	○			○														○							
ARCH-621 Architectural History I					○		●	●				○														
ARCH-622 Architectural History II					○		●	●																		
ARCH-631 Architectural Design I		●	○	●	●	○						○														
ARCH-632 Architectural Design II		●	○	●	●	○						○														
ARCH-641 Fundamentals of Building Systems				○						○			○			○	○									
ARCH-699 Co-op Architecture																						○	○	○	○	●
ARCH-731 Architectural Studio I: Site		●	●			○			●		○								○	○	○					
ARCH-734 Architectural Studio II: Urban		●	●			●			●	●	○								●	○	○					
ARCH-733 Architectural Studio III: Adaptive		●	●			●			●		○								○	○	○					
ARCH-735 Architectural Studio IV: Integrative		○	○			○			○	●	●	●		●	●			●	○	●	●					
ARCH-741 Integrated Building Systems I											●	○		○		●	●	●		○	○					
ARCH-742 Integrated Building Systems II											●	●	○	○		●	○	○		○	○					
ARCH-743 Integrated Building Systems III											●	●	●	○	○	●	●			○	○					
ARCH-744 Integrated Building Systems IV											●	○	●	●	●		●	○			○	●				
ARCH-751 Architectural Theory	○					●		○			○								○	○						○
ARCH-752 Urban and Regional Planning	○						○	●			○								●			●				
ARCH-753 Research Seminar/Thesis Preparation	○																		○							
ARCH-761 Understanding Sustainability														○			○		○	○						
ARCH-762 Industrial Ecology Fundamentals			○											●				●	●	●						
ARCH-763 Sustainable Buildings Metrics					○									○		○	○		○	○		○	○			
ARCH-771 Professional Practice	●														●			●		●	●	●	●	●	●	●
ARCH-790 Thesis (and ARCH-791 Contin. of Thesis)	●				○													●	○			●	●	●	●	●
Global Experience					○		○	○																		

II.2.1 Institutional Accreditation

The regional accreditation letter is provided in Section 4 of the APR.

II.2.2 Professional Degrees and Curriculum

The Master of Architecture program originally began in 2011 as a 147 quarter credit hour (QcH) three year full-time program. Beginning with the 2013-14 academic year RIT fully converted to a semester system and the program became a three and one half year, 105 semester credit hour (ScH) program.

The curriculum mask is shown below and represents the current curriculum in its entirety. Course outlines are found in Section 4 of this document.

◆ ARCHITECTURE

Master of Architecture Program • Rochester Institute of Technology
Curriculum Mask for Students Entering 2016-17

For students with undergraduate degrees not related to architecture.   **3.5 YEAR MASK**

	FALL SEMESTER			SPRING SEMESTER			SUMMER
YEAR 1	ARCH-611 Architectural Representation I	3	INTERCESSION	ARCH-612 Architectural Representation II	3		ARCH-699 Co-op or Global Experience
	ARCH-621 Architectural History I	3		ARCH-622 Architectural History II	3		
	ARCH-631 Architectural Design I	6		ARCH-632 Architectural Design II	6		
	ARCH-761 Understanding Sustainability	3		ARCH-641 Fundamentals of Building Systems	3		
		15			15		
YEAR 2	ARCH-731 Architectural Studio I: Site	6	INTERCESSION	ARCH-734 Architectural Studio II: Urban	6		ARCH-699 Co-op or Global Experience
	ARCH-741 Integrated Building Systems I	3		ARCH-742 Integrated Building Systems II	3		
	ARCH-751 Architectural Theory	3		ARCH-752 Urban and Regional Planning	3		
	Graduate Elective	3		ARCH-762 Industrial Ecology Fundamentals	3		
		15			15		
YEAR 3	ARCH-733 Architectural Studio III: Adaptive	6	INTERCESSION	ARCH-735 Architectural Studio IV: Integrative	6		ARCH-699 Co-op or Global Experience
	ARCH-743 Integrated Building Systems III	3		ARCH-744 Integrated Building Systems IV	3		
	ARCH-753 Research Seminar/Thesis Prep.	3		ARCH-771 Professional Practice	3		
	ARCH-763 Sustainable Building Metrics	3		Graduate Elective	3		
		15			15		
YEAR 3.5	ARCH-790 Thesis	6					
	Graduate Elective	3					
	Graduate Elective	3					
	Sustainability Elective	3					
		15				Total Required Credits	105

This curriculum mask is a guide. Students may take courses as suits their individual needs as long as pre-requisites are met. Only one Co-op and one Global Experience are required and may be taken in any term.

Background color key. Yellow: representation, pink: history/theory/planning, purple: design/studio, tan: technology/practice, green: sustainability, blue: electives

Architecture Concentration/Elective Options

Students may use their four/five graduate electives to concentrate in one of the following areas. These courses are pre-approved, others may be selected by the student but must be approved by the department. The required sustainability elective may be chosen from the list below but note that the sustainability elective cannot simultaneously satisfy a graduate elective.

Environmental, Health and Safety Management
  ESHS-601 Fire Protection
  ESHS-750 EHS and FM Project Management
Facilities Management
  FCMG-660 Principles & Practice in Facilities Management
  FCMG-720 EHS in Facilities Management
  FCMG-740 Real Estate in Facilities Management
  FCMG-760 Operation & Maintenance in FM
Hospitality-Tourism Management
  HSPT-761 Strategic Planning & Development for HT Industry
  HSPT-763 Resort Amenity and Attraction Development
Art and Art History
  All the studio electives; CCER, CGEN, CGLS, CMTJ, CWFD, CWTD, and FNAS
  ARTH-601 Forms of Inquiry
  ARTH-605 Thinking About Making
  ARTH-621 The Image
  ARTH-671 Art & Architecture Ancient Rome
  ARTH-676 Early Medieval Art
  ARTH-677 Displaying Gender
  ARTH-682 Medieval Craft
Business
  ACCT-603 Accounting for Decision Makers
  DECS-744 Project Management
  ESCB-705 Economics & Decision Modeling
  MGMT-740 Organizational Behavior and Leadership
  MKTG-761 Marketing Concepts and Commercialization
Public Policy
  PUBL-610 Technological Innovation & Public Policy
  PUBL-700 Readings in Public Policy
  PUBL-701 Graduate Policy Analysis
  PUBL-702 Graduate Decision Analysis
Environmental Science
  ENVS-650 Advanced Applications of Geographic Information Systems
Sustainability Electives
  MGMT-710 Managing for Environmental Sustainability
  ENVS-601 Environmental Science Graduate Studies
  MECE-629 Renewable Energy Systems
  MECE-733 Sustainable Energy Management
  PUBL-630 Energy Policy
  PUBL-810 Technology, Policy & Sustainability
  STSO-621 Graduate Biodiversity and Society
  STSO-750 Sustainable Communities
  ESHS-765 Product Stewardship
  ISUS-xxx all courses in the Department of Sustainability

Off-Campus Programs
  NA at this time.

II.2.3 Curriculum Review and Development

The Department of Architecture Curriculum Committee meets at least once per semester or more often as needed to address its assigned charges. The committee consists of members of the program faculty, faculty within the GIS, outside professionals, faculty from the CIAS and a student representative. Any curricular changes (new, revised, or eliminated courses) must be approved by this committee. As coursework is proposed by our program, any substantial curricular changes (greater than 30% of the program) must be approved by the university-level graduate curriculum committee referred to as the Graduate Council, and - pending the nature of these changes - curriculum adjustments are often forwarded to the State Board of Education for review and approval.

Over the last year the Committee's primary goal has been to critically review the entire curriculum - both from having now offered each required course at least once, and from advice and insight provided by the 2015 site visit. It also addresses issues of curriculum flexibility; a clarification and revision of program goal(s), mission, and objectives; awarding of advanced standing to applicants; acceptable global experiences; and portfolio review evaluation. The Curriculum Committee recently identified a formal process for annual program curriculum review and development plan to commence at the conclusion of each academic year. This has now become a requisite annual program retreat/advance agenda item and is discussed in greater detail in the earlier sections on Self-Assessment.

The 2015-16 academic year was a critical turning point for the department because two new hires came on board and as a result it was the first time there were as many as three full-time faculty members available to manage the curriculum. The previous reliance on adjuncts to teach studio courses did not provide the kind of oversight necessary to fully integrate the studio sequence. The fact that three of the five SPC deficiencies identified in the last visit were design related seems to have substantiated this point.

As a result, since the last visit, the curricular focus has been on strengthening the design sequence. Toward that end, the three faculty members reviewed the entire sequence and developed an overall approach in terms of what types of projects would best ensure meeting course objectives. This not only assured a smooth transition between courses for the students, but also avoided unnecessary duplication of skill development or worse – missing one. Each faculty member was then assigned one year of the program to coordinate thereby providing a structure for managing the process on a course-by-course basis.

Perhaps more importantly, this review resulted in the faculty formulating a common design approach. Agreement was reached on what *programming & analysis* and what *planning & design* tasks would occur in each course and to what level. These were built around Realm A design SPCs. For example, all of the design and studio courses were modified to include precedent studies. The faculty determined where the concept was introduced, where it was reinforced, and where it would be assessed to fully meet A.6.

The assessment process noted above for Realm C is used for all SPCs, that is, student learning outcomes for each course are directly related to SPCs and are the basis for selecting representative work. High pass examples are simply the best works of the entire class. Low pass examples are selected by checking the work against course objectives to be certain that it represents a minimumally acceptable outcome. Usually this is "C" level work.

One exception to this approach is work that is assessed using criteria referenced instruction methodology. This approach essentially gives students multiple opportunities to meet any given criterion. Students could meet a criterion at the "A" level on the first try or they might not meet it at all in which case they try again. Students often attain at least "C" level work but on occasion do not. An overall level of achievement is the result of combining the results of all criteria tests; e.g. if a student minimally satisfies 17 of 20 criteria on a project his/her grade/level of achievement = 85%.

II.3. Evaluation of Preparatory/Pre-Professional Education

Since the three and one-half year Master of Architecture program originated primarily for students with non-architectural baccalaureate degrees there has been no need for routine evaluation of prior general education work outside the normal admission process. However, given the interest in the program from individuals with some architectural background, a review of processes and procedures has been instituted to provide course waiving and advanced standing opportunities, and a program policy regarding this is included in Section 4.

Application for admission into the Master of Program is channeled through the Office of Graduate and Part-time Enrollment Services where all application materials are received. Once the documents are reviewed and verified as compete, the application is forwarded to the Department of Architecture Recruitment and Admissions Committee where it is fully reviewed. This committee then forwards its recommendation to accept (along with any contingencies), or deny an applicant and forwards this to the department head for final review and processing. All applicants then receive and acceptance or non-acceptance letter by both the Department of Architecture and Office of Graduate and Part-time Enrollment Services. The department head also determines any scholarship award based on the committee's recommendation of a high, medium, or low recruit prospect. Beginning Fall of 2017, the application process will occur completely on-line.

The program also works closely with the Office of Graduate and Part-time Enrollment Services to ensure that the requisite general education is met for all incoming students. In particular, for "advanced standing" candidates, each applicant receives an additional screening for this requirement, above and beyond any SPC being met in pre-professional education. This is also noted in any articulation agreements with feeder schools. Should additional general education or other requirements become necessary, this is identified in the admission letter, outlined in the student file, and tracked for compliance prior to graduation.

The audit process for course waivers is conducted by faculty as part of the admission process. A Course Waiver/Advanced Standing form is used to document this process. Course descriptions and course goals and objectives are the basis for granting credit, however if there are reservations about the content of a course, the student is asked to provide additional materials. In some cases, a student may be waived from a required course but not waived the credits. In such cases, students must take a substitute course that covers topics not found in the analysis.

The only SPCs that are waived in the process are A.1 Professional Communication Skills, A.4 Architectural Design Skills, and A.7 History and Global Culture. These are relatively easy to determine and have not given cause for concern thus far.

II.4.   Public Information

The Master of Architecture program maintains a website (Master of Architecture Program website) similar to those found for other programs at RIT. Public Information begins on the overview page, and subsequently lead to pages and downloads that contain the following statements and links noted below.

II.4.1 Statement on NAAB-Accredited Degrees

All catalogues and promotional materials for this program include the Statement on NAAB-Accredited degrees, exactly as worded in Appendix 1 of the NAAB Conditions for Accreditation. The Statement appears on our Master of Architecture Program website and in the Student Manual that exists as both a physical document and a digital version which is located on the programs' shared online resource.

II.4.2 Access to NAAB Conditions and Procedures

The following documents are directly linked to the RIT Master of Architecture Program website:

NAAB –   2014 NAAB Conditions for Accreditation
NAAB –   2015 Procedures for Accreditation

II.4.3 Access to Career Development Information

The following resources are linked to RIT's Master of Architecture Program website, provided through the Co-op tab:

National Council of Architectural Registration Boards (NCARB)
The American Institute of Architects (AIA)
The American Institute of Architecture Students (AIAS)
Association of Collegiate Schools of Architecture (ASCA)
The Emerging Professional's Companion

II.4.4 Public Access to APRs and VTRs

The following documents pertaining to accreditation are available in the Department of Architecture office as they become available and are made public on the RIT Master of Architecture Program website. These include:

> *Annual Reports*, including any narrative
> Any NAAB responses to the *Annual Reports*
> The most recent decision letter from the NAAB
> The most recent APR
> The final edition of the most recent *Visiting Team Report*, including attachments and addenda

II.4.5 ARE Pass Rates

NA.

II.4.6 Admissions and Advising

Student admissions information is available on the RIT Master of Architecture Program website under the "How to Apply" tab.

Academic advising information is outlined in the Student Manual which is available as both a physical document and a digital document, and is made available to all students on the shared resources website for the architecture program.

II.4.7 Student Financial Information

Student financial information is provided on the RIT Master of Architecture Program under the Frequently Asked Questions (FAQ) tab. The following questions related to finances are included:

- Does RIT offer scholarships and financial aid?
- I'd like to find employment on campus. Does RIT offer student employment?
- What are the approximate costs to attend the program?

The architecture program provides all students with a list of required materials necessary for specific courses and a list of suggested materials that students can purchase to supplement the required materials. Students are provided with a range of manufacturers and brands and make purchases based on personal preferences.

III.1.1 Annual Statistical Reports:

A signed statement attesting to the validity of the data provided is referenced in Section 4 of the APR.

Annual Statistical Reports for the previous two years (2015 and 2016) are also referenced in Section 4 of the APR.

III.1.2 Interim Program Reports:

Interim Progress Reports are provided by NAAB to accompany this report as necessary (NA).

