**Recommended page limit: 8 (including the Institutional and Program Data Form)**

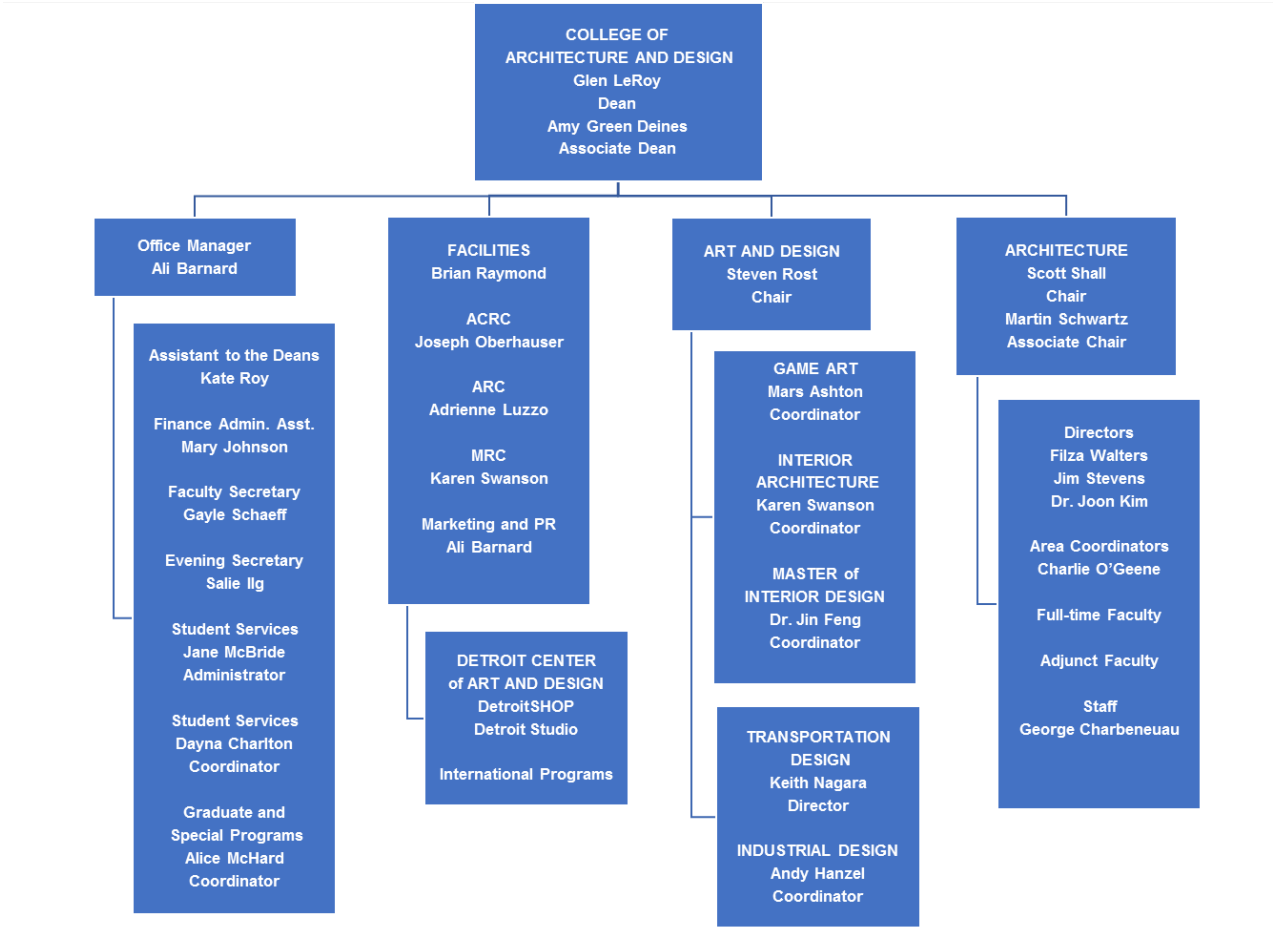
1) *List the names, titles, addresses, phone numbers, and e-mail addresses of administrators who will receive copies of the final Accreditation Report. CIDA distributes a **limit of 6 complimentary copies** of the Accreditation Report to the institution. Additional copies may be requested for a fee of $25 per report. Be sure to include the following individuals:*

| | |
|---|---|
| Chancellor, president, provost, or chief academic officer of the university or school<br><br>**must be a physical address for FedEx delivery* | *Name and title Dr. Maria Vaz, (Provost)* |
| | *Address Lawrence Technological University* |
| | *Address 21000 W. Ten Mile Road* |
| | *City, State Zip Southfield, MI 48075* |
| | *Phone 248.204.2400* |
| | *E-mail mvaz@ltu.edu* |
| Dean of the college or school | *Name and title: Glen S. LeRoy, FAIA, FAICP Dean* |
| | *Address 21000 W. 10 Mile Rd., Suite A129* |
| | *Address* |
| | *City, State Zip Southfield, MI 48075* |
| | *Phone 248.204.2805* |
| | *E-mail gleroy@ltu.edu* |
| Associate Dean | *Name and Title: Amy Deines, Associate AIA, IIDA, NCIDQ* |
| | *Address 21000 W 10 Mile Rd, Suite A129* |
| | *Address* |
| | *City, State Zip Southfield, MI 48075* |
| | *Phone 248.204.2805* |
| | *E-mail adeines@ltu.edu* |
| Chair of the department | *Name and title: Steven Rost, Interim Chair* |
| | *Address 21000 W 10 Mile Rd, Suite A129* |
| | *Address* |
| | *City, State Zip Southfield, MI 48075* |
| | *Phone 248.204.2805* |
| | *E-mail srost@ltu.edu* |
| Head of the interior design program | *Name and title Karen Swanson, AIA, IIDA* |
| | *Address 21000 W. 10 Mile Rd.* |
| | *Address* |
| | *City, State Zip Southfield, MI 48075* |
| | *Phone 248.204.2800* |
| | *E-mail kswanson@ltu.edu* |
| Head of the MID Program | *Name and title Jin Feng, PhD* |
| | *Address 21000 W. 10 Mile Rd.* |
| | *City, State Zip Southfield, MI 48075* |
| | *Phone: 248.204.2805* |
| | *E-mail jfeng@ltu.edu* |

*A. Barnard 8/18/14*

**Report submitted by (signature and date)**

2) *Insert the organization chart showing the program's relationship to the department and/or administrative unit in which it is located, any allied departments, and the institution as a whole here.*




Type of institution (Check one)

- ☐ Public
- ☒ Private, non-profit
- ☐ Private, for-profit

Size of population where the institution is located (Check one)

- ☐ Population of 250,000 or more persons
- ☒ Population of 50-250,000 persons
- ☐ Population under 50,000

Total enrollment for the institution on the campus where the program is located: Total 4,257: Undergraduate 3,065, Graduate 1,192

Academic year of this report: 2013-14

| | |
|---|---|
| Current Council for Interior Design Accreditation status (Check one) | ☒ Accredited<br>☐ Not accredited<br>☐ On probation |
| Check all **institutional** (university/ college) accreditation(s) | ☐ Accrediting Commission of Career Schools and Colleges of Technology<br>☐ Accrediting Council for Independent Colleges and Schools<br>☐ Distance Education and Training Council<br>☐ Middle States Association of Colleges and Schools<br>☒ North Central Association of Colleges and Schools<br>☐ New England Association of Schools and Colleges<br>☐ Southern Association of Colleges and Schools<br>☐ Western Association of Schools and Colleges<br>☒ National Association of Schools of Art and Design<br>☐ Provincial Ministry of Education<br>☐ Other (specify) _____ |
| Check other specialized accreditations or endorsements for the interior design program and/or unit | ☒ National Association of Schools of Art and Design<br>☐ National Kitchen and Bath Association<br>☐ American Association of Family and Consumer Sciences, Council for Accreditation<br>☒ National Architectural Accrediting Board<br>☐ Other (specify) _____ |
| Which classification best describes your institution: | ☐ Doctoral/Research Universities<br>☒ Master's Colleges and Universities<br>☐ Baccalaureate Colleges and Universities<br>☐ Baccalaureate/Associates Colleges<br>☐ Associates Colleges<br>☐ Not applicable |
| Primary institutional mission (Check one) | ☒ Teaching<br>☐ Service<br>☐ Research |

Academic unit housing program (Check one)

- [x] Architecture
- [ ] Art
- [x] Design
- [ ] Fine Arts
- [ ] Interior Design
- [ ] Human Ecology
- [ ] Engineering/Technology
- [ ] Other (specify)

The Department of Art and Design is housed within the College of Architecture and Design

Name of College or School (within the institution that houses the program)

College of Architecture and Design

Division, if applicable, or unit name where the program is housed

Department, if applicable, or unit name where the program is housed

Department of Art and Design

Identify the three most influential factors impacting change to the program curriculum where 1 indicates the most influential

| | |
|---|---|
| | Administration |
| | Facilities |
| 1 | Faculty |
| | Finances |
| 2 | Council for Interior Design Accreditation Standards |
| | Industry trends |
| | Societal trends |
| | Student demographics |
| | Practitioner feedback |
| | Research |
| 3 | Advisory Board |
| | Student assessment |
| | Other (specify) |

Degree(s) offered by the accredited program or program seeking accreditation (list only those degrees eligible for accreditation review)

Bachelor of Interior Architecture

Degree(s) or certificate(s) offered by the program but not eligible for accreditation review

Masters of Interior Design

Program length; total credit hours required for graduation, including liberal arts and electives. (Indicate in the units used by institution)

132 Semester hours
_____ Quarter hours
_____ Trimester hours

Total liberal arts and sciences/general studies hours required to complete the program. (Indicate in the units used by institution)

38 Semester hours
_____ Quarter hours
_____ Trimester hours

Of the total number of credit hours required for graduation, how many are elective credits in the program. (Indicate in the units used by institution)

12 Semester hours
_____ Quarter hour
_____ Trimester hours

How often do practicing professionals (including jurors, project critics, guest lecturers, and mentors) participate in the program?

☐ 1-3 times per semester/quarter
☐ 4-6 times per semester/quarter
☐ 7-9 times per semester/quarter
☒ more than 10 times per semester/quarter

Rate whether the number of practicing professionals who participate in the program is adequate (check one)

Inadequate Adequate

| ☐ | ☐ | ☐ | ☐ | ☒ |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

Is work experience (internship, co-op) required?

☒ Yes ☐ No

If yes, indicate the minimum number of clock hours needed to fulfill this requirement.

150 hours

.

If work experience (internship, co-op) is elective, what percentage of students complete this?

__ %

Are students required to take business courses from units outside the program?
If yes, indicate the number of credit hours needed to fulfill this requirement.

☐ Yes ☒ No

_____

Does the curriculum include a service learning or community service requirement?
If yes, indicate the required clock hours or measure of participation.

☒ Yes ☐ No

4 hours

Is any of the curriculum provided through distance learning?
If yes, list the courses and indicate whether required (R) or elective (E). Indicate with an * the courses that are also offered on site.

☐ Yes ☒ No

_____

If there is a maximum number of credit hours that may be taken by distance education, indicate the amount.

_____ Semester hours
_____ Quarter hours
_____ Trimester hours

What percentage of students transfer from other institutions into your program?

16 %

Do you have any formal articulation agreements in place with those institutions?

☒ Yes ☐ No

Number of students who are enrolled in the interior design program in the **current** academic year:

| | Full Time | Part Time |
|---|---|---|
| First year/freshmen | 12 | 1 |
| Second year/sophomores | 7 | 1 |
| Third year/juniors | 4 | 0 |
| Fourth year/seniors | 10 | 2 |
| Fifth year if applicable | - | - |

| | | |
|---|---|---|
| Total enrollment for the **current** academic year | 33 | 4 |

Estimate the percentage of students enrolled (include all students for all years) in the interior design curriculum who fall into the following categories (each section should equal 100%):

| | |
|---|---|
| Residents of the state/province | 97 % |
| Nonresidents of the state/province | 0 % |
| Nonresident aliens (international students) | 3% |
| **Total** | **100%** |

| | |
|---|---|
| Male | 13 % |
| Female | 87% |
| **Total** | **100%** |

| | |
|---|---|
| Black, non-Hispanic | 11% |
| American Indian or Alaskan Native | - % |
| Asian or Pacific Islander | 5% |
| Hispanic | 5% |
| White, non-Hispanic | 70% |
| Other | 9% |
| **Total** | **100%** |

| | |
|---|---|
| Traditional age students | 84% |
| Returning adult students | 16% |
| **Total** | **100%** |

| | |
|---|---|
| Students with previous baccalaureate degrees | 3% |

| | | |
|---|---|---|
| Students with previous associate degrees | 0% | |
| How many students completed the program and graduated in each of the last three academic years? | 16 | 2012-13 |
| | 13 | 2011-12 |
| | 19 | 2010-11 |
| How many graduates from the past year are employed as interior designers? If known, indicate in the specializations listed. | | Health care |
| | | Hospitality |
| | | Retail |
| | | Corporate |
| | | Residential |
| | | Unknown, but interior design |
| How many students who completed the program during the past academic year are continuing their education in a graduate program? | | Interior design |
| | 1 | Architecture |
| | 1 | Business |
| | | Other (specify) |
| What is the average student to faculty ratio in interior design studios? | **11: 1** Students: Faculty | |
| Total full-time faculty members for the interior design program | 35 | |
| Total adjunct, part-time, and support faculty members or instructional personnel for core courses of the program (If there is change from year to year, provide an average of the past three years and indicate that the total is an average.) | 5 | |
| Salary **range** for full-time faculty in the program (annual salary) | $ **63,500** to $**107,000** | |

Full-time faculty members

| Name | Highest Degree MA, MS, MFA, Ph.D. | Discipline of degree | Passed NCIDQ | Full-time(FT) practitioner (in years) | Full-Time(FT) Faculty Experience | Professional Society Memberships (list all) |
|---|---|---|---|---|---|---|
| Amy Green Deines | MArch | Architecture Interior Design | 2011 | 15 | 15 | AIA Assoc. NCIDQ, IIDA |
| Peter Beaugard | MFA | Design | | 5 | 7 | AIA, USGBC, SBSE |
| Karen Swanson | MArch | Architecture | | 20 | 2 | AIA. IDEC, IIDA |
| Jin Feng | PhD | Architecture | | | 20 | IDEC, AdDN |
| Anirban Adhya | PhD | Architecture | | | 10 | Coleman Fellow |
| William Allen | BLA | Landscape Architecture | | 8 | 20 | |
| Steve Coy | MFA | Art & Design | | 4 | 4 | Coleman Fellow |
| Dan Faoro | MArch | Architecture Urban Design | | 7 | 27 | |
| Dale Allen Gyure | PhD | Architecture History | | | 14 | |
| Deirdre Hennebury | PhD | Architecture History | | | 6 | |
| Joongsub Kim | PhD | Architecture | | 15 | 16 | RA, AIA, AICP |
| Gretchen Maricak | MA | Art Architecture | | 40 | 37 | RA |
| Janice Means | MSE | Mechanical Engineering | | | 40 | LEED AP |
| Thomas Nashlen | BSArch | Architecture | | | 39 | RA |
| Edward Orlowski | MArch | Architecture | | 18 | 18 | RA, AIA, LEED AP |
| Philip Plowright | MArch | Architecture | | 7 | 15 | RA, ASA, ARCC, synchRG |
| Ashraf Ragheb | PhD | Architecture | | | 16 | AIA, USGBC, SBSE |
| Steven Rost | MFA | Photography & Design | | | 33 | AIGA |
| Gretchen Rudy | MArch | Architecture | | | 14 | |
| Martin Schwartz | MArch | Architecture | | 40 | 32 | AIA |
| Scott Shall | MArch | Architecture | | | 14 | AIA |

| | | | | | | |
|---|---|---|---|---|---|---|
| James Stevens | MArch | Architecture | | 7 | 9 | AIA |
| Paul Wang | MArch<br>ME | Architecture | | 25 | 25 | |

Does the state or province in which the program is located regulate the interior design profession and/or require licensing of interior designers?