Section 4. Supplemental Materials

Included below are the following supplemental materials:

I.1   Faculty-Course Matrix
I.2   Faculty Resumés
I.3   Course Outlines
I.4   Self-Assessment Tables
I.5   Digital Supplemental Material

I.1 Faculty Course and Credentials Matrix

A matrix of courses taught, over the last two academic years, by full-time and adjunct faculty members, which identifies specific credentials, experience and research, follows:

Faculty Course and Credentials Matrix ○ = Academic Year 2015-2016 ● = Academic Year 2016-2017 Faculty Member & Summary of Expertise	FALL 2015 FALL 2016	ARCH-611	ARCH-621	ARCH-631	ARCH-699	ARCH-731	ARCH-733	ARCH-741	ARCH-743	ARCH-751	ARCH-753	ARCH-761	ARCH-763	ARCH-790/1
Nana-Yaw Andoh, Assoc. AIA Expertise in traditional and classical architecture and urbanism with emphasis on sustainable neighborhood planning.					○●		○●	○●					○	
Dennis A. Andrejko, FAIA Teaching, research, service and practice experience with a focus on architecture and the built environment, renewable energy and high performance buildings, and community and regional design assistance.														○●
Callie Babbitt, PhD Expertise in environmental assessment using life cycle assessment and carbon footprint techniques, with recent research focus on consumer electronics, batteries, nanomaterials, and biofuels.											○			
Jules Chiavaroli, AIA Over thirty years experience practicing, teaching, and in service of architecture. Expertise in Deaf education, publishing, the business of architecture, structures, and socially responsible design.						○●		○	○●					
Gabrielle Gaustad, PhD Expertise in decision analysis, computational modelling, and materials fundamentals for asessing the environmental and economic tradeoffs in the built environment.													○●	
Richard Napoli, AIA Senior Architect in the Commercial /Retail studio of a large Rochester AE firm which focuses on contextual, efficient design solutions. Provides mentoring and lifelong learning to young professionals within the office and as a volunteer outside practice.		○●												
Michael Place, Assoc. AIA Seven years architecture practice experience, actively seeking professional licensure. Has taught design studios and architectural theory courses. Author of essays on theory, sustainability, and building materials.										○●				
Giovanna Potestà, PhD, Assoc. AIA Teaching architecture and urban design in developed and developing countries, theory and history of architecture and urban form. Professional experience in architecture and urban design.			●	○●							○			
Erinn Ryen, PhD Research and practice experience in product sustainability including life-cycle assessment and recycling strategy. Recent focus on consumer electronics												●		
Mary Scipioni, Assoc. AIA A NYS Registered Landscape Architect with academic experience at RIT.						○								
Alissa de Wit-Paul, RA Teaching sustainable principles, history and first year coordination. Research in the history of sustainable design concentrating on the 1970s. Practice focuses on small residential and commercial spaces.			○									●		

Faculty Course and Credentials Matrix

○ = Academic Year 2015-2016
● = Academic Year 2016-2017

Faculty Member & Summary of Expertise	SPRING 2016 / SPRING 2017	ARCH-612	ARCH-622	ARCH-632	ARCH-641	ARCH-734	ARCH-735	ARCH-742	ARCH-744	ARCH-752	ARCH-762	ARCH-771	ARCH-790/1
Nana-Yaw Andoh, Assoc. AIA Expertise in traditional and classical architecture and urbanism with emphasis on sustainable neighborhood planning.				○●					○	●			
Dennis A. Andrejko, FAIA Teaching, research, service and practice experience with a focus on architecture and the built environment, renewable energy and high performance buildings, and community and regional design assistance.					○●								○●
Jules Chiavaroli, AIA Over thirty years experience practicing, teaching, and in service of architecture. Expertise in Deaf education, publishing, the business of architecture, structures, and socially responsible design.							○●	○●					
Jacqueline Ebner, PhD Expertise in sustainability assessment systems of food waste streams and life cycle greenhouse gas analyses of organic systems.											○		
Gregory Hale, PE Owner of Rochester area firm specializing in design and engineering BIM technologies. Expertise in industry education and architectural technological innovation.		○●											
Trevor Harrison, AIA Managing Partner of a Rochester area firm with a focus on adaptive reuse and contextual design. Leads his practice with a focus on mentoring and lifelong learning.											○		
David Matthews, AIA Owner and principal of Rochester area firm with over two decade of experience in sustainable building and renovation practices.									●				
Giovanna Potestà, PhD, Assoc. AIA Teaching architecture and urban design in developed and developing countries, theory and history of architecture and urban form. Professional experience in architecture and urban design.			○●			○●				○			
James Reynolds Expertise in sustainable principles of neighborhood design, and natural and built systems integration.											●		
Mary Scipioni, Assoc. AIA A NYS Registered Landscape Architect with academic experience at RIT, Mt. Holyoke College, Hampshire College, the University of Massachusetts Amherst, and Domus Academy in Milan, Italy.										○			
Peter Wehner, AIA Licensed Professional Architect with over twenty-five years of expertise and focus in new and renovation projects and large design and construction ventures.												●	
Jim Yarrington, AIA Over thirty-five years of private market and institutional practice with expertise in building additions and transformative renovations, historic preservation/adaptive re-use and university campus development.						○							

I.2 Faculty Résumés

The résumés for full-time and adjunct faculty members participating in the program for two years (four semesters) prior to the site visit are included below.

Name: Nana-Yaw Andoh, Assoc. AIA

Courses Taught (Four semesters prior to current visit):
ARCH 632 Architectural Design II (Spring 2016, Spring 2017)
ARCH 733 Architectural Studio III: Adaptive (Fall 2015, Fall 2016)
ARCH 741 Integrated Building Systems I (Fall 2015, Fall 2016)
ARCH 744 Integrated Building Systems IV (Spring 2016)
ARCH 752 Urban and Regional Planning (Spring 2017)
ARCH 763 Sustainable Building Metrics (Fall 2015)
ARCH 799 Independent Study (Fall and Spring 2015-2017)

Educational Credentials:
University of Notre Dame, Master of Architecture and Design Urbanism, 2007
University of Notre Dame, Rome Studies Program, 2006, 1997-1998
University of Notre Dame, Bachelor of Architecture, 2000

Teaching Experience:
Associate Professor, State University of New York, Delhi, 2009-2015
Graduate Assistant, University of Notre Dame, 2005-2007
Adjunct Professor, Harcum Junior College, 2004-2005
Adjunct Faculty, Northampton Community College, 2003-2004

Professional Experience:
Principal, Andoh Design Studio, 2009-Present
Designer, Hart Howerton, 2007-2008
Project Designer, Schoonover and Vanderhoof Architects, 2004-2005
Graduate Architect,The Architectural Studio, 2003-2004
Intern Architect, Martin A. DeSapio Architects, 200-2003

Licenses/Registration:
None

Selected Publications and Recent Research:
Guest Lecture, The Architectural Impact and Historical Significance of the Italian Renaissance, SUNY
    Delhi Study Abroad Program, Rome, Italy. January 2016.
Peer Review Article, Sustainable Urban Mobility in Developing Countries: A Case Study for a Road
    Pricing Scheme in Accra, Ghana, United Nations Institute for Training and Research (UNITAR), July
    2016.
Guest Lecture, New Urbanism – A Model for Sustainable Urban Design and Social Equity, Malmo
    University, Sweden. September 2016
Research Exhibition, Works & Words, Community Design Center of Rochester (CDCR), Rochester, NY.
    October 2016.
*"Design of a Good City — Creating a 21st Century City in Developing Countries (and Bringing about
    Social Reform."* Presented at the 15th International Planning History Society (IPHS) Conference in
    Sao Paulo, Brazil, 2012.
"State University of New York: Strategic Planning — Diversity and Globalization." Presented 2010

Professional Memberships:

Congress for the New Urbanism (CNU)
American Institute of Architects, Associate Member

Name: Dennis A. Andrejko, FAIA

Courses Taught (Four semesters prior to current visit):
ARCH 641 Fundamentals of Building Systems (Spring 2016, Spring 2017)
ARCH 790 Thesis (Fall 2015, Fall 2016)
ARCH 791 Continuation of Thesis (Spring 2016, Spring 2017)
ARCH 799 Independent Study (Fall and Spring 2015-2017)

Educational Credentials:
Bachelor of Architecture, Arizona State University, 1975
Master of Architecture in Advances Studies, MIT, 1977

Teaching Experience:
Visiting Assistant Professor, Arizona State University, 1981 – 1982
Associate Professor, University at Buffalo, 1983 – 2012
Senior Professor, Monteverde Institute, Costa Rica, Sustainable Futures Program, 1997 - present
Associate Professor, Rochester Institute of Technology, 2011- present

Professional Experience:
SEAgroup, The Sea Ranch/Nevada City, California, 1977 – 1981
Andrejko + Associates, Buffalo, New York, 1981 - present
Director and Interim Chairman, UB Department of Architecture, 1990 – 1999
Head, Department of Architecture, 2011 - present

Licenses/Registration:
New York
Arizona (inactive)
California (inactive)

Selected Publications and Recent Research:
International Green construction Code (IgCC) – (co-contributor as member of Sustainable Building Technology Committee (SBTC)) – 2010

The AIA Guide to the IgCC – (co-contributor as a member of the AIA Task Force) – 2012

An Architects Guide to Integrating Energy Modeling in the Design Process – (co-contributor as a member of the AIA Task Force) - 2012

50 to 50 – AIA's Sustainability Resource for Carbon Neutral Design www.aia.org/fiftytofifty (co-contributor/editor) - 2007

Seventh Generation Green Building: St. Regis Mohawk Tribe Environment Building Final Concept Studies - 2006

UB High Performance Building Guidelines, University at Buffalo UB Green Committee (co - participant/ contributor) - 2005

Least Cost Cooling Study, Natural Cooling Optimization, University at Buffalo, with Wendel Duscherer, NYSERDA Research (co-contributor) - 2003

ARCHITECTURAL GRAPHIC STANDARDS – Passive Solar Design Concepts Page, 8th 9th 10th 11th Editions 1994 – 2009

PASSIVE SOLAR ARCHITECTURE: logic and beauty - 1982

Professional Memberships:
The American Institute of Architects
American Institute of Architects National Board, NY State Regional Director 2006 – 2009
Vice President, American Institute of Architects National Board, 2010 – 2012
Society of Building Science Educators
American Solar Energy Society

Name: Callie Babbitt, PhD
Courses Taught (Four semesters prior to current visit):

ARCH 761 Understanding Sustainability (Fall 2015)

Educational Credentials:
PhD, Environmental Engineering, University of Florida, 2007
M.E., Environmental Engineering, University of Florida, 2003
B.S., Chemical Engineering, Georgia Institute of Technology, 2001

Teaching Experience:
Associate Professor, Rochester Institute of Technology, Golisano Institute for Sustainability, 2015-Present
Assistant Professor, Rochester Institute of Technology, Golisano Institute for Sustainability, 2009-2015
Postdoctoral Associate, Arizona State University, Center for Earth Systems Engineering and Management (affiliate) and School of Human Evolution and Social Change, 2007-2009

Professional Experience:
Arizona State University, Office of Sustainability Initiatives, Project Manager, 2006 – 2007
Golder Associates, Inc., Gainesville, FL, Engineering Intern, January - June 2004
University of Florida, School of Building Construction, Project Manager, 2001 – 2003
Georgia Pacific Corp., Atlanta, GA, Engineering Intern, 1999 - 2000
Buckeye Technologies, Inc., Perry, FL, Chemical Engineering Co-op, 1997 - 1999

Licenses/Registration:
None

Selected Publications and Recent Research:
Lin, J., Babbitt, CW., Trabold, T. 2012. "Life cycle assessment integrated with thermodynamic analysis of bio-fuel options for solid oxide fuel cells," Bioresource Technology, ttp://dx.doi.org/10.1016/j. biortech.2012.10.074.
Anctil, A., Babbitt, C.W., Raffaelle, R.P., Landi, B.J. 2012. "Cumulative energy demand for small molecule and polymer photovoltaics," Progress in Photovoltaics: Research and Applications, 10.1002/ pip.2226.
Schauerman, C.M., Ganter, M.J., Gaustad, G., Babbitt, C.W., Raffaelle, R.P., Landi, B.J. 2012. "Recycling single-wall carbon nanotube anodes from lithium ion batteries," Journal of Materials Chemistry 22, 12008-12015.
Anctil, A., Babbitt, C.W., Raffaelle, R.P., Landi, B.J. 2011. "Material and energy intensity of fullerene production." Environmental Science & Technology 45 (6), 2353–2359.
Babbitt, C.W.; Williams, E.; Kahhat, R. 2011 "Institutional disposition and management of end-of-life electronics." Environmental Science and Technology 45 (12), 5366–5372
Deng, L., Babbitt, C.W., Williams, E. 2011. "Economic-balance hybrid LCA extended with uncertainty analysis: case study of a laptop computer." Journal of Cleaner Production 19 (11), 1198-1206.
Babbitt, C.W., Kahhat, R., Williams, E., Babbitt, G.A. 2009. "Evolution of product lifespan and implications for environmental assessment and management: a case study of personal computers in higher education." Environmental Science and Technology 43: 5106-5112.
Babbitt, C.W.; Stokke, J.M.; Mazyck, D.W.; Lindner, A.S. 2009. "A design-based life cycle assessment of hazardous air pollutant control options at pulp and paper mills: A comparison of thermal oxidation to photocatalytic oxidation and biofiltration." Journal of Chemical Technology and Biotechnology 84: 725-737.