☐ Yes ☒ No

*1) State the mission of the institution.*

The **mission** of Lawrence Technological University is to develop leaders through a student-centric environment with innovative and agile programs embracing theory and practice. The **vision** of Lawrence Technological University is to be a pre-eminent private technological university producing leaders with an entrepreneurial spirit- Detroit Center and business interface. Our students create entrepreneurial projects leading to patentable products and a global view with our expanded study abroad programs and international students.

**Leaders**
The creation of the leadership program, required for all students. Our student centric environment, with enhanced student services through our Dean of Students office, enhanced library facilities, new housing complex, laptop program, growth of student organizations and activities and Academic Achievement Center.

**Innovative and Agile Programs**
We have created new programs in all colleges in order to address emerging trends and societal needs. Great increase in Art and Design programs.

**Embracing Theory and Practice**
Many of our courses are taught by practicing faculty. We have an office of Career Services that assists students in obtaining employment at a high rate of success.

***2) Describe the impact of significant <u>institutional</u> characteristics, such as the institution's mission statement, on the teaching and learning environment.***

**The History of the University**
Lawrence Technological University was founded on the principle that every person should have the opportunity for a college education. From the beginning, there were no restrictions on entering students relating to race, sex, color, creed, or national or ethnic origin – only the requirement that students qualify for admission and have the desire to succeed. Working students could earn a baccalaureate degree by attending evening programs, day programs, or a combination of the two – a feature unique in 1932 and still remarkable today.

Lawrence Tech began as a college of engineering with only a few hundred students and a handful of faculty. Today it offers more than 100 programs in four colleges, with a total enrollment of approximately 4,275 students, and employs more than 400 full- and part-time faculty. In terms of enrollment, Lawrence Tech is among Michigan's largest independent universities.

In 1950, associate programs were added to Lawrence Tech's baccalaureate offerings. In 1952 the College of Management was re-established, having its origins in an earlier industrial engineering curriculum. Master's degree programs in management were launched in 1989. The College of Architecture and Design evolved in 1962 from the former architectural engineering department and in 1993 established a Master of Architecture program. The College of Arts and Sciences was established in 1967. Master's degree programs in engineering were begun in 1990 and in Arts and Sciences in 1997. Doctoral programs were initiated in 2002.

In 1977, Lawrence Tech began to shed its "commuter" classification by opening the nine-story University Housing-South residence hall. The 1980s and 1990s were distinguished by the opening of the Wayne H. Buell Management Building and the Don Ridler Field House, numerous improvements to existing buildings, and a substantial increase in state-of-the-art laboratory and computer equipment. The University Technology and Learning Center opened in 2001, University Housing-North in 2002, and the A. Alfred Taubman Student Services Center and the Center for Innovative Materials Research in 2006. In 2011 competitive athletics returned to campus with the University's entry into the National Association of Intercollegiate Athletics. Today, the university fields 18 teams.

The University's first campus was located in Highland Park, in a building leased from Henry Ford adjacent to the huge manufacturing facility where he built the Model T and perfected the moving assembly line. As enrollment grew, the University acquired acreage in Southfield and in 1955 opened its first building on what had been a General Mills research farm. The campus has since expanded to more than 100 acres and 12 major buildings, as well as the Frank Lloyd Wright-designed Affleck House in Bloomfield Hills, which was donated to the University in 1978. In early 2015, the College of Architecture and Design will open a new Center for Design and Technology in Detroit's urban core.

The University provides a student-centered comprehensive educational experience with technologically focused professional programs. The University's undergraduate and graduate learning outcomes foster students' intellectual development, shaping them into knowledgeable professionals, critical thinkers, and ethical leaders. University faculty members have established the following undergraduate and graduate learning outcomes in the areas of discipline-specific knowledge, critical thinking, and leadership and ethics.

***3) Describe the impact of significant <u>program</u> characteristics, such as the program's mission statement, on the teaching and learning environment.***

**Interior Architecture Program Mission Statement**
*Interior architecture stands at the intersection of architecture, the design of the built environment, and conservation as it relates to issues of sustainability.*

With the mission statement in mind, Lawrence Tech's program focuses on the reclamation of abandoned or underused, but still significant, structures and their transformation into new spaces and relevant forms, with sustainable and technological issues at the forefront. This makes it possible for interior environments to enhance the quality of life, culture, and comfort of occupants by lifting their spirits within spaces that are full of imagination. Interior designers coordinate the creation and maintenance of interior spaces with the building shell, the exterior environment, and the social context with consideration of the health, welfare, and safety of the human environment.

**Regional Significance**
Lawrence Technological University's Interior Architecture Program is the only such program in the state of Michigan. The regional uniqueness of the program is enhanced by efforts to connect disciplinary skills and educational programs with the opportunities and challenges presented by both the city of Detroit and its adjacent suburban communities. Additionally, the College of Architecture and Design will be occupying a new building in midtown Detroit, where the College will consolidate a variety of existing programs into one building. This effort and consolidation exhibits a dedication to the region from an

institutional and pedagogical standpoint. As a result, students within this program are given the opportunity to understand the impact of design from a regional perspective and with clear outcomes.

**Significant Program Characteristics**
The Interior Architecture program resides in the Department of Art and Design, a component of the College of Architecture and Design. This location enables the program to offer a broad, technical, intellectual and conceptual framework that supports the practice of interior architecture as a multi-disciplinary program. The program offers exposure to many aspects of design including digital fabrication, urban design, landscape design, furniture and fixtures, custom millwork, graphics and branding and integrated technological solutions. The curriculum is closely aligned with the architecture and design curricula for the first two years of the program, which allows design students from several disciplines to collaborate and transfer disciplinary knowledge within a studio environment, a process that is also seen in practice.

**The Learning Environment and Context**
The presence of the Interior Architecture Program in Detroit provides special opportunities for students to experience a diverse set of socio-economic and cultural conditions. Faculty find unique opportunities for students to engage city issues. The DetroitSHOP design studio provides an interdisciplinary design studio that partners with private sector and corporate leaders regarding both local and long-range visions for the city's urban core. The College's new *Detroit Center for Design and Technology*, under construction in Detroit, will consolidate these and other programs and provide the Department of Art and Design with studio teaching space, a design incubator, a storefront gallery and a design co-op.

**Significant Changes in the Program's Academic Unit**
In 2000, the program and degree changed from a Bachelor of Science in Interior Architecture/Design to a Bachelor of Interior Architecture to accommodate a more flexible liberal arts requirement for the program. At that time, a mathematics course was added to the curriculum. At that time, Lawrence Technological University required all students in Bachelor of Science programs to take a minimum of one calculus course. Because there were no courses in the Interior Architecture program requiring calculus as a prerequisite, a new course, "Geometry in Art" (MCS 1254), was developed by the Mathematics Department for non-Bachelor of Science majors.

In the fall of 2013, the requirement that Interior Architecture students enroll in two Integrated Design studio courses (intended for both interior architecture and architecture students) was restructured. In place of Integrated Design 1 (ARC 2117), which considers architecture and the landscape, Interior Architecture students now take Interior Architecture 1 (ARI 3114), which considers the threshold between interior and exterior and exterior space. This has had the advantage of placing Interior Architecture students in the interiors studio sequence in the sophomore year rather than the junior year, thus providing them earlier exposure to interior design thinking and practice. The requirement that Interior Architecture students enroll in Integrated Design 2 (ARC 2126), which focuses on interior space, color and texture, was maintained. Finally, Interior Architecture students are now required to enroll in Integrated Design 3 (ARC 3217) the content of this course focuses on the relationship between materials and tectonics.

***6) If the program is taught at more than one site (for instance the senior year is taken at a different campus), briefly describe the sites and the distribution of program requirements, faculty members,***

***and students among the sites. Note: If the programs offered at the different sites are required to undergo separate site visits to seek accreditation, do not provide this information.***

**Urban Exposure: The City of Detroit**

Lawrence Technological University's College of Architecture and Design (CoAD) has long-standing programs and relationships in Detroit's urban core. The highly regarded Detroit Studio on West Grand Boulevard was founded in 1999 to serve Detroit neighborhoods, the design professions, and citizens. In 2011, the College of Architecture and Design created an exhibition gallery, Studio Couture on Woodward Avenue, the primary thoroughfare in the city of Detroit. [http://studiocouturedetroit.org]. Studio Couture has served as the public face of the programs within the College, offering students and faculty the opportunity to curate and install design work for the Detroit community to engage with and discuss.

Additionally, under the direction of Associate Dean Amy Green Deines, the College established DetroitSHOP in 2011 [http://detroitshop.org]. This urban-issues studio specifically engages a variety of disciplines [including interior architecture students] are that are represented within the college to offer a robust multi-disciplinary experience. This studio was originally housed downtown in the "Chrysler House" building and has recently moved to the former Federal Reserve Building. DetroitSHOP students are encouraged to spend time investigating and exploring the urban context and proposing interventions that many times deal with the reclamation of existing building stock and offering a new use that specifically engages the interior environment. Students have access to the downtown studio 24 hours a day and seven days each week.

***7) If the program offers any courses through an alternate delivery method (for instance online learning) briefly describe the delivery method and the percentage of interior design and general education courses required for graduation that are offered through the alternate delivery method.***

The required course, Internship Studies (ARI 4922) is offered online, as are several of the required general education and elective courses.

Analysis of the Program's Compliance with CIDA standards

*Overview of the Program Goals and the Self-Study*

***1) Briefly describe the self-study process your program undertook in preparation for the CIDA accreditation review. Describe the measures and methods used to determine whether the program meets CIDA Standards and program goals. Describe which individuals or groups (e.g., faculty members, students, advisory boards, or employers) were engaged in assessing the program and analyzing results and how they were involved. Highlight any unique characteristics of your self-study process (e.g., any overlap with a self-study activity undertaken for institutional or other purposes.)***

The programs in the College of Architecture and Design fall under three distinct accreditation boards: Council for Interior Design (CIDA), National Association of Schools of Art and Design (NASAD), and National Architecture Accrediting Board (NAAB).

The Interior Architecture program self-study has been on ongoing conversation since the fall 2011 CIDA visit. As a result of faculty, advisory board, and students generated a comprehensive assessment of the program. This assessment was developed to review the collection and analysis of relevant data, documents, and student work. A feedback loop was developed for the consideration of design industry feedback, advisory board commentary, and design community input, with student, faculty, and administrative contributions. The Associate Dean, the Chair of the Department of Art and Design, Chair of the Department of Architecture, Department Coordinator, and all interior architecture faculty engaged in several sessions of a comprehensive examination of Interior Architecture course content and how it supports the 2014 CIDA curriculum standards.

*Individuals or groups*

Employer feedback for the required internship was and is continually collected and evaluated for consistency. Guest critic comments are documented and reviewed and student responses in course evaluations are weighed. A critical Advisory Board meeting was called and contents of the self-study were discussed in depth. Recommendations have been and continue to be evaluated and implemented where appropriate.

***2) Describe the results of the program's self-study by addressing the following:***
***What evidence was collected and what did analysis of evidence reveal?***

Student work was collected over a three-year period and appraised for quality, depth, and adherence to curriculum, CIDA and professional standards. Each course within the required curriculum of the Interior Architecture Program was evaluated based on a range of educational assessment tools: design presentations; tests scores; research papers; public presentations; technical drawings; and research and data collection as they relate to studio projects. The collected evidence was then weighed against the CIDA standards, keeping in mind the importance of the increasing complexity as the Interior Architecture curriculum proceeds from year one to year four.

***What strengths did the program identify?***
**The self-studies revealed the program to have the following strengths:**

a. Technical ability as it relates to building construction, building systems and technology

b. Sensitivity to the existing building stock that provides graduates the ability to re-program this stock toward new uses. This sensitivity supports sustainable design strategies regarding the built environment and business practices
c. Exposure to 'real' projects with client interaction, budgetary considerations, and value added to a specific context/environment
d. Integration of universal design principles into the entire studio sequence
e. Strong curricular exposure to health care design;
f. Strong professional reputation among employers and the design community

The members of the college Interior Architecture Advisory Board identified a number of program strengths, including the successful integration of the Interior Architecture Program with the undergraduate architecture program; well-qualified full-time and adjunct faculty with significant practice experience and research activity; involved alumni that support scholarships, guest speakers, guest or visiting critics, and student internships; and a close relationship with the metropolitan Detroit design community, manufacturers, and fabricators.

Employers continually cite student strengths in communication, leadership, and technical skills; professionalism and conscientiousness; work ethic, passion, and dedication; curiosity and willingness to learn; initiative to get things done; organizational skills; ability to follow directions; computer skills; reliability, creativity, flexibility; the acquisition of basic knowledge and understandings required for entry-level positions; knowledge of construction techniques; and knowledge of visual presentation skills.

Graduates of the Interior Architecture Program have been successful in securing jobs in firms throughout the U.S. and Canada. Firms that employ LTU graduates include Perkins and Will, JPRA, Gensler, Anderson Miller, Hobbs and Black, Rossetti Associates, Steelcase, Inc., Hamilton Anderson, Smith Group, JGA, Berry Architects, Harley Ellis Devereaux, and TMP.

Students and faculty appreciate LTU's location in a large metropolitan area, within a short drive from downtown, art museums, a design center, and professional offices; a supportive administration at all levels of the University and the College; the "LTU Zone" laptop computer program, which provides all students and faculty with computers and software supportive of the teaching mission and professional practice; consistent performance by students in state and international competitions; and dedicated studios and critique spaces for sophomore, junior, and senior level students.

International educational experiences continue to increase, thus expanding students' global view. This includes the Paris, Albania, and Bolivia and Florence summer study opportunities and programs.
An increase in experiences to engage with Detroit Regional community organizations also exposes students to greater cultural and socio-economic diversity.

***What gaps in the educational program were identified?***
***The following gaps in the program were identified:***

a. Within the Visual Communications course sequence, a lack of consistency with regard to the students' exposure to and instruction in digital software was found, including CAD, Revit, Creative Suite, and Sketch-up software.

b. In the structures course sequence, it has become apparent that the material covered is broad and speaks more specifically to an architectural scale than to an interiors scale.

c. Students have inconsistent skills in the management of digital software. Students appear to get locked into one program, where they have limited skill, rather than using a variety of programs and techniques. There is frequently poor decision making on just how to advance a project and to determine the point at which different strategies or techniques might be implemented.

d. Student work sometimes exhibits a limited understanding of how environmental systems and structural systems interface with interior components. In projects where construction documents were combined with renderings, the transfer of this information between drawings types revealed frequent misunderstandings in the ordering and representation of these systems.

e. The Interior Architecture student's exposure to HVAC and Water Systems is a cursory reading and could benefit from being more in depth. Much of this content is spread amongst Building Systems and Allied Design: Health Care Design.

***What led to strengths or gaps?***

The program continues to have a strong and dedicated faculty base with professionals drawn from a wide variety of backgrounds and experience. Established adjuncts continue to provide students with their expertise and flexibility in adapting course content to reflect recent changes within the profession. Numerous faculty set the groundwork for expanded opportunities related to community outreach, increasing student global awareness and understanding of socio-economic and cultural diversity and the human condition. Students continue to have exposure to 'real world' projects and interaction with clients allowing for greater understanding of the climate and conditions and of the profession.

The computers provided to the students have recently been replaced (2014-2015). Prior to replacement, students were not excused from timely completion of work. In the past academic year, outdated machines led to software crashes and slow response times. In an attempt to meet industry standards during a particular year, focus was placed on specific software that has a limited range as a tool during the design process. In addition, some transfer students have not had exposure to certain programs, which has affected their abilities in studio courses.

In Building Systems 1, (ARC 2313) the focus has been primarily on residential and light frame building types. Although students are exposed to commercial and institutional building types in Building Systems 2 (ARC 2323) this information has not been delivered in a timely fashion for interior architecture students. There has also not been enough focus, in these two courses, on existing structures suitable for adaptive re-use.

***What observations about the program mission and goals were made in relation to the self-study process?*** The distinctive nature of the program, most specifically the educational overlap of the interior architecture and architecture programs, encourages the ability to sustain and build upon this relationship. The College of Architecture and Design is committed to the interdisciplinary nature of the design disciplines and continues to enhance opportunities for collaborative efforts between architecture, engineering, graphic design, interior architecture, and the urban landscape. New opportunities with a social mission and community engagement are and will continue to be sought out by the faculty and studio content. Urban issues will continue to be addressed, specifically those of Detroit and other post-industrial cities. More specifically, to the health of the existing and valuable building stock and related issues of sustainability will be emphasized.

***Were any changes made to the program mission or goals as a result of the self-study?***

Continuous advocacy on the position that interior architecture overlaps with architecture, the design of the built environment, and a methodology of sustainability in all design disciplines will be maintained. The enhancement of pedagogy in the relationship between exterior and interior space, and the understanding of the relationships between site, structure, and interior space will be continued. Adaptive re-use within studio projects will continue to be emphasized.

A new lecture series by interior architecture faculty has been introduced for interiors students and made available to all students within the College to provide them with a broader sense of the range of professional opportunities. The program has included presentations on branding, digital fabrication, healthcare, and historic preservation, among others.

A new Materials Resource Library (MRC) will provide materials and resources relevant to architecture, interior architecture, and graphic design. A student assistant will be monitoring the center and access to the Material ConneXion website will be available along with physical samples of its innovative materials. A new light-box, scanner, and printer are also being provided in the MRC.

Articulation agreements with partner educational institutions (such as community colleges) and transcripts of transfer students will be closely monitored to make sure that courses being transferred continue to meet the requirements necessary for students to progress successfully within the Interior Architecture curriculum. The introduction of a portfolio requirement for transfer students is being considered.

Students will gain a broader view of current digital technologies being addressed by changes made in the Visual Communication sequence of courses. Visual Communication curricula broadly seek to introduce the student to the tools and processes for presentation and representation of studio work. The curriculum unfolds over 3 required courses. Coursework emphasizes the hybridization of physical and digital processes through mounting complexity and incremental introduction of computational processes.

The interior architecture and architecture programs are revising the building system sequence (renamed Construction Systems to more clearly reflect the content) to address a broader overview of various building types with emphasis on adaptive reuse. The revised course descriptions more accurately describe the core learning objectives and relationship of coursework to curriculum (supported learning experience).

General theories and concepts will be emphasized in the revised structures courses and will be taught with appropriate reference to the interior architecture curriculum. More active methods of teaching will be incorporated and model making will be integral to the lecture content, allowing students a more comprehensive and intuitive understanding of structural systems.

The understanding of how environmental systems affect and influence interior space is being elevated by the requirement of more in-depth investigation and incorporation of these systems into the Interior Architecture 2 (ARI 3124) primary project. Students are required to show systems not only in plan, but also in sections and three-dimensional renderings. Students translate those systems volumetrically from one drawing to another. Interior Architecture students will be taking the new Construction Systems 1 (ARC 2313) course; they will not be required to take the second course in this sequence. Instead, HVAC and Water Systems (ARC 3423) will be reincorporated into the Interior Architecture Program curriculum.

**Standard 1. Mission, Goals, and Curriculum**

The interior design program has a mission statement that describes the scope and purpose of the program. Program goals are derived from the mission statement and the curriculum is structured to achieve these goals.

Mission: The Bachelor of Interior Architecture at Lawrence Technological University is a four-year curriculum that recognizes the need to rethink how we design, build, occupy and evaluate the built environment with an emphasis on a sustainable and technologically responsive practice.

Goals: The program integrates technological, ecological, social and political systems to offer a critical position within the discipline of Interior Architecture. The curriculum engages in conversations that discuss the significance of context and scale as they relate to a responsive and thoughtful interior. Reclamation and the consideration of opportunities within our existing building stock and within the city, is an emphasis of the studio work and reinforces the conceptual and design skills needed to successfully tackle such conditions.

Program Characteristics

- Student development and engagement
    - Within the studio environment, Interior Architecture students are provided a safe and nurturing setting that allows them to express their ideas freely. Dedicated freshman studios support the development of a strong design community that has a direct effect on the development of a student's growth and maturity as a designer

    - A mechanism of dissemination is embedded within the Interior Architecture program that allows student to engage in the LTU community, as well as the larger design community of Southeast Michigan. Through the final review process, as well as in exhibitions, students are given abundant opportunities to engage in critical discussions regarding their work, ambitions and design discourse.

- Emphasis on critical thinking, creative solutions and entrepreneurial response
    - Interior Architecture students are given the support to expand, abstract, synthesize and respond in a thoughtful manner as a result of our studio sequence. From the foundation year through the fourth year, students are exposed to an increase in complexity, size and scope of projects. Within the curriculum students are given opportunities to discuss how ideas and thoughts can become catalysts that support Interior Architecture practice as an entrepreneurial endeavor.

- Reflecting the profession through curriculum
    - The Interior Architecture program at LTU has a mandatory internship program that provides students with a challenging, educational and tangible experience that prepares them for future professional practice.
    - The curriculum frequently engages students in projects that have a client, budget, site and community in which students can observe, evaluate and respond. As the curriculum becomes more complex, so does the relationship to an outside audience.

- Emphasis on sustainable life and work
    - As interior environments evolve to better represent lifestyle and culture, it is critical that study of Interior Architecture discusses the fragile balance live/work environments.

    - Not only does this balance effect domestic life, it also shapes the evolution of corporate, retail and hospitality environments.

- A commitment to urban challenges

    - The LTU program allows students, opportunities to study the urban context. Currently we have two satellite studios that are located in the core of downtown Detroit. Interior Architecture students are routinely exposed to issues surrounding the reclamation of the existing building stock as a means of urban and economic development. Additionally, students are expected to understand the relationship of interior space to the context in which it resides.

II. Interior Design: Critical Thinking, Professional Values, and Processes

**Standard 2. Global Perspective for Design**
Entry-level interior designers have a global view and weigh design decisions within the parameters of ecological, socio-economic, and cultural contexts.

In the past six years, the College has greatly expanded its global presence through the establishment of internationally based programs and partnerships, as well as through growth in international student enrollments and international programs. Permanent programs are currently based in Paris (summer design studio and additional coursework), Florence (fall design studio and additional coursework in cooperation with Kent State University), and Shanghai or Beijing (summer studios). Occasionally the College will host a faculty member from an affiliated University, primarily from China or Korea, to conduct research and engage the Detroit and campus community. Additional programs have recently been offered in La Paz, Bolivia; Caracas, Venezuela; Turin, Italy; Tirana, Albania; and Berlin, Germany. International programs encourage students to develop the global perspective required of interior designers and allied disciplines that will practice in the twenty-first century and to understand the shared and varying approaches to design that will serve people around the globe.

The College's international educational agreements have also significantly increased the number of international students attending the College and Lawrence Tech.

Cultural diversity and awareness begins in the freshman year through University Seminar (COM 1001), which includes education on diversity. The importance of various cultures on the development of the arts and architecture are emphasized in all of the history courses: History of the Designed Environment 1 (ARC 3613); History of the Designed Environment 2 (ARC 3623); and History of Interiors and Furniture (ARI 4113). A diverse student body, with a significant number of students from other countries or having parents who came here from other countries, has brought a greater awareness of various cultural, religious, and national traditions.

***2a. Students understand the implications of conducting the practice of design within a global context.*** Art and Design Awareness, (ARC 1012) introduces students to a broad range of related art and design topics in the global arena and provides a design foundation for all degree programs in the College of Architecture and Design. The topics are broad in scope and carry common themes of the principles and elements of design, and of how people live in and react. In Art and Design Awareness, students recognize cultural patterns and innovations, and appreciate the overlapping nature of the various design fields. In History of the Designed Environment 1 (ARC 3613) and History of the Designed Environment 2, (ARC 3623) students learn to identify the various social, economic, ecological, technological, religious, and other cultural factors that influenced the making of the built environment. In Interior Design Practice, (ARI 4223) students are made aware of the different types of practices that meet distinct stakeholder needs.

***2b. Students understand how design needs may vary in cultural and social groups with different economic means.*** In Furniture and Millwork, (ARI 3113) a community based design project where students step outside of the classroom and into the city's historically diverse communities is incorporated. By reaching out to the people of Detroit and surveying materials and methods used to build what is meaningful to them, a foundation and context for coursework is established. Students design, model and build new pieces with an emphasis on utility, expression, and the discovery of new

typologies. Work here is created with an eye to finding solutions, which reinvigorates the understanding of urban living. The culturally diverse community in Detroit, north of Hamtramck, was used as the semester project site in Interior Architecture 3 (ARC 4124) (4th year). The community is home to a mixture of artists and immigrants from Bangladesh, among others. The project was intended to be in the model of PID (public interest design), rather than based on a conventional for-profit design service model. In this course, it was demonstrated how design could be an instrument of social responsibility.

***2c.The interior architecture program provides exposure to contemporary issues affecting the discipline.*** Evidence of this can be found throughout the curriculum with emphasis on ecological issues in Integrated Design 1 (ARC 2117) and Interior Architecture 1 (ARI 3114) our growing multi-cultural society in Furniture and Millwork (ARI 3113), and Interior Architecture 3 (ARC 4124) and critical issues in healthcare design in Allied Design: Interior Architecture (ARC 4234).

***2d.The interior architecture program provides exposure to a variety of business and organizational structures.*** The Interior Architecture Program lecture series offers students a view of various topics addressed within professional practice. Interior Design Practice (ARI 4223) studies the theoretical and practical functions of commercial and contract practice including management, marketing, and organizational structure. Allied Design: Interior Architecture (ARC 4234) and Interior Architecture 3, (ARC 4124) addresses the specifics of the layers of organization within healthcare industry.

Additionally, Allied Design: Multi-disciplinary Design [detroitSHOP], (ARI 4234) and Interior Architecture 3, (ARC 4124), combines urban design, interior architecture, graphic design, industrial design, and community engagement, which creates a diverse studio environment that has the ambition to make a massive change in Detroit. The laboratory teaches students about the risks, benefits, and realities of an interdisciplinary practice in an urban core. It helps students and the greater Detroit public, understand that design is not a luxury, but a powerful agent of change.

***2e.The interior architecture program provides exposure to varying group norms and dynamics.*** In History of the Designed Environment 1 and 2, (ARC 3613), (ARC 3623), students identify how various social, economic, ecological, technological, religious, and other cultural factors have influenced the built environment. History of Interiors and Furniture, (ARI 4113) exposes students to economic and social factors influencing interior and furniture design.

***2f.The interior architecture program provides opportunities for developing knowledge of other cultures.*** Global perspective is enhanced, by working on projects with students and faculty from other countries and/or working on projects in other parts of the world. In Interior Architecture 1, (ARI 3114) students worked together for the design of a halal restaurant (one that serves food prepared in accordance with the dietary principles of Islam). In History of Interiors and Furniture (ARI 4113) students from the Middle East lectured on Islamic design and culture. An interior architecture student participated in the study abroad program in Florence, Italy for a semester.

**Standard 3. Human-Centered Design**

The work of interior designers is informed by knowledge of human factors and theories of human behavior related to the built environment.

Theories and ideas about human behavior are introduced early in the curriculum in Visual Communication 1 (ARC 1213) and Visual Communication 2 (ARC 1223) where they are used to inform

two and three-dimensional drawings. In Basic Design 1 (ARC 1133) students examine anthropometrics in the context of three-dimensional form. The application of human environmental concerns in the integration of site, architecture, interior, and natural light occurs in Integrated Design Studio 1, (ARC 2117). Integrated Design Studio 2, (ARC 2126), examines the relationship between light and space with reference to human factors such as behavior and perception. Allied Design: Interiors, (ARC 4234), requires students to further study and apply these principles.

An advanced study of human factors and human environmental relationships is specifically addressed in Environmental Psychology, (ARI 4123), where students investigate the relationship of the built environment and the behavior of its occupants. The course focuses on the role that the built environment plays in human health and well-being. The course explores such topics as environmental perception and cognition; preferred environments and coping with the failure of preference; and mental attention, fatigue and restoration.

***3a. Students understand that social and behavioral norms may vary from their own and are relevant to making appropriate design decisions.*** Furniture and Millwork, (ARI 3113), exposes students to various cultures and individual needs, through exercises like the design and fabrication of furniture for a recently emigrated family from Pakistan, which is a typical exercise. In Interior Architecture 1, (ARI 3114), as another common example, students recently investigated the movements of an individual performing artist and how the artist's actions ought to influence the design of interior space. The examination of the needs of people from different cultural and socio-economic backgrounds, as well as with differently-abled physical conditions, is extensively explored in the design of health care environments in Allied Design: Interiors, (ARC 4234).

The Interior Architecture program has two labs that explore specific types of pedagogical tracks, specifically dealing with the concern of culture, behavior, and special needs of those living in urban conditions and the underserved.

**detroitSHOP** is a multi-disciplinary design studio that promotes Detroit through applied research and theory in collaboration with passionate stakeholders. Combining interior design, architecture, graphic design, urban design, and community engagement, the studio intends to explore 'massive change' in Detroit.

**The Detroit Studio,** is an off-campus studio facility founded in 1999 by the college of Architecture & Design at Lawrence Technological University and located in the New Center area of Detroit. Its location in central Detroit creates a unique educational setting for students, and its long-term commitment to working with Detroit neighborhoods distinguishes it from the programs of other local universities. The Detroit Studio is committed to serving communities in Detroit, Wayne County and Southeastern Michigan, as part of the mission of a local university, through Service Learning projects that utilize interdisciplinary collaboration and teamwork to address real needs, problems and potentials.

***3b. Student work demonstrates the ability to appropriately apply theories of human behavior in the built environment.*** In Environmental Psychology, (ARI 4123), a group assignment is conducted. Each team selects a leader and develops a strategy for responding to the assignment, defines the research process, and develops an action plan. The students perform a small-scale, post occupancy evaluation (POE) of an existing, built environment to verify whether user needs are adequately addressed. To conduct this assignment, each team identifies a study site, performs a POE of that place, and assesses it according to selected key ideas, concepts, theories, and principles drawn from assigned readings,

primarily the course textbook and peer-reviewed journal articles. Other data collection methods, such as field observation and interviews, are used to develop and support the team's position. The team report must explain and support its arguments and thesis in a systematic and logical manner.

***3c. Student work demonstrates the ability to select, interpret, and apply appropriate anthropometric data.*** Application of knowledge of ergonomics, human behavior, and universal design occurs in Allied Design: Interiors, (ARC 4234), where evidence based design is embedded into the students' research efforts, their design process, and final project execution. Furniture and Millwork (ARI 3113) exposes students to full-scale models and design intent drawings dealing with physical dimensions, ease of use and comfort to user.

***3d. Student work demonstrates the ability to appropriately apply Universal Design principles***. Universal design principles are studied and applied along with human environmental considerations in Interior Architecture 1, (ARI 3114). Universal Design principles specific to Healthcare environments based on the Center for Universal Design guidelines are integrated into the healthcare project in Allied Design: Interior, (ARC4234) and reviewed in Interior Materials and Textiles, (ARI 3123), in a hospitality design context.

**Standard 4. Design Process**

Entry-level interior designers need to apply all aspects of the design process to creative problem solving. Design process enables designers to identify and explore complex problems and generate creative solutions that optimize the human experience within the interior environment.

Design theories and processes are first explored through exercises in Basic Design 1(ART 1113) and Basic Design 2(ART 1133), and Visual Communication 1(ARC 1213) and Visual Communication 2(ARC 1223), along with color principles, composition, balance, rhythm, repetition, graduation structure, transparency, proportion and contrast, techniques and tools. Two-and three-dimensional design exercises are implemented throughout the curriculum, along with problem identification and information gathering. Students develop the ability to think creatively and critically in the vocabulary of design and to articulate their ideas verbally and visually. Precedent analysis is incorporated into the studio as a pre-cursor to conceptual design work, followed by a working concept statement. Students are required to express and defend their ideas and processes verbally. In upper level design studios, client interviews are conducted to emphasize that design processes must include real users' needs and input, and that they can be examined and evaluated through research, observation, and surveys.

***4a. Students are able to identify and define relevant aspects of a design problem (goals, objectives, performance criteria).*** Through precedent research and analysis, evidence based design, and product and materials examinations, students discover the essential components of a proposed project type, its constituent elements, and they establish priorities. This type of investigation, which begins in the Basic Design, (ART 1113), (ART 1133), and Visual Communications, (ARC 1213), (ARC 1223), courses, is incorporated into Integrated Design 2, (ARC 2117), and it continues with increasing depth in all Interior Architecture design studios including Interior Architecture 3, (ARC 4124) and Allied Design: Interior (ARC 4234). These principles are underscored, in terms of human behavior and perception, in Environmental Psychology, (ARI 4123).