Professional Memberships:
International Society for Industrial Ecology
Air and Waste Management Association
American Center for Life Cycle Assessment

Name: Jules Chiavaroli, AIA
Courses Taught (Four semesters prior to current visit):

ARCH 699 Co-op Architecture (2015-2017)
ARCH 731 Studio I: Site (Fall 2015, Fall 2016)
ARCH 735 Studio IV: Integrative (Spring 2016, Spring 2017)
ARCH 741 Integrated Building Systems I (Fall 2015)
ARCH 742 Integrated Building Systems II (Spring 2016, Spring 2017)
ARCH 743 Integrated Building Systems III (Fall 2015, Fall 2016)
ARCH 789 Special Topics: Swedish Culture: Arts, Media, and Technology (Fall 2015)
ARCH 799 Independent Study (Fall and Spring 2015-2017)

Educational Credentials:
Bachelor of Architecture (with honors), University of Notre Dame, 1972
Master of Business Administration, Rochester Institute of Technology, 1983

Teaching Experience:
Assistant Professor, Rochester Institute of Technology, 1978-1984
Associate Professor, Rochester Institute of Technology, 1984-2004
Professor, Rochester Institute of Technology, 2004-present

Professional Experience:
Intern Architect, Northrup Kaelber and Kopf Architects Engineers, Rochester NY, 1972-1975
Intern Architect, Kohlstaedt and Fredrickson Architects and Planners, Canandaigua NY, 1975
Intern Architect, Earl J. DeRienzo Architect, Rochester NY, 1975
Project Architect, Northrup Kaelber and Kopf Architects Engineers, Rochester NY, 1976-1978
Principal, Julius J. Chiavaroli Architect, Pittsford NY, 1978-present

Licenses/Registration:
Registered Architect, New York
NCARB Certified
LEED AP

Selected Publications and Recent Research:
AEC Drafting Fundamentals. Cengage Learning. 1994
AEC Drafting Drawings. Cengage Learning. 1994
Graphics Software Packages as Instructional Tools. American Annals of the Deaf. 1985

Professional Memberships:
American Institute of Architects
US Green Building Council

Name: Jacqueline Ebner, PhD
Courses Taught (Four semesters prior to current visit):
ARCH 762 Industrial Ecology Fundamentals (Spring 2016)

Educational Credentials:
Bachelor of Science, State University of New York at Buffalo, 1988
Master of Business Administration, University of Rochester, 1998
PhD in Sustainability, Rochester Institute of Technology, 2016

Teaching Experience:
Guest Lecturer, "Introduction to life cycle thinking", Fundamentals of Sustainability, GIS, RIT, 2015
    Graduate Mentor, M.S. Golisano Institute for Sustainability, Rochester Institute of Technology, Rochester, NY "Sustainability of food supply chain resource diversion to animal feed in NYS", 2015-Present
Graduate Mentor, PhD, "Screening, introduction and optimization of anaerobic codigestion of complex substrate", 2014-Present
Graduate Mentor, PhD, "Development of site specific small scale anaerobic digestion solutions", 2014-present
Course Instructor, "Living Sustainably," Temple Sinai Kesher program for middle school children, 2010
    Seminar, "Shabbat as a model of Sustainability", Jewish Community Federation of Rochester, Global
Day of Jewish Learning, January 2011
Guest Lecturer, "Zero Waste" Hillel School Science fair, December 2010

Professional Experience:
Research Assistant, Rochester Institute of Technology, 2011-Present Marketing Manager, Xerox Corporation, 1987-2000
Operations Manager, Xerox Corporation, 1997-1999
Post Sale Business Manager, Xerox Corporation, 1995-1997
Field and Customer Support Manager, Xerox Corporation, 1992-1994 Quality Assurance Engineer, Xerox Corporation, 1988-1998
Design Engineer, 1988-1992

Licenses/Registration:
None

Selected Publications and Recent Research:
J Ebner, Climate change impacts of retail food waste treatment options based upon substrate characteristics, LCA XV conference of the American Council of Life Cycle Assessment, Vancouver, British Columbia,m October 5-8, 2015
JH Ebner, RA Labatut, J Lodge, AA Williamson, TA Trabold, Anaerobic co-digestion of commercial food waste and dairy manure: characterizing biochemical parameters and synergistic effects, submitted for review to *Waste Management,* September 2015
J Ebner, A Labuzetta, New York State Food Supply Chain Organic Resources, Proceedings of the Federation of NY Solid Waste Associations Spring Conferece, Lake George, NY May 4-6, 2015.
JH Ebner, RA Labatut, MJ Rankin, JL Pronto, CA Gooch, AA Williamson, Lifecycle greenhouse gas analysis of an anaerobic co-digestion facility processing dairy manure and industrial food waste, (2015), *Environmental Science & Technology,* 48(18), 11199-11208
J Ebner, C Babbitt, M Winer, B Hilton, A Williamson, Life cycle greenhouse gas (GHG) impacts of a novel process for converting food waster to ethanol and co-products, (2014), Applied Energy 130, 86-93

Professional Memberships:
LCA Professional Certification

Name: Gabrielle Gaustad, PhD
Courses Taught (Four semesters prior to current visit):
ARCH 763 Sustainable Building Metrics (Fall 2015, Fall 2016)

Educational Credentials:
Massachusetts Institute of Technology
PhD, Materials Science and Engineering
MS, Computation for Design and Optimization
New York State College of Ceramics at Alfred University
Bachelor of Science, Ceramic Engineering, Magna Cum Laude with Departmental Honors Alfred
    University Scholar, Minor in Chemistry & Fine Arts, Concentration in Composites

Teaching Experience:
Assistant Professor, Rochester Institute of Technology, 2009-Present
Teaching Assistant, Massachusetts Institute of Technology, 2005-2007

Professional Experience:
None

Licenses/Registration:
None

Selected Publications and Recent Research:
J. Lin, G. Gaustad, T. Trabold (2013), "Profit and Policy Implications of Producing Biodiesel-Ethanol-
    Diesel Fuel Blends to Specification", Applied Energy, v 104, 936-944.
X. Wang, G. Gaustad (2012), "Prioritizing Material Recovery for End-of-Life Printed Circuit Boards",
    Waste Management. v 32, 1903-1913.
C. Schauerman, M. Ganter, G. Gaustad, C. Babbitt, R. Raffaelle, B. Landi (2012), "Recycling Single-
    Wall Carbon Nanotubes from Lithium Ion Batteries", Journal of Materials Chemistry, v 22, 12008-
    12015.
G. Gaustad, E. Olivetti, R. Kirchain (2012), "Improving aluminum recycling: a survey of sorting
    and impurity removal technologies", Resources, Conservation, and Recycling, v 58, 79-87.
G. Gaustad, E. Olivetti, R. Kirchain (2011), "Towards sustainable material usage: evaluating the
    importance of market motivated agency in modeling material flows", Environmental Science
    & Technology, v 45 n 9, 4110-4117.
E. Olivetti, G. Gaustad, F. Field, R. Kirchain (2011), "Characterizing the Source and Drivers of Benefit
    from Explicit Consideration of Quality Variation in Process Management for Materials Production",
    Environmental Science and Technology, v 45 n 9, 4118-4126.
G. Gaustad, R. Kirchain (2010), "Design for recycling: evaluation and efficient alloy modification",
    Journal of Industrial Ecology, v 14, n 2, 286-308.
G. Gaustad, P. Li, and R. Kirchain (2007), "Modeling Methods for Managing Raw Material
    Compositional Uncertainty in Alloy Production", Resources, Conservation, & Recycling, v 52, n 2,
    180-207.
R. Derosa, E. Telfeyan, G. Gaustad, S. Mayes (2005), "Strength and microscopic investigation of
    unsaturated polyester BMC reinforced with SMC-recyclate", Journal of Thermoplastic Composite
    Materials, v 18, n 4, 333-349.

Professional Memberships:
None

Name: Gregory Hale, PE
Courses Taught (Four semesters prior to current visit):
ARCH 612 Representation II (Spring 2016, Spring 2017)

Educational Credentials:
University of Nevada, Reno, Bachelor of Science, Civil Engineering, 1999

Teaching Experience:
None

Professional Experience:
Owner, CTO, Hale Technology in Practice, LLC, 2014-Present
BIM Manager, SWBR Architecture, 2006-2013
Structural Engineer, SWBR Architecture, 2001-2006
Project Manager, Martin Iron Works, 1998-2001

Licenses/Registration:
Professional Engineer, NYS, 2006
Autodesk Revit Professional Certification, 2008-2013

Selected Publications and Recent Research:
Presenter at Spar International, 2014
Presenter at Autodesk University, 2011-2014
Presenter at GIS SIG Mapping Conference and NYS GeoCon, 2015
Presenter at PSMA/PEAC Design Technology Symposium, 2010-2012
Presenter at RocCity Revit User Group and Buffalo BIM User Group, 2010-2015

Professional Memberships:
None

Name: Trevor Harrison, AIA, NCARB
Courses Taught (Four semesters prior to current visit):
ARCH 771 Professional Practice (Spring 2016)

Educational Credentials:
Bachelor of Professional Studies-Architecture, SUNY Buffalo, 1990

Teaching Experience:
Adjunct Professor, Rochester Institute of Technology, 2013-Present

Professional Experience:
Intern Architect, Fayko Johanson and Fortier, Rochester, NY, 1990-1994
Architect, Handler Gross Durfee Bridges, Rochester, NY, 1994-1998
Partner, Handler Gross Durfee & Associates, Rochester, NY, 1998-2000
Founding and Managing Partner, HBT Architects, LLP, Pittsford, NY, 2000-Present

Licenses/Registration:
NY, NJ, PA, CT, WV, NC, MA, MD

Selected Publications:
None

Professional Memberships:
American Institute of Architects
NCARB
US Green Building Council

Name: David Matthews, AIA
Courses Taught (Four semesters prior to current visit):
ARCH 744 Integrated Biulding Systems IV (Spring 2017)

Educational Credentials:
Kent State University, Bachelor of Architecture, 1993
Kent State Univeristy, Bachelor of Science in Architecture, 1992

Teaching Experience
None

Professional Experience:
Owner and Principal, DesignOne Architecture and Planning, 2015-Present
Senior Project Architect, In.Site:Architecture, 2008-2014
Project Architect, Thompson Pollari Studio, 2005-2007 Project
Architect, Haven Design, 2000-2005
Project Architect, DFM Design, 1999-2000
Project Manager, Rick Daugherty Architects, 1998-1999
Project Designer, Construction Supervisor, Mariposa Custom Homes, 1996-1998 Job
Captain, Frietas and Associates, 1994-1996

Licenses/Registration:
Registered Architect since 2007, State of New York, # 30352982
Registered Architect since 1999, State of Arizona, #34119
LEED Accreditation 2008

Selected Publications and Recent Research:
(585)magazine, *BarnAgain (Peers Relyea Residence),* May.June 2014
EcoHome, *BarnAgain (Peers Relyea Residence),* Fall 2013
Sources and Design, *Paradise Valley Residence,* 2011
EcoStructure, *Navajo Preparatory School Student Center,* Fall 2007

Professional Memberships:
Member of USGBC New York Upstate Chapter, 2010 – present
Member of American Institute of Architects, 2008 – present

Name: Richard Napoli, AIA
Courses Taught (Four semesters prior to current visit):
ARCH 611 Architectural Representation I (Fall 2015, Fall 2016)

Educational Credentials:
New York Institute of Technology, Bachelor of Architecture, 1985

Teaching Experience:
None

Professional Experience:
Design Principal/Senior Architect, Bergmann Associates, 2006-Present Project
Design Architect, Sear Brown/Stantec, 1999-2006
Job Captain, New York Design Collaborative, Inc. 1989-1999 Job
Captain, Klasen Associates, 1989
Draftsman and Job Captain, Olsen Group, Inc., 1988
Draftsman, Karplus and Nussbaum Architects, 1986-1988
Designer/Draftsman, Nouvelle Associates, 1984-1986

Licenses/Registration:
New York State

Selected Publications and Recent Research:
None

Professional Memberships:
American Institute of Architects
ERA/Emerging Rochester Architects
National Association of College & University Campus Auxiliary Services
National Association of College & University Food Services

Name: Michael Place, Assoc. AIA
Courses Taught (Four semesters prior to current visit):
ARCH 751 Architectural Theory (Fall 2015, Fall 2016)
ARCH 789 Special Topics: Race to Net Zero (Spring 2015, Spring 2016, Spring 2017)
ARCH 789 Special Topics: Security-Enhanced Environmental Design (Spring 2017)

Educational Credentials:
SUNY Buffalo, Master of Architecture, 2011
University of Cincinnati, Bachelor of Science in Architecture, 2006 Danish
International School, Copenhagen Denmark, 2005

Teaching Experience:
Adjunct Professor, Boston Architectural College, 2007-2008
Teaching Assistant, State University of New York at Buffalo, 2009-2011
Adjunct Professor, Rochester Institute of Technology, 2013-present

Professional Experience:
Intern Architect, Frank Shirley Architects, Cambridge, MA, 2006-2007
Intern Architect, Arrowstreet Architecture Inc., Somerville, MA, 2007-2008
Intern Architect, Signer Harris Architects, Boston, MA, 2008
Intern Architect, John Senhauser Architects, Cincinnati, OH, 2008-2009
Project Manager, ArchStetics Architecture, Rochester, NY, 2011-2014
Project Member, LaBella Associates, Rochester, NY 2014-Present

Licenses/Registration:
None

Selected Publications and Recent Research:
Purity of Thought and the Realities of Architecture, 2009
The Effects of Location and Context: The Work of Aldo Rossi and Robert Venturi, 2009
A Brief Consideration for the Material of Concrete, 2010
Case Study: The Inner City Arts Addition, Los Angeles, California, 2010
Case Study: The Village of Arts and Humanities, Philadelphia, Pennsylvania, 2010
The Effects of Treating Sustainable Design as a Checklist of Architectural Options, 2011
Materialism in Architecture: Sustainable Futures Through Material Re-Use, 2011
A Systems Approach to Materialism in Architecture, 2011-present
The Sustainable House, 2011-present
Deleuze Through Delanda: Researching the material philosophy of Gille Deleuze, 2011-present

Professional Memberships:
Construction Specification Institute (CSI)
Member ACE Mentorship program, volunteer
American Institute of Architect, Associate Member
Monroe 2 Orleans BOCES Special Education Advisory Board, Member

Name: Giovanna Potestà, PhD, Assoc. AIA

Courses Taught (Four semesters prior to current visit):
ARCH 621 Architectural History I (Fall 2016)
ARCH 622 Architectural History II (Spring 2016, Spring 2017)
ARCH 631 Architectural Design I (Fall 2015, Fall 2016)
ARCH 734 Architectural Studio II: Urban (Fall 2015, Fall 2016)
ARCH 752 Urban and Regional Planning (Fall 2015)
ARCH 753 Research Seminar and Thesis Preparation (Fall 2015)
ARCH 799 Independent Study (Fall and Spring 2015-2017)

Educational Credentials:
University of Florence, PhD, Architecture and Urban Design, 2005
University of Florence, Laurea in Architecture, 1995

Teaching Experience:
Assistant Professor, Kuwait University College of Architecture, 2009-2015
Adjunct Professor, Kent State University in Florence, 2003-2007
Adjunct Professor, California State University in Florence, 2000-2005
Adjunct Professor, University of Florence, 2000-2003
Teaching Assistant, University of Florence, 1995-1998

Professional Experience:
Design and project (co-designer M.C. Bodini) of an office/commercial building in Florence. Client: Immobiliare Novoli SpA, 2003-2005
Design and project (co-designer M.C. Bodini) of a residential/commercial building in Florence. Client: Immobiliare Novoli SpA, 2004-2007
Architectural Consultant for Novoli, Florence, Immobiliare Novoli SpA, 1998-2008
Urban Design Project (with A. Castellana) for Piazza Manin, Municipality of Livorno, 1997
Restoration Design and project of apartments in Florence, country houses in Chianti area, 1996-2000
Exhibit design and project for two exhibitions in Florence. Client: Biennale della Moda,1996
Designer, Collaboration with Natalini Office, 1995-1998

Licenses/Registration:
Ordine degli Architetti di Firenze, Architect, 1997-Present
American Institute of Architects, Associate Member, 2015-Present

Selected Publications and Recent Research:
"The Collective Space of Commerce between Identity and Globalization in Kuwait." *International Journal of Architecture and Design*, Vol. 25, Issue. 2, 2014 pp 1116-1126.
"The Collective Space of Commerce in Kuwait between Identity and Globalization." Presented at the Constructed Environment Conference in Lisbon, Portugal, 2013.
"Dubai: The Deconstruction of a City." Conference Proceedings: "Sguardi sulle città in transformazione," University of Bologna, 2011.
"Occidentalism, A Middle Eastern approach on the European Theme of Urban Design." *Constructed Environment Journal*, 2011.
G. Potestà, *The Architecture of Raffaello Fagnoni for the Aeronautic School of Florence (L'Architettura di Raffaello Fagnoni per la Scuola di Applicazione Aeronautica Scuola di Guerra Aerea Firenze).* Firenze, Polistampa, 2006.
P. Giovannini and G. Potestà, *San Donato a Novoli: da area industriale s centralit*à *urbana (San Donato in Novoli: from industrial area to urban centrality).* Firenze, Polistampa, 2004.
G. Potestà, editor and chapter contributor in: Adolfo Natalini, *Ricognizioni*, Octavo, Florence, 1999.

Professional Memberships:
Ordine degli Architetti di Firenze, 1997-Present ERDA, 2014-Present
American Institute of Architects, Associate Member
Constructed Environment, 2010-2013
Dar Al-Athar Al Islamiya, 2009-2014

Name: James Reynolds
Courses Taught (Four semesters prior to current visit):
ARCH 762 Industrial Ecology Fundamentals (Spring 2017)

Educational Credentials:
Rochester Institute of Technology, Master of Architecture, 2015
  Florida A&M University, Bachelors of Architectural Studies, 2013
Florida Community College at Jacksonville, Associates of Architectural Design & Construction
  Technology, 2009

Teaching Experience:
None

Professional Experience:
in.site:architecture, Architectural Designer, 2015-Present
Freelance Design Consulting, 2014-Present
Direct Energy Solar, Solar Design Specialist, 2015
Urban Planning & Design Institute of Shenzhen, Urban Design Intern, 2014

Licenses/Registration:
LEED AP: ND

Selected Publcations:
None

Professional Memberships:
None

Name: Erinn Ryen, PhD
Courses Taught (Four semesters prior to current visit):
ARCH 761 Understanding Sustainability (Fall 2016)

Educational Credentials:
Rochester Institute of Technology, PhD in Sustainability, May 2014

State University of New York, College of Environmental Science and Forestry, Master of Science, Environmental Resource Engineering, 1995

Syracuse University, Maxwell School of Citizenship and Public Affairs, Master of Public Administration, Environmental Policy and Administration, 1993

Cornell University, College of Agriculture and Life Sciences, Bachelor of Science, Applied Economics and Business Management, 1991

Teaching Experience:
Visiting Assistant Professor and Undergraduate Program Coordinator, RIT, College of Liberal Arts, Department of Public Policy, 2015 to Present

Adjunct Professor, RIT Golisano Institute for Sustainability, 2015 to 2016

Lecturer in Business, Wells College, 2013-2016

Research Assistant, Rochester Institute of Technology, 2009-2014

Volunteer Outreach Educator, RIT Women in Engineering Program, 2012-2013

ImagineRIT Innovation and Creativity Festival, Volunteer Outreach Educator, 2011-2014

Professional Experience:
NYS Pollution Prevention Institute (NYSP2I), Rochester, NY, 2015

Volunteer Committee Member, Town of Brighton, Sustainability Oversight Committee, 2008 – Present

Volunteer Committee and Board Member, Town of Brighton, Conservation Board, 1997-Present

Volunteer Facilitator, Center for Environmental Information, 2008-2009

Assistant Director, Camp Seneca Lake, 2004-2008

Specialty Panel Manager and Internet Panel Manager, Harris Interactive, Inc., 1999-2003

Environmental Planner, Bergmann Associates, 1997-1999

Environmental Specialist, Bausch & Lomb Inc., 1996-1997

Environmental Consultant, BoozAllen & Hamilton, 1994-1996

Licenses/Registration:
Certified Life Cycle Assessment Professional (January 2015 to 2018)

Selected Publications and Recent Research:
E. Ryen, C.W. Babbitt, & A. Lobos (2017). Chapter on life cycle thinking and sustainable design for emerging consumer electronic product systems, Routledge Handbook of Sustainable Design, in press.

K. Richa and E. Ryen (2017). Chapter on policy and technology, Sustainable Food Waste-to-Energy Systems, Elsevier, manuscript in process.

E. Ryen, G. Gaustad, C.W. Babbitt, & G. Babbitt, G. (2017). Ecological foraging models as inspiration for optimized recycling systems in the circular economy. Resources, Conservation & Recycling, manuscript submitted.

S. Rothenberg, E. Ryen, & A. Sherman (2017). An evolution of research on low consumption business models: Implications for the sharing economy. Journal of Consumer Policy, manuscript submitted.

M. Komeijani, E. Ryen, & C.W. Babbitt (2016). Bridging the gap between product design and the human thinking system, Challenges: Special Issue on Electronic Waste — Impact, Policy and Green Design, 7 (1): 1-16.

E. Ryen, C.W. Babbitt, & E. Williams (2015). Consumption-weighted life cycle assessment methodology for a community of consumer electronics, Environmental Science and Technology, 49 (4): 2549–2559.

Professional Memberships:
None

Name: Mary Scipioni, Assoc. AIA
Courses Taught (Four semesters prior to current visit):
ARCH 752 Urban & Regional Planning (Spring 2016)

Educational Credentials:
University of Massachusetts Amherst, Master of Landscape Architecture.
Rochester Institute of Technology, Rochester, NY. Bachelor of Fine Arts in Interior Design

Teaching Experience:
Guest critic and lecturer, RIT MArch Program, Site Studio, Fall 2012
Water, Land, Living Landscapes. Mount Holyoke College, Architectural Studies (2005-
    2007) Urban Green Places. Hampshire College, Humanities, Arts and Cultural Studies
    (2005) Parks and Open Space. University of Massachusetts Amherst, Department of
    Landscape
Architecture and Regional Planning (2006)
Graduate Skills Seminar. University of Massachusetts Amherst, Department of Landscape Architecture
    and Regional Planning (2001)
South Boston Waterfront Plaza. University of Massachusetts Amherst, Department of Landscape
    Architecture and Regional Planning, with Prof. Mark Lindhult (2002)
Landscape Links. University of Massachusetts Amherst, Department of Landscape Architecture and
    Regional Planning (2001)
Site Planning Studio. University of Massachusetts Amherst, Department of Landscape Architecture and
    Regional Planning, with Prof. Patricia McGirr and Prof. Ethan Carr (2001)
Connecticut River Waterfront Revitalization. University of Massachusetts Amherst, Department of
    Landscape Architecture and Regional Planning, with Prof. Henry Lu (2001)
Guest Critic, University of Massachusetts Amherst, Master of Architecture Program, 2002

Professional Experience:
Owner, Pebble-stream design consultants since 2011
Project manager at Environmental Design & Research, Rochester, New York
    Independent landscape design consultant, Amherst, MA (2003-2007)
Walter Cudnohufsky Associates Landscape Architecture, Ashfield, MA (2002-2003)
    Domus Academy, Milan Italy
Andrea Branzi Architect, Milan, Italy Volpi
    & Guazzoni Architects, Milan, Italy
Carson, Lundin and Thorson, PC Architects, NY

Licenses/Registration:

None

Selected Publications and Recent Research:

Published, "The Least You Need to Know About Landscape," Kindle Direct Publishing, Amazon
    Books (2011).
Visual Impact Assessment expert testimony preparation for the New York Regional Interconnect (NYRI)
    consortium regarding its VIA (EIS) methodology and procedures, at the New York Public Services
    Commission hearings (2009).
Measure of Success: Wetland Mitigation and Monitoring. American Society of Landscape Architects, NY
    Upstate Sustainability Conference (2008).
Historical Legitimacy and Historicism in Landscape Design. Mark Roskill Memorial Symposium in the
    History of Art, University of Massachusetts Amherst. (2002).
Ecology and Landscape Architectural Culture: Practice, Education and Research, Masters Thesis.
University of Massachusetts Amherst (2002).

Professional Memberships:
Affiliate, American Institute of Architects

Name: Peter Richard Wehner, AIA, NCARB, LEED AP BD+C
Courses Taught (Four semesters prior to current visit):
Professional Practice (Spring 2017)

Educational Credentials:
Clemson University, Bachelor of Arts, Design, 1984
Clemson University, Master of Architecture, 1986

Teaching Experience:
NYS Association of Fire Districts – Architectural presenter on panel discussion of "Managing Capital
    Projects – Fire Apparatus Purchase/Land Acquisition/Fire Station Construction", 2016
RIT Master of Architecture Co-Professor of Practice, "ARCH-735 Architectural Studio IV: Integrative
    Design" Studio Class, 2015
RIT Bachelor of Architecture formation committee, 2015
RIT Master in Architecture Program Lecture, "Financial Analysis of a Building Project", 2015 CNU
    - Building tour and Lecture – Bridge Square Historic Rehab, 2014
New York State Landmark Conference presentation, "How to Develop an Historic Building", 2014 RIT
    Master of Architecture Program Lecture, "The Planning and Zoning Process", 2014
1985/86 – Studies in Architectural Acoustics w/ Professor M. David Egan, Clemson University,
    Clemson, SC, 1985-1986
Architectural Lighting w/ Professor M. David Egan, Clemson University, Clemson, SC, 1985-1986

Professional Experience:
Associate and Senior Project Architect, Passero Associates Engineers and Architects, 2007-Present
President and Director of Design Services, PRWA Architects + Engineers, 2001-2007
Project Manager, LeChase Construction Services, LLC, 2000-2001
Director of Architectural Services, Buckingham Properties, 1989-2000
    Project
Manager, Martin Rose Associates, 1986-1989

Selected Publications and Recent Research:
Trilia Media, "Lighting Geometry meets Library Geometry", 2015

Irondequoit Post, 08/19/2015 Issue, "The New Irondequoit Library: Homegrown Excellence", 2015

Landmarks Magazine, Fall 2013 Volume LI, Number III, "Inside Downtown Tour 2013", 2013

AIA Rochester, June Issue, "Design Awards", 2013

New York Real Estate Journal, 06/11/2013 Issue, "Property of the Month: 2013 Mayor's Award
    Presented to Renovated 111-Year Old Bridge Square Building; Passero Assocs. Architects and
    Engineers Honored at AIA Rochester Annual Design Awards Gala", 2013
Buildings Magazine, October 2013, "Historic Building Transformed into Mixed-Use Facility", 2013New
    York Real Estate Journal, 05/14/2013 Issue, "Professional Profile", 2013
New York Real Estate Journal, 02/12/2013 Issue, "Wehner of Passero Named President-Elect of
    Rochester AIA", 2013
New York Real Estate Journal, 03/24/2009 Issue, "Passero Associates Promotes Six Employees to
    Serve as Associates", 2009
New York Real Estate Journal, 05/27/2008 Issue, "Room to Move: Passero to Provide Civil and
    Site Engineering for New Firehouse in Churchville", 2008

Name: Alissa de Wit-Paul, RA
Courses Taught (Four semesters prior to current visit):
ARCH 621 History I (Fall 2015)
ARCH 753 Research Seminar & Thesis Prep (Fall 2016)

Educational Credentials:
Binghamton University SUNY, PhD, History and Theory of Art and Architecture ABD
    SUNY at Buffalo, M.Arch
Cornell University, B.S. in Design and Environmental Analysis

Teaching Experience:
Adjunct Professor at RIT, 2013-Present
Assistant Professor at Buffalo State College, 2008-2010
Assistant Professor at Alfred State College, 2002-2008
Adjunct Professor at Genesee Community College, 2011-Present

Professional Experience:
Designer: Various small residential projects Clark Patterson Assoc.: Rochester, NY
Chait Studios: Rochester, NY
Project Management: Bausch & Lomb, Global Facilities Department, Rochester, NY

Licenses/Registration:
RA New York
NCIDQ LEED
AP

Selected Publications and Recent Research:
"Am I a Hick?" Op.Ed piece in MaryJanes Farm, June/July 2016.
Pending: Dialectic IV, 2016. "Eco-Architecture Advocates: Professional Cross Roads Between
    Architecture and Environmentalism", 2016.
"Vernaculars: Creation of Modern Vernacular Traditions" IASTE "Building the Vernacular:
    Indigenous Traditions" Whose Tradition? Volume 262, 2014.
Editor, Fashion Forward, Inter Disciplinary.net, http://www.inter-disciplinary.net/publishing/id-
    press/ebooks/. 2011.
"Sustainable Building Fashion "abstract in National PCA/ACA conference in St. Lewis, MO, 2010. Co-
    authored with John Baun "Preparing Interior Design Students for Work" QED News, 2010.
    http://nqec.asq.org Spring
"Sustainable Building Fashion "abstract in National PCA/ACA conference in St. Lewis, MO 2001 Co-
    authored with John Baun "Preparing Interior Design Students for Work" QED News "Sustainable
    Fashion in the Building Design Professions" Proceedings from the Fashion Exploring Critical
    Issues, Oxford UK, Inter-Disciplinary Press, September 25-27 ISBN 978-1-84888-001-6 "Building
    Sustainably Today" National Magazine The NAIWIC Image, August/September

Professional Memberships:
Current Society of Architectural Historians and College Art Association
Interior Design Educators Council Member, 2009
Upstate New York Chapter of the US Green Building Council Member, 2008
CSI Rochester Chapter Board of Directors Academic Liaison, 2003-2005

Name: Jim Yarrington, AIA

Courses Taught (Four semesters prior to current visit):
ARCH 734 Integrated Building Systems III

Educational Credentials:
Eisenhower College, Bachelor of Arts
Harvard University Graduate School of Design, Master of Architecture

Teaching Experience:
Adjunct Associate Professor of Architecture
Harvard University - Career Discovery Program - design review guest critic Hobart/William Smith
    Design Studio - design review guest critic
SUNY Alfred Design Studios - design review guest critic
Rochester Institute of Technology – Master of Architecture Program – design review guest critic
AIA Rochester - Explorer Scouts - Annual slide lecture to incoming students on the topic of Schematic
    Design drawings using personal project examples

Professional Experience:
Rochester Institute of Technology, 2001 – Director of Campus Planning, Design & Construction
Doran·Yarrington & Moran Architects, Rochester, NY, 2000 – 2001 - Principal
Doran·Yarrington Architects, Rochester, NY, 1995-2000
Principal Bantel·Yarrington Architects, Rochester, NY, 1991-1994
Principal Burwell, Bantel, Yarrington Architects, Rochester, NY, 1989-1991
Principal Burwell & Bantel, Rochester, NY, 1988-1989
Associate Handler/Grosso Architects/Engineers, Rochester, NY, 1982-1988
Intern Architect Mark B. Mitchell Architectural Associates, Cambridge, MA, 1982

Licenses/Registration:
New York 1984 - Active
Pennsylvania 1999
Connecticut 1999
Virginia 2000
Illinois 1999
Maryland 2000

Selected Publications and Recent Research:
Wyoming County: An Architectural Tour. Canandaigua, NY: The Humphrey Press, 1985.
"The American Right of History," Preservation Magazine January- March, 1976.
First prize, national essay contest. Sentinel: The Design, Fabrication, and Installation of the
    Monumental Sculpture by Albert Paley at Rochester Institute of Technology. Rochester, NY: The
    Carey Graphic Arts Press, 2005

Professional Memberships:
Association of University Architects American Institute of Architects
New York State Association of Architects
AIA Rochester, Director of Practice and Design, 1992-1993
AIA Rochester – Design Awards Master of Ceremonies (fifth time this coming year)
Landmark Society of Western New York, Former President, Trustee, now Hon. Trustee
NCARB Certified Member

I.3 Course Outlines

Outlines for courses taught during the two academic years (four semesters) prior to the site visit may be found below.