***4b. Students are able to gather, evaluate, and apply appropriate and necessary information as well as research findings, to solve the problem (pre-design investigation).*** The programming process begins in

Integrated Design Studio 2, (ARC 2126), where students develop a basic program for a building and interior design, consider human environmental behavior as an aspect of building typology, and survey or interview users of similar facilities. Integrated Design Studio 2, (ARC 2117), objectives and outcomes are organized into four phases: gathering, finding, transforming and synthesis. Students learn that the design process includes programming methods for gathering and organizing data. They learn to consider space as the study of haptic engagement, light, color, texture and volume, as they relate to human scale, and the appropriate response to human needs; all of this is also part of the design research process. Also refer to the response in item 3a, above, for a discussion of students' information gathering a deployment in the design process in Interior Architecture 1, (ARI 3114).

***4c. Students are <u>able</u> to synthesize information and generate multiple concepts and/or multiple design responses to programmatic requirements.*** Multiple iterations are encouraged and, in most cases, required for the exploration of all design projects and in each design studio. Students are typically required to display at least three different conceptual ideas and interpret the characteristics that are both successful and unsuccessful in each, as well as discuss them verbally. Additionally the discussion of design development supports multiple concepts as they relate to programmatic needs and uses.

***4d. Students are <u>able</u> to demonstrate creative thinking through presentation of a variety of ideas, approaches, and concepts.*** Students are introduced to the principles of creative design thinking and presentation, and to the need for the reiteration of multiple approaches to design challenges beginning with the Basic Design, (ART 1133), and Visual Communication, (ARC 1213), courses as described in the first paragraph of this section. The examination of two- and three-dimensional elements and principles of design and color theory is explored further in the Integrated Design Studios 2 and 3, (ARC 2126), and (ARC 3117), where students apply these theories to site design, architectural design, interior design and lighting design on projects that are relatively small in scale, but which emphasize the development of understanding space as volume. The upper level students are required to develop ideas through study models, as well as schematic models. These artifacts are developed at several different scales to explore both the building volume as it relates to its environment, as well as how the interior space develops in three-dimensions.

***4e. The interior architecture program <u>includes</u> opportunities to solve simple to complex design problems.*** Projects in Interior Architecture 1, (ARI 3114), begin with space for an individuals and small groups, and with a final project for a mid-size project, such as a restaurant or retail space. In Interior Architecture 2, (ARI 3124), projects typically are mixed-use programs in which students learn to apply building codes. They are also required to show evidence of how structural and environmental systems are integrated into the design. A complex healthcare project is presented to students in Allied Design: Interiors, (ARC 4234), in which students are required to employ evidence-based design methods and to incorporate strategies for ecological and material sustainability. The curriculum has been designed to increase the complexity, scale and critical thinking as the student advances through the studio sequence. Interior Architecture 3, (ARC 4124) and Allied Design: Multi-disciplinary design, (ARC 4234) requires students to take a design position as it relates to a variety of complex issues surrounding political, social and economic conditions.

***4f. The interior architecture program <u>includes</u> exposure to a range of design research and problem solving.*** The Interior Architecture Program coursework and project requirements demand the synthesis of design principles, philosophies, and processes in developing solutions for a variety of project types, from residential interiors to commercial interiors to complex institutional interiors, such as health care facilities. Projects require the comprehensive application of interior design processes and skills including

programming, user needs, design development, detailing, and documentation. Projects are designed to teach professional research skills, as delineated earlier in this document.

***4g. The interior architecture program <u>includes</u> methods and opportunities for innovation and creative thinking.*** In addition to the evidence provided above, where these principles are incorporated into the required coursework three examples of recent student projects that integrate methods into innovative and demanding design challenges are offered. In the fall of 2012, students participated in a design/build installation for DIFFA: Dining by Design (Design Industries Foundation Fighting Aids). Students collaborated on a design concept featuring a donation of textiles from Crypton, Inc. to design an 11' x 11' dining space for a major AIDS Foundation fundraiser. Once the concept was established, students determined the materials and methods that were appropriate for construction of the space. In the fall of 2013, students in Furniture and Millwork,(ARI 3113), were asked to find discarded objects in the city of Hamtramck to develop and construct furniture for a local family. In a Special Topics--Design and Build Civic Engagement design studio (open to students of all disciplines), an interior architecture student was integrally involved in the site development and design of a new startup restaurant constructed with shipping containers.

***4h. The interior architecture program <u>includes</u> opportunities to develop critical listening skills.*** Critical listening skills are developed in exercises and special projects that involve students with real clients and in which students are required to commit them to a responsive and user-relevant outcome. The evidence-based design tasks support the acquisition of these skills. Students must also employ listening skills in lecture and design courses, where exams and assignments are based, at least in part, on verbal content. The annual College lecture series, which introduces students to some of the most interesting and accomplished design practitioners in the professions, offers opportunities to learn by listening. The intention is for students to incorporate lessons learned from the lectures into their projects. Outside faculty, guest critics, and peer reviews are important opportunities for students to obtain valuable feedback.

**Standard 5. Collaboration**

Entry-level interior designers engage in multi-disciplinary collaboration.

Multi-disciplinary collaboration is firmly embedded in the entire College of Architecture and Design curriculum. All students in the College enroll in a series of foundation design courses, which address cross-disciplinary design ideas and issues. These courses include Basic Design 1 and 2, (ART 1113) and (ART 1133), Visual Communication 1 and 2, (ARC 1213) and (ARC 1223), and Art and Design Awareness, (ARC 1012), as well as specific sections of Allied Design, such a 'multi-disciplinary design'. Additionally, as has been mentioned, the interior architecture and architecture students share a number of design studio and technical courses. Because of this range of professional design and technical courses, it follows that the interior architecture faculty represent diverse design backgrounds and expertise. Design Faculty who teach required courses in the Interior Architecture Program are professionals in interior architecture, architecture, fine art, engineering, landscape architecture, and urban design.

***5a. Students have an <u>awareness</u> of teamwork structures and dynamics.*** The first-year foundation studio sequence – Basic Design 1, (ART 1113), and Basic Design 2, (ART 1133), – is designed as a platform for exploring primary design concepts that are shared by students in architecture, architectural engineering, fine arts, game art, graphic design, industrial design, interaction design, interior architecture, and transportation design. The multi-disciplinary pedagogy inaugurates a dialogue among students pursuing different disciplines.

***5b. Students have an awareness of the nature and value of integrated design practices.*** The Integrated Design courses are composed of a studio and a lab component. The studio component emphasizes architectural composition integrated with the insights of associated design disciplines and the associated lab component of the course emphasizes exploration and experimentation with design media and other specific design inquiries in support of the studio. Integrated Design 2, (ARC 2126), exposes students to the study of the relationship of built form with interior space, typically through an adaptive re-use project. In Integrated Design 3, (ARC 3126), students develop an understanding of the relationship between built form and the tectonics of materials assembly and fabrication

***5c. The interior architecture program includes learning experiences that engage students in multi-disciplinary collaboration, leadership, and teamwork.*** Refer to the introductory paragraph of this section and to sections 5a and 5b.

***5d. The interior design program includes learning experiences that engage students in interaction with multiple disciplines representing a variety of points of view and perspectives.*** Refer to the introductory paragraph of this section and to sections 5a, 5b, and 5c.

**Standard 6. Communication**

**Entry-level interior designers are effective communicators.** Writing and professional communications skills are a part of the required core curriculum at Lawrence Technological University and are conveyed through English Composition, (COM 1103), Technical and Professional Communication, (COM 2103), and the several required humanities courses. Geometry in Art, (MCS 1254), is a mathematics course in which students learn to communicate with and interpret a symbolic language.

Computer drafting, lettering, hand drawing, and electronic means of presentation and communications, including Revit, are introduced in the freshman year in Basic Design 1 and 2 (ARC 1113) and (ARC 1223), and Visual Communications 1 and 2, (ARC 1213) and (ARC 1223). Competence of these skills is to be achieved by the time students reach the upper level interior architecture studios. Interior Architecture 1, (ARI 3114), Interior Architecture 2, (ARI 3124), Interior Architecture 3, (ARI 4134) and Allied Design Studio: Interiors (ARC 4234). New visual communication techniques are also introduced in these studios as well as in Graphic Design 1 (ART 2523). Application of BIM software occurs in Building Systems 2 (ARC 2323.

Rendering and perspective drawing are introduced in Visual Communication 2, (ARC 1223), where students explore hybrid media applications. More advanced rendering techniques and opportunities to explore ideas with hand drawings occurs in Integrated Design 2 and 3, (ARC 2126) and (ARC 3126). Computer modeling and rendering is extensively developed in the interior architecture studios Interior Architecture 2, (ARI 3124) and Interior Architecture 3, (ARI 4134). Students create complex computer models and renderings in Interior Architecture 3 and Allied Design.

***6a. Students apply a variety of communication techniques and technologies appropriate to a range of purposes and audiences.*** Visual communication skills are introduced in the freshman year studios, Basic Design 1 and 2, (ARC 1113) and (ARC 1223), and Visual Communications 1 and 2 (ARC 1213) and (ARC 1223). Hand lettering, drafting, sketching, illustration, and collage boards are developed in these courses. Two-dimensional diagrams produced throughout these courses, demonstrate (a) the

experimental use and hybridization of media, (b) iterative design processes, and (c) the rigorous analysis of architecture and design projects. The use of physical, digital and hybridized visual communication media to analyze existing architectural works and develop new ideas occurs in Visual Communications, (ARC 2813). Included in the Visual Communications coursework is an introduction to Building Information Modeling (BIM) and geo-design tools.

***6b. Students are able to express ideas clearly through oral communication.*** Oral presentations are typically and frequently presented in front of faculty, students, outside jurors, clients, and the public. Oral presentations begin in the freshman year studios, where students present their work to the class and learn how to constructively critique the work of their classmates. Students are graded on their oral presentation skills in many of the studio courses. A formal marketing presentation is developed in Interior Design Practice, (ARI 4223), and oral presentations also occur in History of Interiors and Furniture, (ARI 4113), in as well as in Environmental Psychology, (ARI 4123), where students present results of research projects on human and environment topics.

***6c. Students are able to express ideas clearly in written communication.*** Written communication is expected in all studio courses beginning with (ARI 3114) and (ARC 2126). Interior architecture students take an English Composition, (COM 1103), and Technical and Professional Communication, (COM 2103), and these both provide opportunities for developing written communication skills aimed at different purposes and for different audiences. Written concepts and programming exercises occur in Integrated Design 2, (ARC 2126), and Integrated Design 3, (ARC 3117). Problem statements, concept statements, programs, specifications and solution statements are typically written in upper level studios.

***6d.Students are able to express ideas clearly through visual media (ideation drawings and sketches).*** Hand sketching is expected in Basic Design 1 and 2, (ARC 1113) and (ARC 1223), and Visual Communications 1 and 2, (ARC 1213) and (ARC 1223), for the development of basic design ideas. Sketching is also required in the conceptual phase of projects in all design studios. New methods of quick sketching are being integrated into Interior Architecture 1, (ARI 3114), as a critical design exploration and communication technique and relevant companion to emerging digital methods.

***6e. Students are able to produce presentation drawings across a range of appropriate media.*** These skills delineated in sections 6a through 6d, combined with three-dimensional digital and hand renderings and idea sketches. They are integrated into all interior architecture studios.

***6f. Students are able to produce integrated contract documents including drawings, schedules, and specifications appropriate to project size and scope.*** In Building Systems 1 and 2, (ARC 2313) and (ARC 2323), soon to be renamed, Construction Systems 1 and 2) students examine contemporary building materials and construction systems. This course also develops graphic and written communications conventions that are used in construction documents. Diagrams and schedules are incorporated into the final project documents for Integrated Design 2. Specifications are introduced in Furniture and Millwork, (ARI 3113), and extensively executed in upper level interior architecture studios.

***6g. Students are able to integrate oral and visual material to present ideas clearly.*** Students present their work in orally and visually throughout the curriculum. Regular pin-ups to faculty, guest critics, and peers occur in all design studios. Formal presentations are made in all design studios; students are expected to explain their concepts; explain how projects have developed; discuss precedents; explain user needs, climate and contextual responses; and to discuss the uses of materials and assemblies.

**Standard 7. Professionalism and Business Practice**

Entry-level interior designers use ethical and accepted standards of practice, are committed to professional development and the industry, and understand the value of their contribution to the built environment.

Professional values are emphasized throughout the curriculum beginning with the presentation of creative, critical, analytical and strategic thinking strategies in the Basic Design studio courses, (ARC 1113) and (ARC 1133), which are taught freshman year. Strategic thinking is applied to solving problems following the programming process (in studios) beginning with Integrated Design Studio 1, (ARC 2117).

Professional skills are presented to students in the freshman year in University Seminar, (COM 1001), where time management, organization, and active listening, as well as other learning strategies, are presented and discussed. Students are asked to apply these in the sophomore, junior and senior courses and develop time management spread sheets in Integrated Design Studio 2, (ARC 2126), as a model for use in all future studios. Students are able to develop their own project plans and manage them in Interior Architecture 3, (ARI 4124). They also observe these in practice through Internship Studies, (ARI 4922).

Professional ethics and the role of ethics in Interior Design are first presented in Integrated Design Studio 2, (ARC 2126) in the overview of the Interior Design profession in the readings and lectures in that course. Ethics are then examined in the upper level studios as applied to practice in a variety of specializations. Students also discuss ethics issues in Interior Design Practice, (ARI 4223) and observe ethics in the field in Internship Studies, (ARI 4922).

Interior Design Practice, (ARI 4223), covers many topics to help prepare students for their future career. Discussions and reading assignments include ethics, legal aspects, finance, contracts, and different types of business, which help students prepare a Business Plan for a future business.

Students are also required to respond to an RFQ assignment, which includes learning about the different types of design fees and how to calculate them. Students are required to develop a response that includes numerous issues that are presented in the RFQ document.

Throughout each semester, dialog occurs around the profession with guest speakers that talk about topics specially related to them- law, project management, etc. Midway through the semester, a resume/cover letter assignment allows students to develop both items and have designers from local firms come in to review and critique. Each student is given the opportunity to meet with different designers to gain insights as to what future employers expect. This assignment leads to a “mock interview,” in which students fine-tune their cover letters and resumes for a specific entry-level position.

Presentation of business and professional practice occurs in two parts of the curriculum. First, students study these in the Building Systems courses, (ARC 2313) and (ARC 2323), in relation to documentation and construction. Estimating for building construction and systems, budget management, and assessment are all covered in the Building Systems sequence. These concepts applied in Interior Design practice plus coordination, information management, and conflict resolution are all presented in Interior Design Practice, (ARI 4223), where reading assignments, quizzes and projects demonstrate application of this knowledge. The profession is discussed in lectures and presentations in Interior Design Practice, (ARI 4223). Professional societies and other professional issues, such as licensing are first introduced in Art and Architecture Awareness, (ARC 1012). They are presented again in Integrated Design Studio 2, (ARC

2126), and then in Interior Design Practice, (ARI 4223) and Internship Studies, (ARI 4922). Students can be actively engaged in professional societies through membership in ASID and IIDA.

Business processes are examined and applications occur in Interior Design Practice, (ARI 4223), and Internship Studies, (ARI 4922). A marketing plan is developed and presented in Interior Design Practice, (ARI 4223) and these are researched while working in a firm and reported in the journal for Internship Studies, (ARI 4922).

Business computer applications are used throughout the curriculum beginning with Integrated Design Studio 2, (ARC 2126), where spreadsheets are created for a time management project. Specifications and scheduling projects in Building Systems 1, (ARC 2313) and Building Systems 2, (ARC 2323) are completed with computer software, including BIM in Building Systems 2, and computer specifications for office systems furniture are developed in Furniture and Millwork, (ARI 3113), and Interior Architecture 2, (ARI 3124).

Interior Design Practice (ARI 4223) addresses the study of the interior design profession as well as theoretical and practical functions of contract practice as a business including management, planning, marketing, organizational structure, firm activities and scheduling, professional contract for interior services, and ethics, business liabilities and legal responsibilities.

**Standard 8. History**

Entry-level interior designers apply knowledge of interiors, architecture, decorative arts, and art within a historical and cultural context.