Number & Title of Course:

ARCH-611 Architectural Representation I, 3 credits

Course Description: Introduction to the range of architectural representation skills necessary to effectively document basic architectural form and space. Skill development will be both manual and digital.

Course Goals:

The goal of this course is to develop a student's basic architectural representation skills to be used as the primary tool in conveying design concepts.

- To develop the ability to free-hand sketch extemporaneously
- To produce two-dimensional drawings manually and digitally
- To building three-dimensional models manually and digitally
- To be able to understand and develop: plans, sections, elevations, axonometric, oblique, and perspectives
- To learn about rendering in a variety of media including pencil, pen, marker, and watercolor
- To become fluent in publishing (page layout, imaging, illustration) software

Course Objectives:

1. Select and utilize the appropriate drawing convention, type and graphical method(s) to represent architectural forms
2. Measure, draw, scale, and dimension a drawing to accurately represent basic geometric and composite shapes.
3. Select and draw appropriate lines to industry standards to support the intended graphical representation.
4. Letter drawings consistently, legibly, and to industry accepted standards.
5. Lay out and execute basic object drawings to industry accepted standards.

Student Performance Criterion/a addressed:

A.1 – Professional Communication Skills

A.5 – Ordering Systems

Topical Outline:

Graphic Representation (40%)
Accuracy (40%)
Line quality (10%)
Layout (10%)

Prerequisites:

None

Textbooks/Learning Resources:

American Institute of Architects. *Architectural Graphic Standards*. John Wiley and Sons. 2007

Chiavaroli, Jules. *AEC Drafting Fundamentals*. Cengage Learning.1994

Ching, Francis. *Architectural Graphics*. John Wiley and Sons. 2009

Patt, Doug. *How to Architect*. MIT Press, 2012.

Offered: Fall semester; annually

Faculty Assigned: Richard Napoli (P/T-2015-2016), Michelle Murnane (P/T-2014)

Number & Title of Course:

ARCH-612 Architectural Representation II, 3 credits

Course Description:

Further study of architectural representation skills necessary to effectively document more complex architectural form and space. Skill development will be both manual and digital.

Course Goals:

The goal of this course is to further develop a student's architectural representation skills to be used as the primary tool in conveying more complex design concepts.

- To refine free-hand sketch skills.
- To produce complex two-dimensional drawings that relate to each other.
- To building sophisticated three-dimensional models.
- To become skilled with model editing and animation software.

Course Objectives:

1. Create an architectural 3-D virtual model of a moderate sized building project using industry standard file creation techniques.
2. Create photorealistic renderings from an architectural 3-D virtual model of a moderate sized building project.
3. Create select working drawings from an architectural 3-D virtual model of a moderate sized building project.
4. Publish a set of presentation drawings and a partial set of working drawings from an architectural 3-D virtual model.
5. Create free-hand design and analytical drawings to industry accepted standards.

Student Performance Criterion/a addressed:

A.1 – Professional Communication Skills

A.5 – Ordering Systems

B.4 – Technical Documentation

Topical Outline:

Building Information Modeling (60%)
View Generation, Printing/Publishing (30%)
Advanced Sketching Techniques (10%)

Prerequisites:

ARCH-611 Architectural Representation I

Textbooks/Learning Resources:

Aubin, Paul F. *Aubin Academy Revit Architecture 2016.* G3B Press. 2015.

Autodesk 360

A basic 3-D modeling application such as Google SketchUp®

A 2-D/3-D computer drafting/modeling program such as AutoCAD® and/or Revit Architecture®.

Offered: Spring semester; annually

Faculty Assigned: Gregory Hale (P/T-2016, 2017) Michelle Murnane (P/T-2015)

Number & Title of Course:

ARCH-621 Architectural History I, 3 credits

Course Description:

Students study global architecture from pre-history to the 15th century, including form, technology, urban context, and how architecture reflects social, cultural, and political concerns.

Course Goals:

The goal of this course is to develop a student's appreciation for historically significant architecture from pre-history to the Medieval period, understand the influences that affected form, and to apply these principles to contemporary design problems.

Course Objectives:

From pre-history to the Medieval period:

1. Identify by name, date, architect, and location – important examples of architecture for a given style.
2. Identify and explain how various external influences helped create formal characteristics for a given style.
3. Compare and contrast important examples of architecture within and between styles.
4. Evaluate important examples of architecture, and architectural styles with respect to their ability to satisfy the economic, social, and environmental needs of their time.

Student Performance Criterion/a addressed:

A.5 – Ordering Systems
A.7 – History and Global Culture
A.8 – Cultural Diversity and Social Equity
C.1 – Research

Topical Outline:

Beginnings of Architecture and Community (5%)
Ancient Non-Western (10%)
Western Classical (35%)
Byzantine (5%)
Mature Far-Eastern (10%)
Western World (10%)
Romanesque and Gothic (10%)
Non-Western (15%)

Prerequisites:

None

Textbooks/Learning Resources:

 A World History of Architecture; Moffett, Marian; Fazio, Michael; Wodehouse, Lawrence; 608 pp., London, Lawrence King Publishing, 2008.

Library and Interlibrary resources for supplementary sources

Offered: Fall semester; annually

Faculty Assigned: Giovanna Potesta (F/T-2016), Alissa de Wit-Paul (P/T-2014,2015)

Number & Title of Course:
ARCH-622 Architectural History II, 3 credits

Course Description:
Students study global architecture from the 15th to the 21st century, including form, technology, urban context, and how architecture reflects social, cultural, and political concerns.

Course Goals:
The goal of this course is to develop a student's appreciation for historically significant architecture from the Renaissance forward, understand the influences that affected form, and to apply these principles to contemporary design problems.

Course Objectives:
From the Renaissance to the present day:
1. Identify by name, date, architect, and location – important examples of architecture for a given style.
2. Identify and explain how various external influences helped create formal characteristics for a given style.
3. Compare and contrast important examples of architecture within and between styles.
4. Evaluate important examples of architecture, and architectural styles with respect to their ability to satisfy the economic, social, and environmental needs of their time.

Student Performance Criterion/a addressed:
A.5 – Ordering Systems
A.7 – History and Global Culture
A.8 – Cultural History and Global Equity
C.1 – Research

Topical Outline:

Western Renaissance (15%)
Renaissance Transitions and Transformations (10%)
European Classical Revival (10%)
Non-Western (15%)
Romantic Revival and Eclecticism (10%)
Architecture of Engineering (5%)
Modernism (15%)
Post Modern (15%)
Official Taste and Popular Design (5%)

Prerequisites:
ARCH-621 Architectural History I

Textbooks/Learning Resources:
 Moffet M., Fazio M., Wodehouse L. *A World History of Architecture.* Lawrence King Publishing, 2008.

Library and Interlibrary resources for supplementary sources

Offered: Spring semester; annually

Faculty Assigned: Giovanna Potestà (F/T-2016, 2017), Alissa de Wit-Paul (P/T-2015)

Number & Title of Course:

ARCH-631 Architectural Design I, 6 credits

Course Description:

Exploration of basic architectural space and form through studio design problems. Problems require understanding of elements such as spatial relationships, circulation, light, and orientation.

Course Goals:

- Introduce students to the production of basic graphic communication tools and develop an understanding of how to read/interpret various data sources
- Cultivate the student's visual-based spatial awareness and cognition through observation and documentation of the built environment.
- Encourage students to explore the tectonic expression of data and observation based design approaches.
- Introduce students to drawing and making (constructing) as a mode of seeing and thinking by examining the connections between abstract design principles and the physical and visual environments.
- Provide a working forum for developing conceptualization, critical thinking, planning, and making.
- Introduce a range of possibilities for the making of both 2-D and 3-D environments.
- Begin exploration of contextual site as a mode for architectural investigation.
- Examine, apply, and master primary architecture-based concepts such as site, enclosure, separation, adjacency, circulation, utility; as well as facility with 3-dimensional platonic solids

Course Objectives:

1. Describe the nature and role of the primary design elements in a successful design.
2. Utilize primary design elements to create 2-dimensional and 3-dimensional design compositions.
3. Describe the nature and impact each element of form has on an overall design.
4. Utilize elements of form to create 2-dimensional and 3-dimensional design compositions.
5. Utilize elements of form to create 3-D design compositions that respond to spatial requirements.
6. Create a composite sketch.
7. Create a basic color rendering of elemental forms.
8. Photographically record built form to illustrate its various sub-components.

Student Performance Criterion/a addressed:

A.2 – Design Thinking Skills   A.6 – Use of Precedents
A.4 – Architectural Design Skills   B.4 – Technical Documentation
A.5 – Ordering Systems

Topical Outline:

Primary Design Elements (15%)   Color Rendering Basics (10%)
Form (20%)   Photographic Representation Basics (10%)
Form and Space (20%)   Transfers and Transfer Systems (5%)
Composite Sketching (15%)   Documenting Work/Digital File Mgt. (5%)

Prerequisites:

None

Textbooks/Learning Resources:

Various graphic software applications

Ching, Francis, D. K. Architecture: *Form, Space, and Order*, Wiley, New York: 2008.

Offered: Fall semester; annually

Faculty Assigned: Giovanna Potestà (F/T-2015, 2016)

Number & Title of Course:

ARCH-632 Architectural Design II, 6 credits

Course Description:

Students will analyze and solve basic architectural design problems with a focus on residential design and other wood based structures.

Course Goals:

- Introduce students to the process and skills necessary to design the built environment.
- Apply and master primary architectural building concepts such as structure, building skin, adjacency, and program.
- Synthesize historical, structural, and building technology components from co-requisite courses into studio practice and exploration.
- Synthesizes design fundamentals with comprehensive residential architectural design.

Course Objectives:

1. An understanding of spatial design.
2. Ability to combine various formal spaces in a design project.
3. An understanding of best practices in residential design.
4. An understanding of wood-frame construction methods.
5. Ability to design for the specific needs of a client as described/outlined in a project proposal.

Student Performance Criterion/a addressed:

A.2 – Design Thinking Skills	A.6 – Use of Precedents
A.4 – Architectural Design Skills	B.4 – Technical Documentation
A.5 – Ordering Systems	

Topical Outline:

Translating Geometric Forms to Buildings (15%)
Residential Design (50%)
Contextual Space (20%)
Sustainable Architectural Communication (15%)

Prerequisites:

ARCH-631 Architectural Design I

Textbooks/Learning Resources:

Ching, Francis D. K. *Building Construction Illustrated*. Wiley, New York, 2008.

Ching, Francis D. K. *Architecture: Form, Space, & Order.* Wiley, New York, 2008.

Various texts on residential design and sustainability.

2-D/3-D computer drafting/modeling programs, such as Revit, SketchUp, AutoCAD, and/or Rhino

Page layout, illustration, and imaging software such as the Adobe Creative Suite

Offered: Spring semester; annually

Faculty Assigned: Nana-Yaw Andoh (F/T), Michelle Murnane (P/T-2015), Alissa de Wit-Paul (P/T-2015)

Number & Title of Course:

ARCH 641 Fundamentals of Building Systems, 3 Credits

Course Description:

Students will receive an overview of the various passive and active architectural and engineering systems that comprise a building project while focusing on wood frame construction.

Course Goals:

- To be aware of the basic principles of natural order and theories of construction, elements of environmental control, building services, building envelope, and materials and assemblies.
- To understand the interrelationship between the natural and built environments, including responsibility to global issues, sustainable concepts, and the ecological impact of buildings and their occupants.
- To be aware of the assessment, selection, and integration of concepts related to environmental, structural and construction systems as each informs design decision making and built form – individually and collectively.
- To be able to demonstrate the basic principles of active and passive environmental control systems as informative elements of design inquiry.

Course Objectives:

1. List sections of various building construction formatting systems
2. Recognize, classify, and compare the major components and assemblies of common architectural material assemblies
3. Explain or describe the function of various site components on a construction project
4. Explain basic concepts and perform simple structural calculations for a building project
5. Explain the purpose and describe the function of various heating, ventilating, and air conditioning components for a building project
6. Explain the purpose and describe the function of various plumbing components for a building project
7. Explain the purpose and describe the function of various electrical components for a building project
8. Explain the relationship and interaction between climate and human comfort

Student Performance Criterion/a addressed:

A.4 - Architectural Design Skills
B.2 - Site Design
B.5 - Structural Systems
B.6 - Environmental Systems

B.7 - Building Envelope Systems
B.8 - Building Materials and Assemblies
B.9 - Building Service Systems
B.10 - Financial Considerations

Topical Outline:

Architectural Materials & Methods (30%)
Structural Systems (10%)
Plumbing Systems (10%)
Climate & Comfort (10%)

Civil/Site Work (10%)
HVAC Systems (10%)
Electrical Systems (10%)
Other Systems (10%)

Prerequisites:

None

Textbooks/Learning Resources:

Allen, Edward. *How Buildings Work: The Natural Order of Architecture*, Third Edition, Oxford University Press, New York, 2005.
Ching, Francis D.K.. *Building Construction Illustrated*, Wiley, New York.
Ching, Francis D.K.. *Architecture: Form, Space, & Order,* Wiley, New York.