Design theories are presented in the Basic Design studios, (ARC 1113) and (ARC 1133), to develop an awareness of their influence on concept development. Design theories are examined in the context of history and culture in the History of the Designed Environment 1 and 2 courses, (ARC 3613) and (ARC 3623). These courses focus on architectural history and ideas and include the presentation of ideas that generate and influence interior design and the design of decorative elements. In the junior and senior years, an elective course in art and architectural history and interior and furniture history, History of Interiors and Furniture, (ARI 4113), encourages students to increase their knowledge of design theories in the fine arts and in the design of furniture and other interior elements.

With exposure to disparate topics but common themes, students develop a vocabulary and an understanding of precedents and theories in design. This permits them to think critically and creatively in the language of art and design. Discussions concerning the global nature of the social, political, economic and cultural forces that shape the human condition also find support in courses in the University's core curriculum: World Masterpieces 1 and 2, (LLT 1213) and (LLT 1223), Foundations of the American Experience, (SSC 2413), and Development of the American Experience, (SSC 2423).

***8a. Students understand the social, political, and physical influences affecting historical changes in design of the built environment.*** Art and Design Awareness, (ARC 1012), introduces students to the disciplines of architecture, art and design, including the creative process, architectural expression, theory and history. In History of the Designed Environment 1, (ARC 3613), students are exposed to the history and philosophy of the design arts in significant periods of the western world: in the periods of antiquity, the Middle Ages (including Byzantine and Islamic extensions), and in the Renaissance and Baroque periods. The History of the Designed Environment 2, (ARC 3623), addresses the history and philosophy of architecture and related design arts in significant periods in Asian and Pre-Columbian

cultures and in the modern world from the 18th century.

***8b.Students understand movements and traditions in interior design.*** In the History of Interiors and Furniture, (ARI 4113) course, students are required to read "A History of Interior Design" by John Pile. This required text addresses the social, political and physical influences affecting historical changes in design of the built environment. In the final project, each student offers a presentation about his or her view of what will be the next trend in interior design based on an analysis of the current social, political and technological movement in the world.

***8c.Students understand movements and traditions in architecture.***
Please refer to the introduction and sections 8b and 8c.

***8d.Students understand movements and traditions in furniture, decorative arts, and art.*** Please refer to the introduction and sections 8a, 8b, and 8c.

***8e. Students apply precedents to inform design solutions.*** The use and understanding of architectural, interior, and other design precedents are a central element of all design coursework including the Interior Architecture, Integrated Design, and Allied Design studio courses. This is supported by the history and theory courses: Art and Design Awareness, (ARC 1012), and History of the Designed Environment 1 and 2, (ARC 3613) and (ARC 3623), and History of Interiors and Furniture, (ARI 4113).

**Standard 9. Space and Form**
Entry-level interior designers apply elements and principles of two- and three-dimensional design.

The understanding and manipulation of spatial volumes is critical to the development of students' abilities to read and manipulate interior architectural space. These fundamentals are integrated into courses throughout the curriculum. Volumetric thinking and visual communication are introduced to students in Art and Architecture Awareness, (ARC 1012), where students are exposed to the built environment and the visual arts through a variety of experiential exercises. In the Basic Design studios, (ARC 1113) and (ARC 1213), students develop multiple iterations of two-dimensional and three-dimensional designs through a variety of skill-building assignments that require the use of different graphic visualization tools. Interior space, volume, and textures are addressed in Integrated Design 3, (ARC 3117). Interior Architecture 2, (ARI 3124), and Interior Architecture 3, (ARI 4134) through schematic and design development sketches and computer-aided and conventional model building.

***9a. Students effectively apply the elements and principles of design to two-dimensional design solutions.*** Basic Design 1 and 2 introduce the principles and elements of design in a freshman year studio experience. Students develop an understanding of ordering systems that provide structure both in their compositions and to the designed environment. Assignments deal with symmetry and asymmetry, figure/ground relationships, patterns and repetition, balance, dynamic and static compositions, scale, proportion, center of interest, a consideration of edges and boundaries, grids and points of radiation.

***9b. Students effectively apply the elements and principles of design to three-dimensional design solutions.*** A more detailed examination of the two- and three-dimensional elements and principles of design and color theory occurs in the Integrated Design Studios, (ARC 2117) and (ARC 2126), where students apply these theories to site design, architectural design, interior design and lighting design on projects that are relatively small in scale. Study models, as well as schematic models are developed in

several different scales to explore both the building volume as it relates to its environment, as well as how the interior space develops in three-dimensions Sketching is assigned, along with model building, to articulate the details of the buildings and spaces. Three dimensional computer models are used in upper level studios Interior Architecture 1, (ARI 3114), Interior Architecture 2, (ARI 3124), Interior Architecture 3, (ARI 4124) and Allied Design Studio: Interiors, (ARC 4234) to develop interior space in three dimensions, while examining the impact of details and other elements on the three-dimensional design.

***9c. Students are able to analyze and communicate theories or concepts of spatial definition and organization.*** In Visual Communication 3, (ARC 2813), students use physical, digital, and hybridized visual communication media to analyze existing architectural works and hypothesize new constructs. Investigations using physical and digital media will center upon assessing, classifying, and mapping information through the use of Computer-Aided Drafting (CAD), modeling and computation. Analytical frameworks will stress ecological processes as they pertain to the relationship of body, architecture and landscapes. Included is an introduction to information modeling, including Building Information Modeling (BIM) and geo-design tool sets. Diagrams have been used in the integrated design studio sequence as a major way of exploration of design solutions.

**Standard 10. Color**

Entry-level interior designers apply color principles and theories.

The principles of design and color theory are explored first in the Basic Design 1 and 2, (ART 1113), (ART 1133), and then in Integrated Design 2 and 3, (ARC 2126) and (ARC 3117), where students apply these theories to site design, architectural design, interior design and lighting design on projects that are relatively small in scale, but which emphasize the development of understanding space as volume.

***10a. Student work <u>demonstrates</u> an understanding of color principles, theories, and systems.*** Design theories and systems are first explored through exercises in Basic Design 1 and 2, (ART 1113), (ART 1133), along with color principles. Art and Design Awareness, (ART 1012), parallels and supports those objectives with lectures that provide historical and theoretical context. When color theory is introduced in Basic Design 1, talks are simultaneously held in Art and Design Awareness, (ARC 1012), where students are presented with information on primary colors; painting and sculpture; examples of the work of specific artists and designers such as Picasso, Pollock and others.

***10b. Student work <u>demonstrates</u> an understanding of the interaction of color with materials, texture, light, form and the impact on interior environments.*** Basic Design 1 (ART 1113) and Basic Design 2 (ART 1133), Interior Architecture 1 (ARI 3114), introduce the and apply the design methodologies concerning color, materials, texture, light, form and their effect on the interior environment. Upper level Interior Architecture studios inherently embed the above methods into each project. (ARC 4234): Application of natural and artificial light and evidence-based color palettes for healthcare environments are required for the healthcare project.

***10c. Students appropriately select and <u>apply</u> color with regard to its multiple purposes.*** The application of color in interiors begins in Integrated Design Studio 2, (ARC 2126), where students review color theory learned in Basic Design, (ART 1113), and then learn color schemes and their application in interior design. This studio requires students to explore the interaction of light, color, and texture. Color is considered an important element in both three-dimensional and two-dimensional designs in all upper level courses and it is typically evaluated in all project work. In interior architecture studios, applications of color are realized through requirements for finished material selections and specifications.

***10d. Students apply color effectively in all aspects of visual communication (presentations, models, etc.)*** Basic Design 1 (ART 1113) and Basic Design 2 (ART 1133), Interior Architecture 1 (ARI 3114), Interior Architecture 2 (ARI 3124) and all upper level studios engage color as it relates to visual communication.

**Standard 11. Furniture, Fixtures, Equipment, and Finish Materials**
Entry-level interior designers select and specify furniture, fixtures, and equipment and finish materials in interior spaces.

An introduction to the selection and specification of interior finishes occurs in Integrated Design Studio 2, (ARC 2126) and Interior Architecture 1, (ARI 3114). Detailed furniture selection for office systems and conventional office furniture occurs in Interior Architecture 2, (ARI 3124). Detailed furniture selection also occurs in Allied Design Studio: Interiors, (ARC 4234) where health care furniture is selected and specified. Decorative elements in retail, restaurant and hotel interior furniture, artwork and accessories are addressed in Interior Architecture 1, (ARI 3114) and furniture and other interior elements are selected in the comprehensive design studio, Interior Architecture 3, (ARI 4124).

***11a. Students have awareness of a broad range of materials and products.***
(ARC 4234): students are exposed to healthcare specific finishes and furniture selections, with an emphasis on performance and patient centered care. (ARI 3123): students are exposed to a broad range of materials used in interior environments: flooring, paint, wall covering, ceilings, textiles, window treatments, glass, and plastic.

***11b. Students have awareness of typical fabrication and installation methods and maintenance requirements. (***ARC 4234): students evaluate interior finish materials for appropriate application in healthcare and hospitality environments; elements designed for durability are included in the project (ARI 3123): fabrication, installation, maintenance requirements, pricing/life cycle costs are reviewed for flooring, paint, wall covering, ceilings, textiles, window treatments, glass and plastics.

***11c. Students select and apply materials and products on the basis of their properties and performance criteria, including ergonomics, environmental attributes, and life cycle cost. (***ARC 4234): students design with materials they determine to be appropriate for healthcare environments with special focus on environmental stewardship and promoting patient health
(ARI 3123): students apply materials based on properties, performance and environmental attributes for a comprehensive hospitality environment

***11d. Students are able to layout and specify furniture, fixtures, and equipment.***
Allied Design: Interior, (ARC 4234): students select and specify healthcare furniture specific to the project type. Room Data Sheets define equipment specifics such as sizes and power requirements. Building elements such as lighting fixtures are selected based on codes and appropriateness for a healthcare environment. Interior Architecture 3 (ARI 4134) often requires students to communicate furniture, fixture and equipment layout with plans, elevations and sections.

**Standard 12. Environmental Systems**

Entry-level interior designers use the principles of lighting, acoustics, thermal comfort, and indoor air quality to enhance the health, safety, welfare, and performance of building occupants.

Lighting design education occurs across the design and technical curriculum. Students are introduced to daylighting in Integrated Design 2 (ARC 2126) and expected to recognize opportunities for its use in projects that are presented in several subsequent courses. Daylighting principles are reinforced and electrical lighting principles and practices are introduced in Acoustical, Electrical and Illumination Systems (ARC 4443). Students also exhibit abilities in the application of lighting design principles and fundamentals in the solution of complex lighting projects in Advanced Lighting Design (ARI 4323). Students apply their increasing knowledge of lighting theory and technology in the solution of lighting designs in interior architecture design studios. The effect of lighting on human behavior and attitudes is examined in Environmental Psychology (ARI 4123). The College's new Lighting Lab (in the combined rooms, T328 and T329) provides space and equipment for students to investigate and test the qualities of different types of light sources.

The understanding of the principles of acoustics is covered in Acoustical, Electrical and Illumination Systems (ARC 4443). Course materials include the theory and analysis of architectural acoustics, room acoustics, sound isolation (indoor/outdoor), sound absorption, and electronic sound reinforcement. Students study speech privacy, speech clarity and spaces for musical presentations and the acoustical properties of materials.

The understanding of the principles of thermal design and of indoor air quality is studied in Building Systems 1 and 2 (ARC 2313 and ARC 2323). This course, as well as HVAC and Water Systems (ARC 3423, soon to be required of interior architecture students) classes, investigate human comfort, external and internal heat loss and heat gain, principles of heat transfer, fundamental thermodynamics, heating, ventilating and cooling equipment, system selection and sizing, spatial requirements, moisture migration and energy conservation.

***12a. Students <u>understand</u> the principles of natural and electrical lighting design.*** Lighting fundamentals are first presented in Integrated Design Studio 2 (ARC 2126). The variable nature of sunlight, skylight and other basics of daylighting are introduced in this course, and an awareness of the character and qualities of daylight is developed. Advanced Lighting Design (ARI 4323) examines the relationship between daylight and artificial lighting, and how each affects the occupants and influences energy use. In Acoustical, Electrical and Illumination Systems (ARC 4443), students learn basic electrical theory as it relates to building construction, electrical problems in power and distribution, illumination design, natural and artificial lighting design, natural and artificial sources, and energy conservation.

***12b. Students competently select and <u>apply</u> luminaires and light sources.*** In Acoustics, Electrical and Illumination Systems (ARC 4443), students learn to understand the principles of natural and electrical lighting design and to competently select and specify luminaires and light sources. Students learn to recognize the benefits of high efficiency lamps in lowering electrical costs and cooling loads. Using light meters and a compass, students verify the penetration of light into a space and demonstrate an understanding of their findings by plotting footcandle levels at the work surface. All interior architecture studios require reflected ceiling plans with luminaire selection information. Interior Architecture 3 (ARI 4134) requires luminaire specification as part of the design project. Allied Design (ARC 4234) requires reflected ceiling plan specifically engaging the needs of the users, program and productivity. Additionally students include outlet and switch placement in their submission.

***12c. Students <u>understand</u> the principles of acoustical design.*** Acoustics and the propagation and isolation of sound are addressed in Acoustics, Electrical and Illumination Systems (ARC 4443). In this course, students come to understand the nature of "noise" and the interpretation of sound as dialogue

or music by learning basic principles of propagation through free space and reverberant space, including privacy and accuracy of articulation. Formulae and empirical thinking with critical analysis support this learning and are the keys to the measurement and the interpretation of findings. Studying interior space for the shaping, reflecting, diffusion, absorption, and separation of sounds is promoted consistently with the selection of materials, and the installation and configuring of finishes as they relate to the life and well-being of inhabitants.

***12d. Students <u>understand</u> appropriate strategies for acoustical control.*** Strategies for the control of sound separation and propagation are addressed in Acoustics, Electrical and Illumination Systems (ARC 4443). In this course, students explore strategies and their implementation as they resolve weaknesses in sound separation requirements between private spaces. Students investigate a sound attenuation condition through field examination. They analyze the performance of a demising partition designed to provide sound separation by generating noise and measuring by meter its propagation through this element. This task enables performance analysis based on inspection for flanking paths, penetrations and compliant construction. Students learn that sound transfer is not just related to weaknesses of the demising element, but also of the performance of the receiving space. To that end, they are taught to think critically, to employ strategies that include receiving space modification and to modify connectivity weaknesses in mechanical, HVAC, and wall components. Students examine and test speech propagation and music in a presentation venue, such as an auditorium or lecture space. They document the space's finishes and use volume calculations for evidence of the space's capacity to meet proven requirements of reverberation time and direct and indirect sound patterns.

***12e. Students <u>understand</u> the principles of thermal design***
and
***12f. Students <u>understand</u> how thermal systems influence interior design solutions.*** HVAC systems, principles, and practices, including the concepts and practices of thermal controls within buildings, have been addressed in Building Systems 2 (ARC 2323) for some years. Course material includes the considerations necessary for spatial, construction and finish systems to accommodate HVAC equipment for the facilitation of heating, cooling, and ventilation.

Beginning in the fall of 2015, however, the program will provide a substantially more intensive education for Interior Architecture students in this subject area. The study of the principles of thermal design and the influence of thermal systems on interior design solutions will also be addressed in HVAC and Water Systems (ARC 3423). Students will learn to use the psychrometric chart to investigate human comfort and to specify a range of temperatures, humidity levels, air velocities, and general conditions for comfort and health.

***12g. Students <u>understand</u> the principles of indoor air quality.*** The influence of indoor air quality on interior space and the related influence of climate conditions on air quality have been addressed in Building Systems 1 (ARC 2313, now Construction Systems 1), for several years. Beginning in the fall of 2015, the program will provide a substantially more intensive education for Interior Architecture students in this subject area. The study of the principles of indoor air quality also will be addressed in HVAC and Water Systems (ARC 3423), as a matter of both human comfort and basic health. Students will learn to identify what constitutes good and poor indoor air quality and understand practices that promote acceptable air quality conditions: the course considers the limits of unacceptable indoor air quality as defined by ASHRAE.

**12h. Students <u>understand</u> how the selection and application of products and systems affect indoor air quality.** Information related to environmental systems considered within the context of construction and interior space has been addressed, up to now, in Building Systems 2 (ARC 2323, now Construction Systems 2) and further considered in Interior Materials and Textiles (ARI 3123).

Beginning in the fall of 2015, the program will provide a substantially more intensive education for interiors students in this subject area.

**Standard 13. Building Systems and Interior Construction**

Entry-level interior designers have knowledge of building systems and interior construction.

The interior architecture curriculum provides students with a broad, professional understanding of construction systems, power distribution systems, mechanical systems, energy management, data/voice telecommunications systems, ceiling systems, security systems, and acoustics through courses that are shared with undergraduate architecture majors.

Information on building materials and systems is introduced in the Integrated Design 2 and 3, (ARC 2126) and (ARC 3117), and Interior Architecture 1, (ARI 3114). Advanced instruction in building systems and construction is provided in Building Systems 2, (ARC 2323), renamed Construction Systems 2. These courses emphasize the nature, development, correct use and properties of materials and systems of construction. Consideration of these materials and systems includes structural principles, as well as geographical, climatic, energy related, code and safety issues. Typical interior construction materials studied include wood, concrete, brick, and glazed ceramic products. Class projects incorporate the study of zoning ordinances, building codes, and barrier-free access requirements, as well as field trips.

***13a. Student work <u>demonstrates</u> an understanding that design solutions affect and are influenced by structural systems.*** Interior architecture students enroll in Structures 1, (ARC 2514) now (ARC 2513), which provides an overview of various structural principles, systems, and considerations involved in the selection of systems. Students are introduced to statics, the mechanics of materials, and structural analysis. The course helps students develop an awareness of structural systems behavior, the structural design process, and it prepares them to collaborate effectively with structural engineers and other consultants.

***13b. Student work <u>demonstrates</u> an understanding that design solutions affect and are influenced by non-structural systems including ceilings, flooring, and interior walls.*** Interior Architecture 2(ARI 3124), Interior Architecture 3, (ARI 4134), Interior Architecture 3(ARI 4134), and Allied Design (ARI 4234) require students to present thoughtful design solution represented in a variety of different presentation methods.

***13c. Student work <u>demonstrates</u> an understanding that design solutions affect and are influenced by distribution systems, including power, mechanical, HVAC, data/voice telecommunications, and plumbing.*** Mechanical systems including heating, ventilating and air conditioning systems; as well as plumbing and water systems, are addressed comprehensively in HVAC and Water Systems, (ARC 3423). Refer to the detailed responses in section 12.

***13d. Student work <u>demonstrates</u> an understanding that design solutions affect and are influenced by: energy, security, and building controls systems*** In Allied Design: Interior, (ARC 4234), students create a site analysis to evaluate optimal positioning for energy efficiency and access to natural light for their

project, which includes an outdoor healing garden. Building, personal safety and patient information security (HIPAA) concerns are integrated into the project design. Building controls such as light sensors, automatic plumbing fixtures and energy efficient lighting and appliances are part of the solutions for energy efficiency

***13e. Student work <u>demonstrates</u> an understanding that design solutions affect and are influenced by the interface of furniture with distribution and construction systems.*** Allied Design (ARC 4234), requires students to technical represent technical design solutions that consider the construction systems and programmatic needs including space planning and furniture placement. Acoustics, Electrical and Illumination Systems (ARC 4443) address work that demonstrates thoughtful solutions that bring furniture placement and interior elements in harmony with construction systems, including HVAC, electrical and lighting systems.

***13f. Student work <u>demonstrates</u> an understanding that design solutions affect and are influenced by vertical circulation systems.*** In (ARC 2323), Building Systems 2 students are exposed to vertical circulation systems as they relate to a multi-story, light-frame building. A two-story structure is introduced in Interior Architecture 2, (ARI 3124), where students are required to incorporate vertical circulation and to consider life safety. The coordination of these related and increasingly complex circulation systems is covered in Allied Design: Interiors, (ARC 4234), and Interior Architecture 3, (ARI 4134).

***13g. Students are <u>able</u> to read and interpret construction drawings and documents.*** Students learn to prepare, read, and interpret construction documents in Building Systems 2, (ARC 2323), now renamed Construction Systems 2). Students examine and prepare documents, including drawings and outline specifications for a multi-story, light frame building.

**Standard 14. Regulations and Guidelines**

> Entry-level interior designers use laws, codes, standards, and guidelines that impact the design of interior spaces.

Regulations are introduced in Building Systems 1 and 2, (ARC 2313) and (ARC 2323), as part of the overall command of building construction and building systems. Non-residential building regulations are covered in Building Systems 2, (ARC 2323), where compartmentalization, circulation, and egress are discussed in lecture content. Students execute material analysis booklets that demonstrate understanding of volatile organic compounds, carcinogenic and hazardous fire retardant chemicals, mold, and other examples of how indoor air quality impacts health and welfare. Knowledge of detection and suppression systems are evidenced in exam questions. Application of codes, regulations, and standards are expected as integral to design projects in upper level studios.

(ARC 4234) requires students to demonstrate an understanding of a broad range of building systems including structures, HVAC, plumbing, and fire protection, integrated with an understanding of environmental psychology and human factors.

Barrier-free design concepts, universal design principles, ergonomics and human factors data are introduced in Integrated Design Studio 2, (ARC 2126). They are applied in all Interior Architecture studios when relevant, and are researched in more detail in Environmental Psychology, (ARI 4123). Human factors and ergonomics are also applied in furniture and millwork design in Furniture and

Millwork, (ARI 3113), and office systems furniture human factors and ergonomics are examined in Interior Architecture 2, (ARI 3124).

The impact on health and welfare of indoor air quality, noise and lighting are specifically addressed in Building Systems 2, (ARC 2323) and Environmental Systems 1, (ARC 3413) where both architecture and interior architecture students receive thorough information on these issues in preparation for careers in both of these disciplines.

***14a. Students have awareness of sustainability guidelines.*** In Building Systems 2, (ARC 2323), students understand the impact of fire and life safety principles with the inclusion of sprinklers and emergency exit signs on reflected ceiling plans and incorporating legends for ceiling plans in studio projects. Fire detectors are indicated on drawings from Building Systems 1 and 2, (ARC 2313), (ARC 2323). Students complete precedent studies in Building Systems 1, (ARC 2321), and identified methods of acoustic control in Environmental Systems 1, (ARC 3413, which demonstrates understanding of health and welfare issues related to noise. Interior Mat, Comp & Textiles, (ARI 3123) and Advanced Lighting Design, (ARI 4143) expose students sustainable practices.

***14b. Students have awareness of industry-specific regulations.*** In Interior Architecture 2, (ARI 3124), students as a group put together a zoning and code analysis book for a specific commercial/institutional studio project. Individual students are assigned the responsibility for each section and asked to highlight the code sections relevant to the project. Advanced Lighting Design, (ARI 4143) shows understanding of health and welfare issues related to lighting.

***14c. Student work demonstrates understanding of laws, codes, and standards that impact fire and life safety, including compartmentalization, fire separation and smoke containment.*** Interior Architecture 2 (ARI 3124) is required to prepare a building code analysis as a group project.
Allied Design: Interior, (ARC 4234): students research codes applicable to general construction and healthcare specific facilities.

***14d. Student work demonstrates understanding of laws, codes, and standards that impact fire and life safety, including movement: access to the means of egress including stairwells, corridors, and exit ways.*** Allied Design: Interior, (ARC 4234) students apply codes applicable to general construction and healthcare specific facilities with special attention to life safety issues such a egress and exiting. Interior Architecture 2, (ARI 3124), requires a drawing as part of a larger set of drawings that show egress. Building Systems (ARC 2323) covers fire-rating assembly.

***14e. Student work demonstrates understanding of laws, codes, and standards that impact fire and life safety, including detection: active devices that alert to occupants including: smoke/heat detectors and alarm systems.*** Interior Architecture 2, (ARI 3124), introduces the integration of security systems and fire detection within interior environments. Allied Design: Interior, (ARC 4234) students identify and locate security cameras, strobe and alarm system elements. Building Systems 2, (ARC 2323) applies knowledge of codes relating to fire and life safety.

***14f. Student work demonstrates understanding of laws, codes, and standards that impact fire and life safety, including: suppression devices used to extinguish flames including sprinklers, standpipes, fire hose cabinets, extinguishers, etc.*** Allied Design: Interior, (ARC 4234), Students identify and locate sprinklers system devices. Students are introduced to the above content in Interior Architecture, (ARI

3124). Building Systems, (ARC 2323), requires students to apply knowledge of the above content through a variety of exercises.

**14g. Students apply *federal, state/provincial, and local codes.*** Through a group project students are exposed to federal, state, and local codes as it relates to the built environment in Interior Architecture 2, (ARI 3124) additionally in Allied Design: Interior, (ARC 4234), students prepare a code analysis defining elements of state, local and healthcare specific requirements.

***14h. Students apply standards.*** Allied Design: Interior, (ARC 4234) students utilize standards from 2010 ADA Standards, Michigan Minimum Standards for Healthcare Facilities and the in designing their projects. Students are required to apply the above standard in Building Systems 1, (ARC 2313) and Building Systems 2, (ARC 2323).

***14i. Students apply accessibility guidelines.*** Interior Architecture 2, (ARI 3124) requires students to design and implement accessible residential and commercial bathrooms. Accessibility guidelines are explored and studied in Interior Architecture 2 (ARI 3124) Allied Design: Interior, (ARC 4234) students utilize guidelines from various health organizations such as the Center for Health Design and the Veterans Administration, The Center for Universal Design, HIPAA and the AIA Guidelines for Design and Construction of Hospitals and Outpatient Facilities

**Standard 15. Assessment and Accountability**

> The interior design program engages in systematic program assessment contributing to ongoing program improvement. Additionally, the program must provide clear, consistent, and reliable information about its mission and requirements to the public.

A University Assessment Committee comprised of a Director of Assessment, faculty representatives from each academic department, the Associate Provost, and the Director of Institutional Research have the primary responsibility of assessing student educational outcomes. The Assessment Committee has developed a detailed plan and process for assessing learning outcomes of Lawrence Tech students for all educational goals.

In addition to annual assessment plans and reports submitted by all academic departments, the University engages in a range of student surveys that yield indirect assessment measures for consideration by the Assessment Committee. a graduating student survey administered by the Provost's Office, and a post-graduation employment survey administered by the Office of Career Services.
The major surveys used at Lawrence Tech are the National Survey of Student Engagement (scheduled to be administered in the spring semesters of 2014, 2017, and 2020), the Noel-Levitz Student Satisfaction Survey (last administered in the fall of 2011)

Lawrence Tech's Academic Program Planning and Review (APPR) process ensures that each academic program is reviewed at least every three years. This collaborative process involves a department self-study, review by the Provost's Office, and a planning discussion between the Provost's Office, Dean's Office, department chair, and program director. The results of the APPR process support the University's annual budget process, the department's academic program development, and the University's enrollment management strategy. The most recent APPR for Interior Architecture was completed in the spring of 2013.

Enrolled students fill out faculty and course evaluations each semester for all courses in the College. Course evaluations are used by faculty to improve teaching methods and improve course content. Interior Architecture students also participate in a comprehensive curriculum evaluation in Internship Studies, (ARI 4922), which is used by the program faculty to evaluate and improve the curriculum and course content.

Faculty work together to monitor the curriculum and courses to respond to current trends and guidelines, student input, and feedback from adjunct faculty. An active Advisory Board, consisting of leaders in interior design fields, meet bi-annually to assist the program with improvement and innovation relevant to current practice. Alumni serve on this Advisory Board. They also support the program through an active College Alumni Association that provides displays of alumni work in the College throughout the year, as well as, and contributes to activities within the College and program.

Employers of student interns communicate with the program and provide an educational experience for students. They also evaluate student interns to assist in the determination of course grades in Internship Studies, (ARI 4922) and as part of the assessment of students.

**Standard 16. Support and Resources**

> The interior design program must have a sufficient number of qualified faculty members, as well as adequate administrative support and resources, to achieve program goals.

**The Interior Architecture Program**

The Interior Architecture Program is generally well supported by the College of Architecture and Design and by Lawrence Technological University, which enables the program to achieve its goals with increasing success and ambitions for its future.

The program employs four full-time faculty members dedicated to the program and required courses are taught by professional interior architecture, architecture, art, design, and engineering faculty. Three faculty members responsible for interior design studio supervision in the 2013/2014 academic year have earned a degree in interior design and three have passed the complete NCIDQ exam. The fourth faculty member, Program Coordinator, Professor Karen Swanson, has a BFA in Interior Design from the University of Michigan, an M.Arch from the University of Illinois Chicago, and is a registered architect. She is scheduled to take the NCIDQ exam in the spring of 2015. The Interior Architecture Program Coordinator reports to the Chair of the Art and Design Department. The Associate Dean of the College of Architecture and Design, Amy Green Deines, who was formerly the Chair of the Department of Art and Design is NCIDQ certified.

All faculty in the College of Architecture and Design belong to ACSA (Association of Collegiate Schools of Architecture) and receive that organization's newsletters as well as invitations to submit papers to regional, national, and international conferences. All full time interior architecture faculty and administrators are members of IDEC, (Interior Design Educators Council). Full time faculty regularly attends the IDEC International Conferences and have presented papers and served the organization. Faculty also belong to professional societies relevant to their specializations such as the AIA (American Institute of Architects) and IES (Illuminating Engineering Society). Interior architecture faculty belong to ASID (American Society of Interior Designers) and IIDA (International Interior Design Association) and regularly participate in professional society activities. Please refer to the individual Personnel Data Forms for specific faculty member affiliations. The LTU Faculty Handbook encourages faculty to engage

in scholarly research and writing as well as professional practice in their fields. Specific examples of juried exhibitions, research papers, publications, and practice accomplishments can be seen in the Personnel Data Forms.

The Associate Dean, Chair of the Department of Art and Design, and the Interior Architecture Program Coordinator participate in the University's recruitment activities both on and off campus. Faculty report to the Chair of the Department of Art and Design, who evaluates full-time and adjunct faculty annually based on requirements in the LTU Faculty Handbook. The Program Coordinator, full-time faculty, and adjunct faculty collaborate to develop the curriculum and implement program changes.

The Interior Architecture Program provides information to the public through the internet at the Lawrence Tech web site http://www.ltu.edu. Admissions policies, program philosophy, course of study, academic quality and student achievement information are available at that site, as is the University catalog.

All interior architecture students are assigned a laptop computer fully equipped with software appropriate to course requirements in the program and professional practice. All full-time and adjunct faculty are similarly assigned laptop computers to support their teaching. The University maintains a computer Help Desk, with a knowledgeable staff, to support the faculty's integration of digital technology into teaching and learning and to assist faculty with learning how to use the laptop computers and software. The digital technology capabilities of the University are detailed below.

**Program Facilities**

Sophomore and junior interior architecture students enrolled in Integrated Design studios are provided with dedicated individual studio work stations in the University Technology and Learning Center (UTLC) building. Junior and senior level interior architecture studios have individual dedicated stations in the immediately adjacent College of Architecture and Design.

Critique space is available in the current facility as well as in the UTLC. The Interior Architecture Program has a permanent display case in the lobby of the College of Architecture and Design and gallery space is available throughout the school to display student, faculty, and guest artists' work. Collaborative activities may occur in studios or other spaces in the building.

Product samples and catalogs are available to students in the Materials Resource Center (MRC) located across from the ARC. The MRC is located directly across from the Architecture Resource Center. The MRC replaces the previous materials library, which was inconveniently located. New materials that are relevant to interiors, architecture, graphics, and product design are continually introduced to this collection. Current periodicals and publications on the different disciplines will also be housed in this office; this is in addition to the journals available in the library. The students' laptop computers may access the Material Connexion website, for further information. The MRC will have interior architecture students employed and dedicated to monitoring and maintaining the center's resources.

Full-time faculty members have private offices and support spaces available for course and project activities and access to conference rooms for meetings. Adjunct faculty have shared work space in the College of Architecture and Design, in room A 150. The program would benefit from additional storage space for student work particularly for large projects waiting to be graded and returned to students.

Technical support staff are available in the wood shop, metal shop, ACRC printing office, and computer lab and a librarian is available in the ARC. A facilities coordinator assists faculty with exhibitions and other functions such as minor renovations, moving, audio-visual equipment services, and furnishings.

An administrator of student services and an assistant are available to support faculty in their advising and other student concerns. One full time and one part time clerical staff member is assigned to all faculty in the College of Architecture and Design along with student.