Offered: Spring Semester Only

Faculty Assigned: Dennis A. Andrejko (F/T- 2016, 2017)

Number & Title of Course:

ARCH-699 Co-op Architecture, 0 credits

Course Description:

This course provides a ten-week (350 hour) work experience in the field.

Course Goals:

- Gain work experience in the architecture, engineering, and/or construction industry.
- Provide students with a better understanding of career options, work conditions, and work expectations.
- Enable students to better select a career preparation focus for remaining program study.

Course Objectives:

1. Demonstrate successful job attendance and punctuality.
2. Explain work experiences with weekly on-the-job written communication.
3. Self-evaluate work performance in design and technical aspects of the job.
4. Communicate with the coop advisor using the JobZone website activity log and other strategies.

Student Performance Criterion/a addressed:

D.1 – Stakeholder Roles in Architecture
D.2 – Project Management
D.3 – Business Practices
D.4 – Legal Responsibilities
D.5 – Professional Conduct

Topical Outline:

None

Prerequisites:

Second year program status.

Textbooks/Learning Resources:

None

Offered: All Terms; annually

Faculty Assigned: Jules Chiavaroli (F/T-2014-2017)

Number & Title of Course:

ARCH-731 Architectural Studio I: Site, 6 credits

Course Description:

Investigation of the interconnection between architecture and the site as well as natural and man-made constraints. Basic landscape architecture topics will also be introduced.

Course Goals:

- To provide students the opportunity to create designs that fully integrate state of the art site and architectural design principles
- To provide students the opportunity to expand their understanding of the relationship between the design process and the completed project
- For students to articulate and successfully communicate the design parti as well as the subsequent practical aspects of the design
- For students to successfully anticipate and prioritize user needs throughout the site and building design and articulate the same with professional level communication methods.

Course Objectives:

1. Given an architectural program and project site, students will be able to produce a coherent and professionally presented solution that satisfies client needs
2. Student will be able to analyze site data as a prelude to the design process
3. Students will be able to apply site design best practices to create workable, economical, and sustainable site solutions
4. Student will be able to create a building design, and/or multiple building layout design that integrate with site characteristics to produce an integrated site/building solution

Student Performance Criterion/a addressed:

A.2 – Design Thinking Skills   B.3 – Codes and Regulations
A.3 –Investigative Skills   C.1 – Research
A.5 – Ordering System   C.2 – Integrated Evaluations and Decision Making Design Process
A.6 – Use of Precedents   C.3 – Integrative Design
B.1 – Pre-Design
B.2 – Site Design

Topical Outline:

Programming & analysis (25%)
Project Planning & Design (75%)

Prerequisites:

ARCH-632 Architectural Design II

Textbooks/Learning Resources:

Ching, Francis, D. K. Architecture: Form, Space, and Order, Wiley, New York: 2008.
Pena, William Problem Seeking 4th Edition, Wiley, New York 2001.
Tufte, Edward The Visual Display of Quantitative Information, Graphics Press, New York, 2001.
A basic 3-D modeling application such as Google SketchUp®
A 2-D/3-D computer drafting/modeling program such as AutoCAD® and/or Revit Architecture®.

Offered: Fall semester; annually

Faculty assigned: Jules Chiavaroli (F/T-2015,2016)

Number & Title of Course:

ARCH-733 Architectural Studio III: Adaptive, 6 credits

Course Description:

This course examines the adaptive reuse of existing buildings, with implicit exposure to the basics of historic preservation.

Course Goals:

- To provide students with the opportunity to create designs incorporating adaptive reuse and historic preservation principles.
- For student to develop an understanding of building design and the technical issues related to adaptive reuse and building rehabilitation.
- For students to develop an understanding of design and regulatory issues related to creating a certified rehabilitation project.
- For students to understand compatibility issues related to sustainability and historic resources.
- To provide students with the opportunity to examine adaptive rehabilitation from various decision making viewpoints including those of development, architectural design and regulatory compliance.
- To provide students with the opportunity to interface with preservation agencies and governmental regulatory bodies.

Course Objectives:

1. Accurately document and communicate as-built space.
2. Analyze existing site and building data as a prelude to the design process.
3. Utilize sustainability related analytic software to inform architectural design.
4. Master professional-quality presentation skills.
5. Create an adaptive reuse proposal that successfully responds to the client's program and the external design constraints.

Student Performance Criterion/a addressed:

A.2 – Design Thinking Skills	**B.1 – Pre-Design**
A.3 – Ordering Systems	B.3 – Codes and Regulations
A.6 – Use of Precedents	C.1 – Research
A.7 – History and Global Culture Process	C.2 – Integrated Evaluations & Decision-Making Design
A.8 – Cultural Diversity & Social Equity	C.3 – Integrative Design

Topical Outline:

Studies/Research (35%)   Pre-Design Analysis (15%)   Adaptive Reuse Design (50%)

Prerequisites:

ARCH-734 Architectural Studio II: Tectonic

Textbooks/Learning Resources:

An LCA Program: Anthena Eco-calculator
A 2-D/3-D computer drafting/modeling program such as AutoCAD® and/or Revit Architecture
A lighting analysis program: Ecotect
Page layout, illustration, and imaging software such as the Adobe Creative Suite®
Gelfand, Lisa and Chris Duncan. *Sustainable Renovation: Strategies for Commercial Building Systems and Envelope.* Wiley, 2011.
Carroon, Jean. *Sustainable Preservation: Greening Existing Buildings.* Wiley, 2010.
Hegger, Manfield, et. al. *Energy Manual: Sustainale Architecture.* Birkhäuser Architecture, 2008.
Hausladen, Gerhard. *ClimateSkin: Building-skin Concepts that Can Do More with Less Energy.* Birkhäuser Architecture, 2008.

Offered: Fall semester; annually

Faculty assigned: Nana-Yaw Andoh (F/T-2015, 2016)

Number & Title of Course:

ARCH-734 Architectural Studio II: Urban, 6 credits

Course Description:

Investigation of architectural design as a response to the modern urban context. This includes an understanding of urban design and planning, as well as community involvement.

Course Goals:

- Students should be able to translate user needs and client demands into a tectonic, prioritized, and articulated space.
- Students should be able to explore alternative architectural and structural systems to evaluate the impact on architectural design.

Course Objectives:

1. Create schematic design drawings that accurately communicate architectural solutions.
2. Produce design development drawings that explore multiple technical solutions to a given design.
3. Produce technical documentation that quantifies the technical solutions explored in the design development phase.
4. Create basic working drawings and specifications for an element of an architectural design.
5. Build an element of an architectural design from working drawings and specifications.

Student Performance Criterion/a addressed:

A.2 – Design Thinking Skills	**B.10 – Financial Considerations**
A.3 – Investigative Skills	**C.1 – Research**
A.6 – Use of Precedents	C.2 – Integrated Evaluations & Decision-Making Design Process
B.1 – Pre-Design	C.3 – Integrative Design
B.3 – Codes and Regulations	

Topical Outline:

Schematic Design (20%)
Design Development (30%)
Comprehensive Design Project (50%)

Prerequisites:

ARCH-731 Architectural Studio I: Site

Textbooks/Learning Resources:

Gehl, Jan, *Cities for People,* Island Press, 2010.

Pena, William Problem Seeking 4th Edition, Wiley, New York 2001.

Tufte, Edward The Visual Display of Quantitative Information, Graphics Press, New York, 2001.

A basic 3-D modeling application such as Google SketchUp®

A 2-D/3-D computer drafting/modeling program such as AutoCAD® and/or Revit Architecture®.

Offered: Spring semester; annually

Faculty assigned: Giovanna Potestá (F/T-2016, 2017), James Yarrington (P/T-2015, 2016)

Number & Title of Course:

ARCH-735 Architectural Studio IV: Integrative, 6 credits

Course Description:

This studio provides the opportunity for students to execute a comprehensive and integrative project from schematic design through design development.

Course Goals:

For students to produce a comprehensive and integrative architectural project that demonstrates the capacity to make design decisions across scales while integrating all major aspect of the design.

Course Objectives:

Given a building program, create a comprehensive schematic design that:
- Responds to the implicit historical/cultural tradition of the project location
- Responds to the natural features presented by the site
- Responds to the man-made constraints of zoning, building, and accessibility codes
- Integrates architectural, civil/site, mechanical/electrical, and structural systems
- Optimizes, conserves, or reuses natural and built resources while providing a healthy environment for users.
- Apply principles of natural and formal ordering systems to the design and development of a construction project.
- Gather, assess, record, apply and evaluate relevant information throughout the design process.

Produce the following technical documents:
- Site plan(s) documenting site improvements, grading, water management, utilities, and accessibility.
- Floor plan(s) documenting code compliance (fire rating, egress, and accessibility), building envelope design, interior construction, core elements (stairs, elevators, etc.) and schematic plumbing, HVAC, electrical and fire protection systems.
- Building and wall section(s) documenting building components shown on floor plans where applicable.
- Framing plans documenting structural configuration with calculations for a typical structural bay

Student Performance Criterion/a addressed:

A.2 – Design Thinking Skills
A.3 – Investigative Skills
A.6 – Use of Precedents
B.1 – Pre-Design
B.3 – Codes and Regulations
B.4 – Technical Documentation
B.6 – Environmental Systems

B.7 – Building Envelopes & Assemblies
B.10 – Financial Considerations
C.1 – Research
C.2 – Integrated Evaluations and Decision-Making Design Process
C.3 – Integrative Design

Topical Outline:

Programming & Analysis (25%)
Project Planning & Design (35%)
Project Development & Documentation (40%)

Prerequisites:

ARCH-733 Architectural Studio III: Adaptive

Textbooks/Learning Resources:

Applicable zoning codes, building codes, accessibility codes, etc.
Technical resources such as manufacturer's literature, Architectural Graphic Standards, etc.
A building information modeling program such as ArchiCAD or Revit

Offered: Spring semester; annually

Faculty assigned: Jules Chiavaroli (F/T-2016, 2017)

Number & Title of Course:

ARCH-741 Integrated Building Systems I, 3 credits

Course Description: A study of architectural materials and systems that comprise a building project's site work including civil engineering and landscaping, water management, soils/substructure, and exterior lighting.

Course Goals:

- Understand the physical/natural characteristics of a building site and how to manage and utilize them.
- Understand the man-made constraints imposed on land use and comply with them.
- Understand the implications of and the practices necessary to place a building on a site.
- Become familiar with and apply the common materials and construction methods used in site construction with a focus on building sub-structure.
- Understand water/waste/storm, and electrical systems found on building sites.
- Understand and apply energy ratings systems as they relate to sustainable sites and water efficiency.
- Investigate current innovative architectural solutions that address building sites.

Course Objectives:

1. Recognize, classify, and select material composition, production methods, assembly methods, and common sizes and shapes for concrete, masonry and metals.
2. Create a topographic map based on a site survey and utilize the data.
3. Recognize and/or describe the characteristics of various soil types and their suitability for construction.
4. Design a simple foundation for a one or two story building.
5. Describe and/or calculate the effect site material selection has on micro-climate and heat island effect.
6. Describe how storm water is collected on a building site and tied into a community storm water system and/or retained on site.
7. Design a roof and site drainage system and create a site storm water drawing.
8. Describe the basic principles of exterior lighting.
9. Perform basic lighting calculations for a building site and create a site lighting drawing.
10. Compare sustainable characteristics for select materials and/or assemblies.
11. Perform a square foot cost analysis for a building and its associated site improvements.
12. Identify, analyze, and report zoning code regulations that affect site and building design.

Student Performance Criterion/a addressed:

B.2 – Site Design	**B.8 – Building Materials and Assemblies**
B.3 – Codes and Regulations	**B.9 – Building Service Systems**
B.4 – Technical Documentation	**B.10 – Financial Considerations**
B.5 – Structural Systems	

Topical Outline:

Architectural Mat"ls & Methods (30%)	Civil/Site Work (15%)	Structural Systems (15%)
Plumbing Systems (10%)	Electrical Systems (10%)	Sustainability (5%)
Construction Cost Controls (5%)	Zoning and Building Codes	(5%) Accessibility Codes (5%)

Prerequisites: None

Textbooks/Learning Resources:

A wide variety of technical resources on architecture, engineering, and construction.
Allen, Edward; Iano, Joseph. *Fund. of Building Construction: Materials & Methods.* 5th Edition, Wiley.
Onouye, Barry; Kane, Kevin. *Statics and Strength of Materials for Architecture and Building Construction.* 4th Edition, Prentice Hall.
Grondzik, Walter; Kwok, Alison; Stein, Benjamin; Reynolds, John. *Mechanical and Electrical Equipment for Buildings.* 11th or 12th Edition, Wiley.

Offered: Fall semester; annually

Faculty assigned: Nana-Yaw Andoh (F/T-2015, 2016), Jules Chiavaroli (F/T-2014, 2015)

Number & Title of Course:

ARCH-742 Integrated Building Systems II, 3 credits

Course Description:

A study of building envelopes and structural systems of non-residential building and their overall performance. Structural inquiry will fully cover the field of statics.

Course Goals:

- Understand how external forces affect a structure and to develop the ability to solve structural problems using the principles of statics
- Understand how natural phenomena affect a building and to develop the ability to design a building envelope to manage such while accommodating human comfort
- Gain a further understanding of water/waste, and electrical power systems as they relate to building interiors
- Understand and apply energy rating systems as they relate to location and transportation, and energy and atmosphere
- Investigate current innovative architectural solutions that address building structure and envelope

Course Objectives:

- Recognize, classify, and select material composition, production methods, assembly methods, and common sizes and shapes for select building materials.
- Develop and detail building envelopes that meet all imposed constraints such as building codes and certification systems
- Recognize and describe how steel frame, site-cast concrete, and precast concrete structural systems and their components work and be able to choose select structural components from manufacturers' literature.
- Explain and/or describe structural phenomena as it relates to the discipline of static and perform equilibrium calculations
- Analyze a project by certification standards for location and transportation, and energy and atmosphere
- Perform comparative cost analyses for commercial construction materials and methods.

Student Performance Criterion/a addressed:

B.3 – Codes and Regulations	B.9 – Building Service Systems
B.4 – Technical Documentation	B.10 – Financial Considerations
B.5 – Structural Systems	C.2 – Integrated Evaluations and Decision-Making
B.6 – Environmental Systems	Design Process
B.7 – Building Envelope Systems & Assemblies	C.3 – Integrative Design
B.8 – Building Materials and Assemblies	

Topical Outline:

Structural Systems (50%)
Architectural Materials & Methods (35%)
Building Services (5%)
Sustainability – LEED WE & EA (5%)
Construction Cost Controls (5%)

Prerequisites:

ARCH-741 Integrated Building Systems I

Textbooks/Learning Resources:

Allen, Iano. *Fundamentals of Building Construction: Materials and Methods.* John Wiley and Sons. 2014
Onouye, Kane. *Statics and Strength of Materials for Architecture and Construction.* Prentice Hall. 2012

Offered: Spring semester; annually

Faculty assigned: Jules Chiavaroli (F/T-2015, 2016, 2017)

Number & Title of Course:

ARCH-743 Integrated Building Systems III, 3 credits

Course Description:

Interior building components will be studied from subdivision of space to selection of finishes as related to building code regulation. Structural inquiry will continue with strength of materials.