The College carries out its core teaching and administrative functions on the Southfield campus of Lawrence Technological University in two connected buildings, the College of Architecture and Design and the University Technology and Learning Center (UTLC). As with other design academies, the College of Architecture and Design focuses on the design studio environment and curriculum as the center of the program and the community. The need for a strong studio culture—students and faculty actively engaged in learning, together—influences the configuration of the physical environment of the architecture studios on the Southfield campus as well as the College's venues in Detroit and abroad. The need for studio space guides much of our current work on the College's facilities and our ideas about our future facilities. Our buildings are very much works in progress and we are working with them so that they reflect the intentions and mission of the college programs.

Our vision of the College calls for us to maintain a variety of "micro-campuses" that enable the program and the studio content to have a direct relationship with contextual, political, social and intellectual landscapes, in some cases electronically. Our primary micro-campus will be the Detroit Design and Technology Center, a multi-functional location for academic, research, outreach, and community works. The Center is expected to be available for occupancy in the fall of 2015 at its location in downtown Detroit. Please refer to the section on Micro-Campuses, below.

**Planned Facility Expansion**

The University has embarked on a $55 million dollar construction program that will be implemented over the next several years. The expansion of new facilities and alteration of existing facilities will be implemented in phases based on degree of need and available funding. As for the future of Lawrence Technological University's campus plans as they influence the College of Architecture and Design, the University recently selected internationally recognized architect Thom Mayne and his firm, Morphosis Architects, to design the A. Alfred Taubman Engineering, Life Sciences, and Architecture Complex (TELSA). The concept guiding the design of the new building is interdisciplinary cooperation between LTU's College of Engineering, College of Arts and Sciences, and College of Architecture and Design. The first phase of 30,000 square feet is expected to include a new home for Lawrence Tech's robotics program, science labs, biomedical engineering labs, and space for multidisciplinary student collaboration. The project is in the design phase and the implementation schedule has not yet been established. Subsequent phases of the facilities expansion are more specifically intended to deal with the needs of the College of Architecture and Design.

**College of Architecture and Design Facilities**

At the Main Campus of Lawrence Tech, the primary uses of the College of Architecture and Design, as well as the immediately adjacent UTLC, are as academic and support spaces for the College of Architecture and Design and its programs in architecture, art, and design. The College also conducts classes from the Art and Design Center, including transportation and industrial design, in a separate, north campus building.

The College of Architecture and Design was built in 1962 and originally housed the College of Architecture and the University Library. The College of Architecture's space needs were then satisfied by one large open studio, today referred to as the "freshman wing." The building also housed, as it does today, classrooms for general instruction and faculty offices. The former library wing is now design

studio space and used principally for art and design programs. The College of Architecture and Design also houses an exhibit gallery, a large auditorium, the Dean's Office and associated administrative offices for the College of Architecture and Design, the Department of Art and Design, and the Department of Architecture.

The UTLC, the largest academic building the University has constructed to date, provides state-of-the-art learning facilities and establishes an urban scale "front door" for the 115-acre campus; the building further serves to define, for the first time, a real campus quadrangle, which was landscaped five years ago. The UTLC was designed by the noted architecture firm, Gwathmey Siegel & Associates Architects, and was completed in 2000. The woodshop was enlarged and relocated to the Engineering Building adjacent to the metal fabricating shop; computer labs were expanded and moved to the new building. This enabled the College to create lab spaces for photography and sculpture. The UTLC also provided design studio spaces filled with daylight, dedicated critique and seminar rooms, an appropriate entry lobby, a gallery, a student lounge, printing facilities, classrooms, and office spaces.

In general, the UTLC contains 24 semi-open design studios, three dedicated critique and seminar rooms, a 124-seat fully equipped lecture auditorium, general classrooms and graduate studio or research areas, open computer labs and computer instruction classrooms, and a new Lighting Lab. The bridge space on the fourth floor holds faculty and staff offices.

The main floor entry to the UTLC includes an open area used to host events and which acts as the entry to the UTLC Gallery. The gallery and open area are used for events and for exhibitions of student work from the architecture, interior architecture, graphic design, transportation and industrial design programs. The College's facilities coordinator, working with the department chairs and faculty, handles reconfigurations of the space for different events. The UTLC lobby includes a lounge and study area for students; a small food and coffee service area were added to the lobby in 2011. The remainder of this level contains the Architecture Computer Resource Center, graduate architecture studios, and a dedicated research space for Studio[Ci]. This wing of the building is eventually intended to be specifically dedicated to work spaces for graduate students throughout the College.

**Recent Improvements**

Recently, we have made a number of renovations intended to provide space for programs and ideas that are somewhat different from when the building was erected. Fortunately, both of our buildings are highly flexible as we also are attempting, in this process, to recognize the quality and character of the fine UTLC and the College of Architecture and Design.

The "freshman wing" in the Design Building has just received a complete renovation, with new flooring, furniture, fixtures, and equipment including, dedicated desks and lockable storage, as well as movable and pin-able partitions. This refreshed studio environment supports the College's commitment to its studio culture and collaborative learning space. Among the dedicated spaces, we have recently incorporated a Macintosh Computer Lab that is open 24 hours each day and houses PC and Macintosh platforms and embedded technology for presentations and discussions.

The Architecture Gallery, room A210, and the surrounding public spaces, have received new track lighting as well as vertical surfaces better suited to the mounting and display of student, faculty, and alumni work. These renovated spaces will also host public exhibitions, critiques and juries, and the occasional discussion or lecture. A new screen-printing space has been constructed within the College of Architecture and Design. This space will support both architecture and art and design students. The

College recently hired three new faculty and, as a result, three new offices have been constructed.

**Micro-Campuses: Local Facilities**

*The Detroit Studio [No longer leasing this space]*

The Detroit Studio, a community and urban focused design studio, is now housed in the Federal Reserve Building at 160 West Fort Street in Detroit. We have a one to two-year lease on this space and expect the Studio to move to the new Detroit Center for Design and Technology as described below.

*Square footage: 4,000 SF*

*Occupancy load: 36 students*

*DetroitShop*

Since 2011, the College of Architecture and Design has maintained a multi-disciplinary studio, DetroitSHOP, in the heart of the Detroit's Central Business District in the Chrysler House (formerly known as The Dime Building) on Griswold Street. Since the fall of 2013, DetroitShop and Detroit Studio are consolidate and is located in Federal Reserve Building at 160 West Fort Street in Detroit. This academic space has a studio, a conference and seminar room, and exhibition space. We have a one- to two-year lease on this space and plan for the Shop to move to the new Detroit Center for Design and Technology upon its completion.

*Federal Reserve Building (2013-2014 location)*

*Square footage: 3,500 SF*

*Occupancy load: 32 students*

*Studio Couture, 2011 – 2014 [No longer leasing this space]*

Studio Couture is a multi-purpose arts incubator with a gallery, student-directed design studio, and community arts space, located at 1433 Woodward Avenue in Detroit, in a storefront space rented on a monthly basis. For more information please go to studiocouturedetroit.org.

*Square footage: 2300 SF*

*Occupancy load: 230*

*Ponyride*

The College of Architecture and Design has a permanent classrooms space at Ponyride to support our community-based efforts. Ponyride leases studio space to artists and entrepreneurs who engage the citizens of Detroit in their creative practices. By providing residents with subsidized spaces, participants at Ponyride are able to focus on their art and public works. The Ponyride Studio and Seminar Space is a 200 sq. ft. is located at 1401 Vermont, Detroit MI 48216. The space is provided by an in-kind donation.

*Detroit Design and Technology Center (DDTC)*

*Occupancy date: January 2015*

We expect our new Detroit micro-campus location to be a vibrant destination for design thinking, serving college and high school students, young as well as seasoned professionals, architects, artists, designers, innovators, entrepreneurs, and visiting professionals, as a place where they can collaborate with the broader community. The Center will be a catalyst to validate and fulfill the objectives of new economies within Detroit. To this end, we plan for all Detroit based programs (including the Detroit Studio and DetroitShop) and studios, to be located in this facility along with new exhibition spaces, offices, and applied research program space. The lease arrangement is for five years with an option to extend the lease for an additional five years.

*DDTC Activities*

- Detroit-based Design Studios: We plan to serve neighborhoods, community development groups, and urban artistic endeavors with insights as to how they might influence the future of the city and region.
- Detroit "Think Tank:" We will bring together key partners, leaders, and constituents to envision the 21st century future of the city and the region.
- Applied Research Institute: We will seek and undertake funded research projects that examine the future of Detroit and other metropolitan locations, basic design and planning research that serves community clients, and projects that expand our knowledge of Detroit and the urban condition in general.
- Design Incubator for Sustainable and Social Practice: The Center will engage with entrepreneurial students and faculty to help them integrate sustainability into business practices. These businesses range across the design, architecture, and urban planning fields to social entrepreneurship activities and clean technology businesses.
- K-12 Educational Outreach Program: We seek opportunities to partner with urban schools and students to improve education in science, technology, engineering, and mathematics areas, and to develop design and technological themes.
- Exhibition Gallery: We intend to exhibit the Center's studio and research findings, professional art and design works, and to host traveling exhibitions. The gallery will also host educational symposia and lectures on Detroit, design, and emerging technologies for the broader community.

*Location: Woodward Avenue and Willis Street, Detroit, MI 48201*
*Square footage: 8000 SF*
*Occupancy load: 250*

**Micro-Campuses: International Program Spaces**
*Paris*
During the summer semester, the College of Architecture and Design maintains a studio presence in Paris. The program provides a full-time semester of study for participating students. The facilities, course offerings and length of stay are intended to immerse the students into the city of Paris while providing a rigorous academic experience. A typical semester involves one Allied Design studio (four credit hours) along with one art and design elective and a required literature elective. A typical Paris summer student might enroll in the following courses: Allied Design (ARC 4264), Photography (ART 3023), or (LLT 3613) Literature and Art.

Before leaving for Paris, students first prepare with research and design assignments at Lawrence Tech. The studio travels together to Paris for a four-week residency and study program. While in Paris, the students reside in the American Dormitory at the Cite International University of Paris (CIUP). Located in the 14th Arrondissement, the CIUP provides an academic campus for Lawrence Tech. The campus includes dormitories, student dining, library, lecture halls, auditorium and athletic fields. Please also refer to http://www.ciup.fr/en/node.

*La Paz*
The Universite Catolica provides studio space and computer facilities to support the studio. Beyond that, work spaces are found within a loose network of locations in and around the cities of La Paz and El Alto; we borrow time and facilities from cafes with wireless internet, local metalworking shops, public plazas, and the street. Participants stay in large groups with local families for the duration of the program; the homes also provide dedicated spaces for gathering and meetings.

*Shanghai*

Each summer, Lawrence Tech conducts a design workshop in Shanghai, China. A typical workshop will be framed around a specific design challenge or competition. The workshops are hosted by the Shanghai University of Engineering and Science (SUES). During the workshops, students and visiting faculty stay in university housing for a period of three weeks and work in a dedicated studio of approximately 2,000 square feet. Students work in groups, are paired with local Chinese students, and are led by one Lawrence Tech and one SUES faculty member. The students have access to the studio 24 hours a day and faculty work with students ten hours each day in a continuous design charette. The workshop culminates with a design critique at Tsinghua University in Beijing.

**Support Functions in the College**

*Architecture Computer Resource Center (ACRC)*

The ACRC is a full-service plotting and printing facility that charges for services on an 'at cost' basis. The Center, located in room T 215, is overseen by a manager and proficient student assistants who conduct the day-to-day business. The ACRC has a wired infrastructure direct to its servers, as well as a wired path to the EDCC servers. Scanners, plotters, and printers are available for student and faculty use. This facility offers a range of printing services to the students, faculty, and staff with extended hours of operation at the end of each term. The ACRC primarily serves the students and faculty within the College but also offers services to other colleges at Lawrence Tech. Black and white printing is also available at no charge without quotas to students at various public locations throughout the campus.

*Architecture Resource Center (ARC)*

Additional equipment and learning materials required to support program objectives is available to faculty and students in the Architecture Resource Center (ARC) in room A 131 in the College of Architecture and Design. The ARC is a branch of the University Library, holding computer projectors, overhead projectors, slide projectors, a slide collection, cameras, light meters, books, journals, and other materials about interior architecture, architecture, are available for use by students and faculty. The ARC also houses a small photo studio with backdrops and lights. Computer labs have approximately 25 computers for use by students and faculty with advanced graphics software and other software not available on the laptop computers available to all faculty and required for all students in the College.

*Woodshop*

The Woodshop is equipped with essential woodworking equipment for models, furniture, and sculpture projects and includes equipment such as table saw, miter saw, band saw, jointer, router table, stationary sanders, scroll saw, vacuum press, air compressor, laser cutter and a 2-stage dust collector. In 2013, the Trotec laser saw – a popular tool among students –was updated with a Speedy 300. In the interest of user safety, and to allow greater access to the table saw, a Sawstop 52" cabinet saw was purchased in 2012. In 2013, an LTU board member donated a 20" Grizzly surface sander to the woodshop. In addition to hand held power tools such as drills, sanders, routers, jig saws and a plate jointer, the shop has hand tools and supplies, such as clamps, fasteners, sandpaper, chisels, files, and planes. All tools are kept in the shop and are available to students and faculty. The Woodshop is located in room E3, in the Engineering Building, next to the UTLC.

**Computer Resources and Digital Technologies**

All computer-related equipment maintenance and consultation services are provided by University

funds. Equipment and software acquisition is supported by college funds, grants and donations. Budgets, workload balance, and new initiatives are defined and prioritized through the IT Governance structure. Every student in the College of Architecture and Design receives a laptop computer with a full suite of software needed for the programs' coursework. Please refer to the software list below for details.

The University has developed a governance structure for IT planning to prioritize and manage the IT services, comprised of the following elements:

The *IT Strategic Committee* consists of the Provost, the Vice President of Finance, the Executive Director of IT and several faculty members. The group, which includes a College of Architecture and Design representative, meets periodically to set the direction and priorities of technology initiatives.

The *IT Advisory Group* is a working level committee formed with representatives from the various college and operational departments to coordinate IT related initiatives on campus.

The *Student Technology Advisory Group* is a student group, which reports to Student Government on IT and technology related issues.

*Additional Information Gathering:* Meetings are also held with various student groups, deans, college faculty and key vendors to communicate IT related projects and gather input on specific issues. CoAD is currently active in the one-on-one laptop program (LTuZone) equipment evaluation.

The *IT Technical Infrastructure* is a campus-wide system. The College of Architecture and Design has access to all IT technical resources on campus and remote connections. The campus network, internet access, campus-wide wireless access, centralized server-based applications, and LTU student laptop program applications are available for use on campus, in University housing, and remotely. Improvements in all these areas have been recently made and more are planned in order to meet increasing demand.

*The Edward Donley Computer Center (EDCC)* houses most of the IT infrastructure equipment used throughout the university. The network backbone, core system servers, storage area network (SAN) and telecommunications equipment are located in this closely monitored computer room with physical security measures, environmental controls and fire suppression system. IT controls and processes are reviewed each year as part of the campus financial audit.

The campus buildings are connected via fiber-based backbones between the buildings and network closets back to the network core in the EDCC. Internet access is available from the Merit Network in Michigan and has been upgraded to provide 250mb connection to the Internet and Internet 2. Remote connections are available to all students and faculty via web based services and VPN connections. For example, the current Detroit Studio has printing and plotting capabilities. Those services will be migrated to the Detroit Federal Reserve building space, which is currently under construction.

*The Campus Wireless System* covers the entire campus and housing units with coverage utilizing 801.a, b, g and n protocols. Off-site offices in the Detroit Studio, Chrysler House and Federal Reserve building also have internet access. Off campus remote access is also available to students for the core Banner and Blackboard systems. Remote VPN access also gives students access to services. All IT technical components are consistently under life cycle evaluation and studied for areas of improvement.

*Centralized Information Systems:* The core institutional system for admissions, registration, class scheduling and degree tracking is provided by the SunGard HE Banner system. Student and University financial matters are also maintained in Banner. The system is continuously updated with supported versions and various efforts are underway to enhance its functionality and use.

The computer *Help Desk* is the first point of contact for students, faculty and staff to assist them in resolving problems with software, network connectivity issues, laptop issues, and other computer related problems. Walk-in support is available at no charge for problem diagnosis, laptop distribution and repair, password resets, software installation, wireless network configuration, email setup, and instruction and training. The Help Desk also provides first level support for eLearning issues.

*My.ltu.edu*, Lawrence Tech's comprehensive learning and services portal, offers an expanding variety of resources and conveniences. Among them is *Blackboard*, a comprehensive and flexible learning software platform that delivers the University's course management system, customized institution-wide portals, on-line communities, and an advanced architecture providing Web-based integration with the University's administrative systems. *Blackboard* offers students 24/7 access to professors and fellow students not available in the typical classroom environment. Professors can post their syllabi online, as well as class lectures and assignments, for immediate retrieval by students with an Internet connection. Other features available through Blackboard are discussion boards for posting questions and receiving answers to and from other students and the professor in the class, advising, virtual chat room capabilities for asynchronous communication with the entire class, and the ability for students to submit assignments online. Video streaming, synching with Facebook, Wimba and other add-ons are also available via links to Blackboard. Google Hangouts software is also used to teach and supplement various online classes. Students and faculty are provided LTU-administered *Google Apps for Education* accounts for email, calendaring documents and website creation. Each student also has allotted network disk space. A centralized room scheduling system is also in place for use.

*eLearning* Services provides support for LTU Online, course development, media production, online evaluation and assessment, and classroom technologies. eLearning provides documentation, instruction, and support to students, faculty and staff for enterprise applications via my.ltu.edu eLearning also works with faculty for course integration of enterprise and discipline-specific applications into courses. IT and eLearning have also developed web-based support documentation via the LTU eHelp link to supply general computer system information, training documents and FAQs. This support mechanism is evolving and continuously being expanded to cover additional systems.

The *LTuZone Laptop Computer Program* started as the student laptop initiative in 2000. This program gives all students and faculty access to personal use of a laptop for the academic year with specific applications installed depending on their academic program. The recently renamed “LTuZone” laptop initiative program was developed with input from administration, faculty, staff and students and will be pursued for at least the next four years. The LTuZone environment effectively places all the equipment and software of a “lab” with each student at all times. Undergraduate students participate in the laptop program as part of their tuition; they pay only a security deposits on the laptops. The deposit is refunded to the student when the unit is returned. Graduate students may also receive a University laptop but pay a set amount per credit hour. A new cycle of equipment will be purchased for the fall of 2014.

*Software:* Representatives from the College departments and programs evaluate and make

recommendations as to the required software needed for each program. Input is also received from industry representatives so that the software reflects what is being used in the professions. For example, the interior architecture college students currently receive a Lenovo workstation level laptop with the following software preloaded:

| | | |
|---|---|---|
| Adobe | Speciality Software | Learning Tools |
| CS6 Master Collection | Abaqus (CD) | Blackboard Wimba |
| Adobe Creative Cloud access | ArcGIS | Panopto Recorder |
| Reader | B2 Spice A/D | PDF Annotator |
| Air | Pro Catia | UW Classroom Presenter 3 |
| Shockwave | ChemDraw Pro | NOOK Study |
| Flash | Chempad | |
| | CityEngine | Utilities |
| Microsoft | CrazyBump | Browsers – Various |
| Endpoint Protection | CulvertMaster v3.3 | CD Burner XP |
| Access | DataStudio | 7-Zip |
| Excel | FlowMaster v8.11 | K2 software |
| InfoPath Designer | Grasshopper | mySQL Installer |
| InfoPath Filler | Hammer V8i | Printer and Plotter drivers |
| OneNote | InterVideoWinDVD | Quicktime |
| Outlook | LabVIEW | Realplayer |
| Powerpoint | Logger Pro | Safe Connect Policy Key |
| Illustrator | Maple | VLC Media Player |
| Word | MapleSim | VPN Client |
| Project Professional | Mathcad | WinSCP |
| Visio Professional | MicroCap | |
| 2013 | Mind Walk | Google |
| Silverlight | Minitab | Google Apps for Education |
| Calc Plus | PDF Creator | Google Earth (Free Version) |
| VisualStudio.NET Premium | Pond Pack v8i | Google Drive |
| | PsychoPy | |
| Autodesk Education Master Suite | Ram Structural Systems | |
| Revit | Rhinoceros | |
| AutoCAD | RISA-3D | |
| Navisworks Manage | RTT Delta Gen c | |
| 3DS Max Design | SAP 2000 (y CD) | |
| Architecture | Scientific Viewer | |
| MudBox Lenovo only | SewerCADv8i | |
| Autocad Civil 3D | SewerGEMS v8i | |
| Inventor Fusion | SketchUp Pro | |
| Alias Automotive | Spartan | |
| Maya | StormCAD v8i | |
| MotionBuilder | Structure Point | |

| | | |
|---|---|---|
| (Lenovo only) | | |
| | Syntax2D | |
| | UCL Depthmap | |
| | WaterCad V8i | |
| | WaterGEMS v8i | |

For special needs and certain program requirements, other software is loaded on the student and faculty laptops. Student versions of software and equipment are also available for free or purchase at discounts using LTU agreements with companies such as Abaqus, Adobe, Autodesk, Maple Soft, Microsoft and Minitab.

*Computer Laboratories* throughout campus allow both general and specific function computer access to students.

| CoAD Labs | Other Labs |
|---|---|
| A236 – iMac classroom and individual use | Library – iMacs and Windows Workstations |
| T221- iMacs and Windows workstations | E152–Windows workstations with Google Earth Pro |

*Measurement of usage by faculty and students:* From a network perspective, there are no routine attempts to monitor or measure individual computer usage. Monitoring and investigation are performed if there is reasonable cause to determine inappropriate usage or to resolve technical issues. The only type of internet traffic that is usually blocked is peer-to-peer protocols, which could be used for the illegal downloading of copyrighted materials. Aggregate measures of traffic, data storage, and usage is captured in various ways to plan and modify systems for performance or planning purposes. Internet traffic is also monitored in the same way to better route and use campus bandwidth. Print volumes are measured to determine if the proper devices are deployed in a cost effective manner. For example, academic system usage of Blackboard is beginning to be analyzed for usage patterns so as to better utilize the system and establish usage standards.

**Services available to assist students and faculty:**

**Information Services Support Structure**
Information Services support is provided to the university through coordinated efforts of the centralized IT department and eLearning Services. The IT department consists of the Edward Donley Computer Center (EDCC) and the Computer Help Desk.

**The EDCC**
The EDCC provides IT support to the entire Lawrence Tech community by offering an expanding variety of educational technology resources and enhancing the IT infrastructure. EDCC provides access to and support for computing systems and software, email accounts, laptops and personal computers, the Internet, printer access, access to network drives, university telephones, and internal and external data networks.

**The Computer Help Desk**
is the first point of contact for students, faculty and staff to assist them in resolving problems with software, network connectivity issues, laptop issues, and other computer related problems. Walk-in support is available at no charge for problem diagnosis, laptop distribution and repair, password resets,

software installation, wireless network configuration, email setup, and instruction and training. The Help Desk also provides first level support for eLearning issues.

**eLearning**
Services provide support for LTU Online, course development, media production, online evaluation and assessment, and classroom technologies. eLearning provides documentation, instruction, and support to students, faculty and staff for enterprise applications via my.ltu.edu eLearning also works with faculty for course integration of enterprise and discipline-specific applications into courses.
IT and eLearning have also developed web-based support documentation via the LTU eHelp link to supply general computer system information, training documents and FAQs. This support mechanism is evolving and continuously being expanded to cover additional systems.

**Accessibility**
of the computer facilities and services to students and faculty and how students' access to these facilities is provided and monitored
**The LTuZone laptop initiative**
along with the supporting IT infrastructure allows Architecture students and faculty access to services anywhere on campus and in university housing. Each student also has the ability to log into Banner, Blackboard and other services, including library resources, remotely via the Web or LTU Virtual Private Network (VPN).

Approved Architecture users are given network and application ID's based on their role, along with a LTU based Google Apps for Education email account at no charge. Black and white printing is also available at no charge without quotas to students at various public locations throughout the campus. Various computer laboratories throughout campus also allow both general and specific function computer access to Architecture students.

| **CoAD Labs** | **Other** |
|---|---|
| **A236 – iMac classroom and individual use** | **Library – iMacs and Windows Workstations** |
| **T221- iMacs and Windows workstations** | **E152–Windows workstations with Google Earth Pro** |

Student versions of software and equipment are also available for free or purchase at discounts using LTU agreements with companies such as Abaqus, Adobe, Autodesk, Maple Soft, Microsoft and Minitab. Periodic vendor promotions to LTU are also offered to students and faculty.

All computer related equipment maintenance and consultation services are provided by University funds. Equipment and software acquisition is supported by college funds, grants and donations. Budgets, workload balance and new initiatives are defined and prioritized through the IT Governance structure.

**Undergraduate students** participate in the laptop program as part of tuition only by paying a security deposits on the laptops they receive. The deposit is refunded to the student once the unit is returned. Faculty members also have access to the laptop program. Graduate students may also receive a University issued laptop but pay a set amount per credit hour.

**Plotters and Printers**
Architecture students are able to print B&W materials for free at 7 public student printer locations across campus. There is no limit or quota on the volume of printing per student. These public printers

allow for standard letter size and 11 x 17 printing.

**Color printing** is available for a nominal cost in the Library and at the ACRC. Letter size color prints are $0, 50 and 11 x 17 costs $1.00. Plotting is available at the ACRC at a nominal cost determined to cover the annual plotting expenses and is dependent on the size of the plot and paper used.

**The Architecture Computer Resource Center (ACRC) Print Desk** provides printing, scanning, and computer-related services. Services such as color printing, large-format printing and plotting, scanning, and report binding are available throughout the school year during operating hours. Specialized printers produce large-format CAD plots, as well as photo-quality prints and posters. After hours, 24/7 self-service black-and-white printing is available on the public printer by the Print Desk, as well as color laser printing and scanning to the Hotspot printer in the lobby adjacent to the Print Desk. Scanners are also available for student use.

**Ricoh HotSpot printers** are available to allow printing directly from laptops and mobile devices. These are located in the library (pay at the desk or use PayPal), in the Architecture Resource Center (A131), and in the atrium of the Buell Management Building. Black-and-white prints are free on these devices. There is a charge for color printing of 50 cents per page.

**The current detroitSHOP and Detroit Studio** also has printing and plotting capabilities. Those services will be migrated to the Detroit Federal Reserve building space, which is currently under construction.

**Measurement of usage by faculty and students**
From a network perspective, routine attempts to monitor or measure individual computer usage are not done.

Monitoring and investigation is performed if there is reasonable cause to determine inappropriate usage or resolve technical issues. The only type of internet traffic which is usually blocked is peer-to-peer protocols which could be used for the illegal downloading of copyrighted materials.

Aggregate measures of traffic, data storage and usage is captured in various ways to plan and modify systems for performance or planning purposes. Internet traffic is also monitored in the same way to better route and use campus bandwidth. Print volumes are also measured to determine if the proper devices are deployed in a cost effective manner.

Academic system usage of Blackboard is beginning to be analyzed for usage patterns to better utilize the system and set usage standards.

**Self-assessment of any limitations of the education of Architecture students resulting from the current computer facilities:**
The available computing facilities are appropriate to the mission of the College of Architecture and Design. Continued infrastructure and upgrades of hardware and software are planned with input from various the University IT governance groups.

1) ***Provide a brief description of the conclusions you have drawn about overall program quality. In what ways are your students especially well prepared to enter professional practice as interior designers? What areas could be further strengthened to support current or future preparation of program graduates?***

***Interior Architecture Program Assets***

- A strong emphasis on student development and preparation for design practice
- A curriculum that reflects the profession through its curriculum and practicum
- An emphasis on collaborative practice
- Preparation to lead design conversations related to social and political issues
- An emphasis on sustainable life and work
- Engagement in the critical discussion concerning the role of the interior architect in the redevelopment of the existing building stock and in urban redevelopment.
- A commitment to urban challenges and opportunities

***Preparation of Students for Professional Practice***

The Interior Architecture Program introduces students to an interdisciplinary learning environment at the beginning of the design studio experience.

Students are exposed to 'real world' projects and interactions with clients, which encourage a greater understanding of the climate and conditions and of the profession.

Courses are taught by a committed, professional faculty, full time and adjunct instructors with diverse educational backgrounds and work experiences, dedicated to the preparation of students for successful practice and to the long-term success of the program.

LTU's interior architecture graduates obtain permanent positions in the field as a direct result of the program's practicum experience. Employers seek to hire well rounded, prepared students who possess the rigorous, if fundamental, knowledge and skills required for an entry-level position. Practicing interior architects and designers value LTU students' preparation for leadership, communication, and understanding. LTU graduates grow into strong, professionals who enjoy long tenures at strong firms.

The program continues to expand its International study experiences, which enlarge students' global perspectives. LTU classrooms and design studios are gatherings of diverse groups of students from a wide variety of nationalities including US, Canada, India, China and Saudi Arabia.

LTU's location in a large metropolitan area, and the context of Detroit in particular, offer a range of opportunities to engage with community organizations and to cultural and socio-economic diversity.

***1. What areas could be further strengthened to support current or future preparation of program graduates?***

With the program's increasing number of international students, we need to expand opportunities for a better mixing of students, both academically and socially.

We need to continue to increase student exposure to the appropriate use of sustainable materials and construction methods.

**2)** ***Provide a brief description of your plans for future program development. What changes to curriculum or resources have been planned and/or implemented to improve gaps in the educational program identified through self-study? When are these changes likely to occur? What changes in the program, institution, higher education, the profession, or society may impact the program in the future? What is being done to address emerging issues, trends, or challenges?***

a. Within the Visual Communications course sequence a new emphasis will be placed on the exposure and application of a broader range of both creative and technical software.

b. In the future Structures Course Sequence, the content will better reflect the technical knowledge required for the practice of Interior Architecture.

c. As with many college students, time management is clearly a skill that requires more focus. Students, this year in particular, complained about software issues due to aging computers, but they were not adept at finding alternate solutions. This was made evident by a number of projects not coming to completion in a timely manner.

d. Students have inconsistent skills in the management of digital software. Students appear to get locked into one program, where they have limited skill, rather than using a variety of programs and techniques. There is frequently poor decision making on just how to advance a project and to determine the point at which different strategies or techniques might be implemented.

e. The merging of Building Systems 1 and 2 into one course will allow Interior Architecture students the opportunity to have a condensed exposure and application of systems specific to practice of Interior Architecture. Content will be specific to environmental systems and structural systems and how they interface with interior components. Emphasis will be placed on clear and concise representation of the ordering of these systems.

f. As Building Systems 1 and 2 become merged the opportunity to carefully place the HVAC and Water Systems into a technical course will be beneficial. Faculty who teach studio can integrate these concepts into design challenges within the design proposals.

g. We are discussing ways to move Environmental Psychology (ARI 4123), earlier in the curriculum sequence. Students would benefit greatly by taking it earlier so that these ideas may be incorporated into Interior Architecture 3 (ARI 4134) capstone projects.

*When are these changes likely to occur?*

*2015*

***What changes in the program, institution, higher education, the profession, or society may impact the program in the future?***

Issues that will continue to influence society and the design of the built environment are the fast pace of globalization, the increasing concern for the quality of the built environment, and the appropriate use of natural resources. With regard to our program and institution, we see the need for an Increased focus on time management skills due to growing number of distractions offered by our fast-paced society and its rapidly evolving communications technologies.

***What is being done to address emerging issues, trends, or challenges?***

Issues of rapid globalization are being addressed through our continuing engagement with the city of Detroit and its diverse urban and suburban cultures and by offering students more opportunities for travel study programs. Our international students also contribute to this conversation. The city of Detroit is also our laboratory for investigations as to how to increase the quality of the built environment as well as the intelligent use of natural and human resources.

*When preparing paper copies of the report, insert the Curriculum Matrix followed by Faculty Data Forms in place of this page. A detailed outline of the curriculum structure, including liberal arts and prerequisites also assists the CIDA visiting team. The program should refer the team to the appropriate college catalog page if the detailed curriculum structure is published therein or should be sure to include an outline with the Curriculum Matrix. For the electronic copies of the report, Submit in Adobe Acrobat format as one complete file by inserting the completed institutional and program data form, faculty data forms and curriculum matrix into the PAR template*

## *Curriculum Matrix*