Course Goals:

For students to:
- Understand how external forces affect a structure and to develop the ability to solve structural problems using the principles of strength of materials
- Develop the ability to subdivide the interior space of a building while meeting all technical requirements
- Understand and incorporate fire protection, and transportation systems into building
- Understand and apply energy rating systems as they relate to materials and resources
- Investigate current innovative architectural solutions that address interior building space.

Course Objectives:

1. Recognize, classify, and select material composition, production methods, assembly methods, and common sizes and shapes for structural and interior walls, ceiling, and floors.
2. Develop and detail building interiors that meet all imposed constraints such as building and accessibility codes, and certification systems
3. Understand requirement for and develop/detail building core elements such as stairs, shaftways, vertical transportation systems, and fire protection systems.
4. Explain and/or describe structural phenomena as it relates to the discipline of strength of materials and perform select structural calculations
5. Analyze a project by certification standards for materials and resources
6. Perform comparative cost analyses for commercial construction materials and methods.

Student Performance Criterion/a addressed:

B.3 – Codes and Regulations	**B.9 – Building Service Systems**
B.4 – Technical Documentation	**B.10 – Financial Considerations**
B.5 – Structural Systems	C.2 – Integrated Evaluations and Decision-Making
B.6 – Environmental Systems	Design Process
B.8 – Building Materials and Assemblies	C.3 – Integrative Design

Topical Outline:

Structural Systems (50%)
Architectural Materials & Methods (30%)
Building Services (10%)
Sustainability – LEED MR (5%)
Construction Cost Controls (5%)

Prerequisites:

ARCH-742 Integrated Building Systems II

Textbooks/Learning Resources:

Allen, *Fundamentals of Building Construction: Materials and Methods,* John Wiley and Sons, 2004

Onuoye, Kane. *Statics and Strength of Materials for Architecture and Construction.* Prentice Hall. 2012

Offered: Fall only; annually

Faculty assigned: Jules Chiavaroli (F/T-2015, 2016)

Number & Title of Course:

ARCH-744 Integrated Building Systems IV, 3 credits

Course Description:

Building environmental systems, acoustics, and illumination will be studied. Emphasis will be placed on natural illumination and reducing dependence on mechanical means of achieving human comfort.

Course Goals:

Design solutions for, and have the ability to explain the fundamentals for design choices related to the integration of daylighting, electrical lighting, thermal controls and acoustic systems in the design of a building remodel and a new building design.

Course Objectives:

1. Demonstrate an understanding of the effects of location and climate on building design

2. Demonstrate an understanding on the use of daylighting in building design to enhance spaces and decrease overall artificial lighting requirements

3. Demonstrate an understanding of basic artificial lighting design in relation to design of space in order to manage both the quality and quantity of light

4. Recognize and be able to explain the operation of Thermal / HVAC systems, including renewables, and be able to select appropriate components of commercial building

5. Explain the fundamentals of architectural acoustics and apply these principles to the design of space in order to manage sound

6. Explain building performance criteria of energy certification programs (such as LEED) for indoor environmental quality.

Student Performance Criterion/a addressed:

B.3 – Codes and Regulations
B.4 – Technical Documentation
B.6 – Environmental Systems
B.9 – Building Service Systems

C.2 – Integrated Evaluations and Decision-Making
        Design Process
C.3 – Integrative Design

Topical Outline:

Architectural Materials and Methods (10%)
Natural Systems (10%)
Sustainable Systems (20%)
Electrical and Lighting Systems (20%)
HVAC Systems (20%)
Acoustical Systems (20%)

Prerequisites:

ARCH-743 Integrated Building Systems III

Textbooks/Learning Resources:

Grondzik, Walter; Kwok, Alison; Stein, Benjamin and Reynolds, John. (2015) *Mechanical and Electrical Equipment for Buildings,* John Wiley & Sons, New York.

Lechner, Norbert. (2015) Heating, Cooling and Lighting, John Wiley & Sons, New York.

Various technical resources and codes

Offered: Spring semester; annually

Faculty assigned: David Matthews (P/T- 2017), Nana-Yaw Andoh (F/T-2016)

Number & Title of Course:

ARCH-751 Architectural Theory, 3 credits

Course Description:

A survey of architectural theory and criticism with emphasis on contemporary architecture. Students will investigate, learn, and apply critical thinking, as well as communicate it to others.

Course Goals:

The goal of this course is to develop in students the ability to critically analyze architecture and express this analysis verbally and in written form so as to aid them in the development of their own design process.

Course Objectives:

1. Analyze, evaluate, and compare architectural texts on issues of architectural theory.
2. Communicate architectural concepts clearly, concisely, and effectively in writing.
3. Communicate architectural concepts clearly, concisely, and effectively using speech.
4. Explain at least three contemporary architectural theories.
5. Draft, refine, revise, and edit written material until it meets professional standards.

Student Performance Criterion/a addressed:

A.1 – Professional Communication Skills
A.3 – Investigative Skills
A.6 – Use of Precedents
A.8 – Cultural Diversity and Social Equity

Topical Outline:

Architectural theory vs. architectural practice (15%)
Criticism (20%)
Architectural theory throughout history (25%)
Contemporary theories (40%)

Prerequisites:

ARCH-621, 622 Architectural History I, II

Textbooks/Learning Resources:

Charles Jencks and Karl Kropf, *Theories and Manifestos of Contemporary Architecture*, Wiley-Academy, 1997

Le Corbusier, *Toward a New Architecture*, New York: Dover Publications, 1986

Vitruvius, *The 10 Books of Architecture*, New York: Dover Publications, 1960

Robert Venturi, *Complexity and Contradiction in Architecture*, New York: MOMA, 1977

Louis Kahn, *Essential Texts*, New York: W.W.Norton & Company, 2003

K.Michael Hays, *Architecture | Theory | Since 1968*, Cambridge, MA: the MIT Press, 1998

Kate Nesbitt, *Theorizing a New Agenda for Architecture. An Anthology of Architectural Theory 1965-1995*, Princeton, NJ: Princeton Architectural Press, 1996

Various other texts related to specific topics available through the RIT Library,

Offered: Fall semester; annually

Faculty assigned: Michael Place (P/T-2014, 2015, 2016)

Number & Title of Course:

ARCH-752 Urban and Regional Planning, 3 credits

Course Description:

This course immerses students in the field of urban and regional planning by studying and actively engaging in the planning process through projects with community agencies.

Course Goals:

This course will introduce students to the key issues (economic, social, environmental) facing the architectural and planning communities as well as the constituencies that they serve by providing them with real world interaction with all stakeholders in the urban/regional environment.

Course Objectives:

1. Identify and explain the major influences on present day planning;
2. Gather, analyze, and synthesize planning data from governmental and community agencies;
3. As a member of a design team, create alternative concepts for an urban or regional design problem;
4. Identify and explain the steps involved in the approval process of planning projects;
5. Apply contemporary planning theory to an urban or regional design problem.

Student Performance Criterion/a addressed:

A.7 – History and Global Culture
A.8 – Cultural Diversity and Social Equity
B.3 – Codes and Regulations
C.1 – Research
D.1 – Stakeholder Roles in Architecture
D.5 – Professional Conduct

Topical Outline:

Introduction and history of planning (20%)
The planning process (20%)
Planning theory (60%)

Prerequisites:

First year courses

Textbooks/Learning Resources:

Eugenie L. Birch (editor) *The Urban and Regional Planning Reader,* London & New York, Routledge, 2009.
T.L. Daniels, J.W. Keller, & M.B. Lapping, *The Small Town Planning Handbook, 2nd edition.* Chicago, IL. American Planning Association, 1995.
P. Calthorpe & W. Fulton, *The Regional City: Planning for the End of Sprawl.* Washington D.C. Island Press, 2001.
Other texts as appropriate for project selected, available through library.

Offered: Spring semester; annually

Faculty assigned: Nana Yaw Andoh (F/T-2017), Giovanna Potesta (F/T- 2016), Mary Scipioni (P/T-2015, 2016)

Number & Title of Course:

ARCH-753 Research Seminar/ Thesis Preparation, 3 credits

Course Description:

Students frame individual thesis proposals through various research approaches, critical readings, presentations and examinations of architecture; physicality, socially, culturally, historically and technologically

Course Goals:

- As a seminar this course aims to increase exposure to contemporary urban and social issues related to the practice and study of architecture.
- The course endeavors to provide the student with the skills necessary to critically examine these contemporary issues, their historic context, and identify the relevance of these issues to the practice their chosen profession and specialization.
- Students will develop the experience and confidence to discuss sensitive and complex issues in a productive manner in a collegial environment.
- Students will be encouraged to research areas of personal and professional interest.
- To gain understanding, and examine issues from a variety of perspective—and not to further a political or ideological perspective.
- To prepare students for their culminating thesis.

Course Objectives:

1. Understand basic frameworks for examining historic social and urban events and movements
2. Apply accepted social and humanistic methods of analysis to readings.
3. Demonstrate the ability to read, understand, and apply historic context to contemporary conditions and policy.
4. Delineate between grassroots urban movements and policy-driven urban events.
5. Deliver/exhibit professional-quality presentation and discussion skills.
6. Create a management plan to follow in executing the thesis project.
7. Synthesize reading and application of knowledge to a research-driven project.

Student Performance Criterion/a addressed:

A.1 – Professional Communication Skills
A.3 – Investigative Skills
C.1 – Research

Topical Outline:

Approaching a Social Issue	A World Without Us
Labor and its Impact on Social Space	Social Structures and Resultant Hegemony
Managing Social Data	Marketing the Urban Sphere
Analyzing Social Data	The Future Social Condition
Making a Change: Materials	Making a Change: Conceptual Approach
Making a Change: Alternatives	The Future Urban Condition
The Culture of Consumption	Thesis Preparation

Prerequisites:

Second year courses

Textbooks/Learning Resources:

Groat, Linda. *Architectural Research Methods.* [RIT Electronic Resources].
A wide variety of books, periodicals, and literature available from the RIT Library

Offered: Fall semester; annually

Faculty assigned: Alissa de Wit-Paul (F/T- 2014, 2016), Giovanna Potesta (F/T-2015),

Number & Title of Course:

ARCH-761 Understanding Sustainability, 3 credits

Course Description:

Students will study the interaction between industrial, environmental/ecological and social systems in the built environment by introduction of systems thinking and the multiple disciplines comprising sustainability.

Course Goals:

- To understand critical thinking and the scientific method, and be prepared to identify problems in sustainability and formulate appropriate solutions based in scientific research, architecture, or applied science.
- To understand the scientific basis behind current sustainability challenges and solutions
- To understand how to quantitatively and qualitatively evaluate sustainability at the systems level.
- To motivate and prepare students to include sustainability principles into the core design and technology courses of the M. Arch. program.
- To provide students with an understanding of the interaction between industrial, environmental/ecological, and social systems by training them in the scientific method as it applies to sustainability.
- Introduce students to systems thinking and the multiple scientific disciplines of sustainability, and prepare them to conduct research in sustainable architecture.
- Introduce students to multiple perspectives on sustainability such as strong and weak formulations, different scientific approaches to sustainability, and the importance of sustainability in relation to related research efforts in industrial ecology, ecological economics, sustainable design, ecological health, and public policy.

Course Objectives:

1. Understand multiple perspectives on the fundamental concepts in sustainability.
2. Understand the scientific basis behind current sustainability challenges and solutions.
3. Understand relationships among and limitations to disciplinary and trans-disciplinary approaches to sustainability.
4. Understand role of scholarly literature in sustainability and demonstrate ability to perform review and critique of scholarly literature.

Student Performance Criterion/a addressed:

A.3 – Investigative Skills
C.1 – Research
C.2 – Integrated Evaluations and Decision-Making Design Process

Topical Outline:

Sustainability as a cultural construct	Sustainability as a contested concept
Sustainability as a wicked problem	Sustainability and systems thinking
Sustainability and critical/scientific thinking	Major challenges in sustainability
Measuring sustainability	Ecological economics, weak vs. strong sustainability
Sustainable design	Communicating sustainability science
Conducting sustainability science across the sustainability spectrum	
Sustainable decision-making and policy challenges	

Prerequisites:

None

Textbooks/Learning Resources:

A wide variety of scholarly articles.

Offered: Fall semester; annually

Faculty assigned: Erinn Ryen (P/T- 2016), Callie Babbitt (F/T-2014, 2015)

Number & Title of Course:

ARCH-762 Industrial Ecology Fundamentals, 3 credits

Course Description:

Students will learn how to assess the impact and interrelations of built environments on the natural environment by utilizing life cycle assessment tools and principles of sustainability.

Course Goals:

- To enhance students' understanding of the interaction between the built environment and environmental/ecological systems.
- To introduce students to the analytical tools necessary to quantify material and energy exchanges and the adverse environmental consequences of those.

Course Objectives:

1. Define and describe industrial ecology.
2. Demonstrate the relationships among production, Testing consumption, sustainability, and industrial ecology.
3. Explain how industrial ecology serves as a framework for the consideration of environmental and sustainability related aspects of science and technology.
4. Define and describe the tools, applications, and implications of industrial ecology.
5. Apply industrial ecology as a framework for the consideration of environmental and sustainability-related aspects of science and technology.
6. Compare and contrast characteristics of industrial and ecological systems that relate to sustainability and understand the implications of this eco-industrial analogue.
7. Literature synthesis and concept development assignment
8. Analyze material flows in an industrial ecosystem to demonstrate mastery of material flow analysis as an essential tool in industrial ecology.
9. Compile and analyze inventory and environmental impact data for a product or process across its life cycle to demonstrate mastery of life cycle assessment as an essential tool in industrial ecology.
10. Analyze and discuss sustainable design approaches, benefits, and challenges in a team-based setting.

Student Performance Criterion/a addressed:

A.3 – Investigative Skills
B.6 – Environmental Systems
B.10 – Financial Considerations
C.2 – Integrated Evaluations and Decision-Making Design Process
D.2 – Project Management

Topical Outline:

Understanding Industrial Ecology (15%)
Life Cycle Assessment Methods (35%)
Software & methods studies (35%)
Industrial ecology examples and cases studies (15%)

Prerequisites:

ARCH-761 Understanding Sustainability

Textbooks/Learning Resources:

A wide variety of scholarly articles.

Offered: Spring semester; annually

Faculty assigned: James Reynolds (P/T- 2017), Jacqueline Ebner (P/T-2016), Tom Trabold (F/T-2015)

Number & Title of Course:

ARCH-763 Sustainable Building Metrics, 3 credits

Course Description:

The measurement science, performance metrics, assessment tools, and fundamental data critical for the development and implementation of building systems associated with life-cycle operation of buildings while maintaining a healthy indoor environment.

Course Goals:

The goal of this course is to introduce students to prevailing metrics and assessment tools pertaining to the built environment and to support the inclusion of these considerations into the Integrated Building Systems courses.

Course Objectives:

1. Describe the scientific measurement methods used in the evaluation of the built environment.
2. Perform scientific measurements and calculations that relate to the built environment.
3. Describe and utilize the assessment tools used in the evaluation of the built environment.
4. List the main design guidelines for applicable green building standards.
5. Complete select aspects of major green building certification systems.
6. Develop an understanding of architectural design as a total environmental experience.
7. Practice architecture AND engineering
8. Nourish a passion for the built environment and design
9. Understanding of the ecological impact of buildings on their occupants and on the natural world
10. Understanding of design principles that result in sustainable architecture
11. Understanding of architectural strategies regarding shading and passive solar heating and cooling, human visual perception, electric lighting, day lighting, mechanical systems for heating and cooling.

Student Performance Criterion/a addressed:

A.5 – Ordering Systems
B.6 – Environmental Systems
B.7 – Building Envelope Systems & Assemblies
B.8 – Building Materials and Assemblies
B.9 – Building Service Systems
D.1 – Stakeholder Roles in Architecture

Topical Outline:

Measurement science for the built environment. (15%)
Environmental and energy performance metrics for the built environment. (35%)
Assessment tools. (35%)
Certification processes and design guides. (15%)

Prerequisites:

ARCH-762 Industrial Ecology Fundamentals

Textbooks/Learning Resources:

A wide variety of scholarly articles, texts and software applications.

Offered: Fall semester; annually

Faculty assigned: Gabrielle Gaustad (F/T-2014, 2015, 2016), Nana-Yaw Andoh (F/T-2015)

Number & Title of Course:

ARCH-771 Professional Practice, 3 credits

Course Description:

Students will study the roles of stakeholders involved in architecture within the context of project management and business practices including legal responsibilities, and professional ethics.

Course Goals:

To introduce students to the key issues facing the architectural/ engineering/ construction industry today and provide them with the opportunity to explore areas of interest.

Course Objectives:

1. List roles and responsibilities of members of a building project team.
2. Explain the various types of firms, common sizes, and legal organizational formations.
3. Explain the various project delivery methods and list advantages and disadvantages of each.
4. Explain the various stages of project development and the control measures used in each to successfully manage the project.
5. Identify the various components of management (financial, marketing, operations, personnel, etc.)
6. Explain the professional development requirements of the architectural profession.
7. Given a scenario one might encounter during professional practice, explain an appropriate ethical and legal response by the architect.

Student Performance Criterion/a addressed:

B.10 – Financial Considerations
D.1 – Stakeholder Roles in Architecture
D.2 – Project Management
D.3 – Business Practices
D.4 – Legal Responsibilities
D.5 – Professional Conduct

Topical Outline:

Roles of the building team
Firm types, sizes, and configurations
Project delivery
Project management
Professional development
Legal and ethical responsibilities

Prerequisites:

Second year courses

Textbooks/Learning Resources:

AIA Rochester
AIA Publications
Professionals from the field

Offered: Spring semester; annually

Faculty assigned: Peter Wehner (P/T-2017), Trevor Harrison (P/T-2015, 2016)

Number & Title of Course:

ARCH-790 Thesis, 6 credits

Course Description:

Students will propose, design, and defend an architectural design or research problem, while working closely with a selected faculty committee.

Course Goals:

- The master's thesis should be evidence of the graduate students ability to carry out independent investigation and to present the results in clear and systematic form.
- Preparing a thesis assures students' expertise in a chosen area of architecture and reinforces a systematic, critical approach to architectural design.
- The Department of Architecture offers two separate but equivalent ways for students to undertake their thesis investigations: the Design Option and the Research Option.
- Students should choose the option that best accommodates their goals and working methods.

Course Objectives:

Produce a comprehensive design or research solution for a select project that successfully integrates the architectural, structural, and services components of the design while satisfying the various legal, historical, social, economic, and technical constraints imposed on the project.

Student Performance Criterion/a addressed:

A.1 – Professional Communication Skills
A.3 – Investigative Skills
A.5 – Ordering Systems
A.6 – Use of Precedents
C.1 -- Research

Topical Outline:

A comprehensive architectural solution to a given problem/project as selected by the student.

Prerequisites:

Third year courses

Textbooks/Learning Resources:

Varies with project

Offered: Fall semester; annually

Faculty assigned: Dennis A. Andrejko (F/T- 2015, 2016, 2017)

I.4 Self-Assessment Tables

Program Learning Outcome Assessment Plan (PLOAP)

Self-Assessment Matrix

Benchmark: Standard, target, or achievement level.	All assessment will be course based. The target achievement level for all of the measures will be 90% of students taking the course.
Timeline: When and how data are collected, aggregated, and analyzed.	Each course identified under "assessment opportunity" will contain in its syllabus a table with corresponding SPCs it is responsible for meeting and the method by which they are measured. Course instructors are responsible for reporting results at the completion of the course.
Data Analysis Key Findings: Who is responsible and key findings.	The department curriculum committee oversees the assessment process. They will see to it that faculty follow the tasks and timeline noted above. They collect the data, analyze them, and report them to the Department Head and all the faculty.
Use of Results, Action Items and Dissemination: How results are used and shared. Recommendations or action items.	The Department faculty discuss various findings at the department annual retreat/advance in May/June and identify successes and concerns. Action items are then implemented for the following academic year. Review and assessment occurs on a tri-annual cycle within curricular clusters of Representation and Sustainability (Year A cycle); Design Studio, Technology and Practice (Year B cycle); History/Theory/Planning/Other (Year C cycle) – Noted as (A), (B) or (C) in Assessment Opportunity Section.

Program-level goals	Student Learning Outcomes	Alignment to RIT Educational Goals	Assessment Opportunity
	A.1 Professional Communication Skills. *Ability* to write and speak effectively and use representational media appropriate for both within the profession and with the general public.		ARCH 611 (A) ARCH 612 (A) ARCH 790/791 (C)

| accepted programs must be able to build abstract relationships and understand the impact of ideas based on the study and analysis of multiple theoretical, social, political, economic, cultural, and environmental contexts. Graduates must also be able to use a diverse range of skills to think about and convey architectural ideas, including writing, investigating, speaking, drawing, and modeling.

Student learning aspirations for this realm include:

- Being broadly educated.
- Valuing lifelong inquisitiveness.
- Communicating graphically in a range of media.
- Assessing evidence.
- Comprehending people, place, and context.
- Recognizing the disparate needs of client, community, and society.	**A.2 Design Thinking Skills**. *Ability* to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.	☒ Integrative Literacies ☒ Global Interconnectedness ☒ Creativity/ Innovative Thinking	ARCH 731 (B) ARCH 734 (B) ARCH 733 (B)
	A.3 Investigative Skills. *Ability* to gather, assess, record, and comparatively evaluate relevant information and performance in order to support conclusions related to a specific project or assignment.		ARCH 751 (C) ARCH 753 (C) ARCH 761 (A)
	A.4 Architectural Design Skills. *Ability* to effectively use basic formal, organizational and environmental principles and the capacity of each to inform two- and three-dimensional design.		ARCH 631 (B) ARCH 632 (B)
	A.5 Ordering Systems. *Ability* to apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.		ARCH 631 (B) ARCH 632 (B) ARCH 731 (B)
	A.6 Use of Precedents. *Ability* to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into architecture and urban design projects.		ARCH 734 (B) ARCH 733 (B) ARCH 751 (C)
	A.7 History and Global Culture. *Understanding* of the parallel and divergent histories of architecture and the cultural norms of a variety of indigenous, vernacular, local, and regional settings in terms of their political, economic, social, ecological, and technological factors.		ARCH 621 (C) ARCH 622 (C)
	A.8 Cultural Diversity and Social Equity. *Understanding* of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the responsibility of the architect to ensure equity of access to sites, buildings, and structures.		ARCH 621 (C) ARCH 622 (C) ARCH 752 (C)
Program-level goals	Student Learning Outcomes	Alignment to RIT Educational Goals	Assessment Opportunity
	B.1 Pre-Design. *Ability* to prepare a comprehensive program for an architectural project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.		ARCH 731 (B) ARCH 734 (B) ARCH 733 (B)

such decisions on the environment must be well considered. Student learning aspirations for this realm include: - Creating building designs with well-integrated systems. - Comprehending constructability. - Integrating the principles of environmental stewardship. - Conveying technical information accurately.	**B.2 Site Design**. *Ability* to respond to site characteristics, including urban context and developmental patterning, historical fabric, soil, topography, ecology, climate, and building orientation, in the development of a project design.		ARCH 731 (B) ARCH 741 (B)
	B.3 Codes and Regulations. *Ability* to design sites, facilities, and systems that are responsive to relevant codes and regulations, and include the principles of life-safety and accessibility standards.		ARCH 735 (B) ARCH 741 (B) ARCH 742 (B) ARCH 743 (B)
	B.4 Technical Documentation: *Ability* to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.		ARCH 735 (B) ARCH 742 (B) ARCH 743 (B)
	B.5 Structural Systems: *Ability* to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.		ARCH 742 (B) ARCH 743 (B)
	B.6 Environmental Systems: *Ability* to demonstrate the principles of environmental systems' design, how design criteria can vary by geographic region, and the tools used for performance assessment. This demonstration must include active and passive heating and cooling, solar geometry, daylighting, natural ventilation, indoor air quality, solar systems, lighting systems, and acoustics.		ARCH 641 (B) ARCH 744 (B) ARCH 763 (A)
	B.7 Building Envelope Systems and Assemblies: *Understanding* of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.		ARCH 641 (B) ARCH 742 (B) ARCH 763 (A)
	B.8 Building Materials and Assemblies: *Understanding* of the basic principles used in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse.		ARCH 741 (B) ARCH 742 (B) ARCH 743 (B)
	B.9 Building Service Systems: *Understanding* of the basic principles and appropriate application and performance of building service systems, including lighting, mechanical, plumbing, electrical, communication, vertical transportation, security, and fire protection systems.		ARCH 741 (B) ARCH 743 (B) ARCH 744 (B)

Program-level goals	Student Learning Outcomes	Alignment to RIT Educational Goals	Assessment Opportunity
	B.10 Financial Considerations: *Understanding* of the fundamentals of building costs, which must include project financing methods and feasibility, construction cost estimating, construction scheduling, operational costs, and life-cycle costs.		ARCH 641 (B) ARCH 734 (B) ARCH 741 (B) ARCH 743 (B)
	C.1 Research: *Understanding* of the theoretical and applied research methodologies and practices used during the design process.		ARCH 734 (B) ARCH 753 (C)
	C.2 Integrated Evaluations and Decision-Making Design Process: *Ability* to demonstrate the skills associated with making integrated decisions across multiple systems and variables in the completion of a design project. This demonstration includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.		ARCH 735 (B) ARCH 762 (A)
	C.3 Integrative Design: *Ability* to make design decisions within a complex architectural project while demonstrating broad integration and consideration of environmental stewardship, technical documentation, accessibility, site conditions, life safety, environmental systems, structural systems, and building envelope systems and assemblies.		ARCH 735 (B)
Program-level goals	Student Learning Outcomes	Alignment to RIT Educational Goals	Assessment Opportunity
	D.1 Stakeholder Roles in Architecture: *Understanding* of the relationships among key stakeholders in the design process—client, contractor, architect, user groups, local community—and the architect's role to reconcile stakeholder needs.		ARCH 752 (C) ARCH 771 (B)
	D.2 Project Management: *Understanding* of the methods for selecting consultants and assembling teams; identifying work plans, project schedules, and time requirements; and		ARCH 771 (B)

the client, society, and the public.	recommending project delivery methods.		
Student learning aspirations for this realm include: • Comprehending the business of architecture and construction. • Discerning the valuable roles and key players in related disciplines. • Understanding a professional code of ethics, as well as legal and professional responsibilities.	**D.3 Business Practices:** *Understanding* of the basic principles of a firm's business practices, including financial management and business planning, marketing, organization, and entrepreneurship.		ARCH 771 (B)
	D.4 Legal Responsibilities: *Understanding* of the architect's responsibility to the public and the client as determined by regulations and legal considerations involving the practice of architecture and professional service contracts.		ARCH 771 (B)
	D.5 Professional Conduct: *Understanding* of the ethical issues involved in the exercise of professional judgment in architectural design and practice and understanding the role of the NCARB Rules of Conduct and the AIA Code of Ethics in defining professional conduct.		ARCH 699 (B) ARCH 771 (B)

I.5   Digitized Supplemental Material

In addition to the above, the digitized supplemental material, listed below, is included via Dropbox. These materials are made available for review to the NAAB, and to the NAAB Visiting Team. The various resources and documents include:

Appendix 1: University-Wide Documents

A.1.1   Academic Integrity Policy
A.1.2   Information Resources of the Wallace Center Library
A.1.3   Policies and Procedures Relative to EEO/AA for Faculty, Staff, and Students
A.1.4   Policies Regarding Human Resource Development Opportunities
A.1.5   Policies, Procedures, and Criteria for Faculty Appointment, Promotion, and Tenure
A.1.6   Educational Goals
A.1.7   RIT Strategic Plan: Greatness Through Difference
A.1.8   Harassment and Discrimination Policy
A.1.9   Regional Accreditation Letter

Appendix 2: Golisano Institute for Sustainability-Wide Documents

A.2.1   Policies, Procedures, and Criteria for Faculty Appointment, Promotion, and Tenure
A.2.2   GIS Strategic Plan
A.2.3   Committee Assignments

Appendix 3: Department of Architecture-Wide Documents

A.3.1   Department of Architecture Strategic Plan
A.3.2   Studio Culture Policy
A.3.3   Student Handbook
A.3.4   Annual Statistical Report — 2015
A.3.5   Annual Statistical Report — 2016
A.3.6   Annual Statistical Report Certification Letter
A.3.7   Larger Format Tables for Section 4 – I.1 and I.4

Appendix 4: Initial Candidacy Application Material

A.4.1   Plan for Initital Accreditation
A.4.2   Candidacy Elgibility Letter