External Program Review Committee Final Report  
School of Applied Technology  
Illinois Institute of Technology

Background
At the request of the Illinois Institute of Technology Board of Trustees, an external program review committee was assembled to examine the School of Applied Technology (SAT), its academic programs, faculty, administration, staff, facilities and students. The committee was comprised of the following individuals:

- Andrea Berry (Chair), Senior Vice President, Broadcast Media Services, Fox Networks
- Dr. Charles Czuprynski, Director, Food Research Institute and Professor and Chair, Pathobiological Sciences, School of Veterinary Medicine, University of Wisconsin
- Dr. Robert Friedman, Professor and Director of the Institute of Technology, University of Washington Tacoma
- Dr. Barry Lunt, IT Program Coordinator and Professor, Brigham Young University
- Dr. James Mohler, Associate Dean of Academic Affairs & Diversity and Professor of Computer Graphics Technology, College of Technology, Purdue University

The committee was on the IIT campuses on April 1-2, 2014. The committee or parts thereof, visited with various faculty, students, administrators and staff and examined facilities at the main, Rice and Moffett campuses. This brief report summarizes the committee's review of the school and specific feedback pertaining to institutional alignment, administration and staff, programs, English as a Second Language (ESL), research, faculty, students, and facilities. The document concludes with a section on suggested future directions.

Executive Summary
The committee believes that the programs of the School of Applied Technology (SAT) are well aligned with both the IIT mission and the needs of the industries they support. While there are areas for improvement and realistic threats that should be addressed, these are far outweighed by strengths and opportunities for the school and the IIT. The faculty, staff and administration should be commended for their ongoing efforts to form and organize the new school. The current programs are sound and have various avenues for growth and expansion. These impressions are supported by the materials and data provided to the committee, as well as the numerous interviews with administrators, faculty, and students that occurred during the two day visit to the three campuses and their facilities.

Institutional Alignment
- Creation of the SAT was insightful; the school significantly contributes to the IIT institutional mission and the employment needs of industry.
- The planned Center for Innovation seems to be an important part of IIT activities. The SAT also sees it as critical to their current and future mission.
- The SAT has the potential to serve as a hub or connector to many other disciplines at the IIT. It has the potential to synergize with several other programs on campus and is in a unique position amongst the other schools at the IIT.
Programs
Overall, each of the following programs is highly relevant to the needs of industry. All programs have high student placement rates and the overall average starting salary for SAT graduates is in-line with institutions having similar programs. All programs also appear to be profitable and benefit the IIT overall.

Industrial Technology and Management (INTM)
- A unique aspect of this program is that it assists working professionals to advance in their careers.
- The program has beneficial relationships with the City Colleges of Chicago, community colleges and professional organizations such as unions.

Information Technology and Management (ITM)
- The program’s strength is in the high demand area of forensics and cybersecurity.
- Due to the number of online courses offered (and the quality of them) there is a great opportunity for ITM to become nationally recognized.

Food Science and Nutrition (FdSN)
- The M.S. program hits a sweet spot for which there are few competitors nationally and internationally.
- There is an opportunity for FdSN to develop a high-quality, in-demand bachelor’s degree.
- Development of a Ph.D. program can be initiated with limited input and will increase the visibility of the FdSN program.

Office of Professional Development
- The ESL program is an important part of the Office of Professional Development activities. The current success of the ESL program, in part, derives from its being housed in a school such as the SAT, one that seeks to serve and collaborate with other academic units, has a broad vision, and has deep experience in providing a practical approach to English language remediation. If the program continues to be successful (and/or grows), the institution should be cautious about moving ESL out of the SAT.

This concludes the executive summary. The remainder of this document describes specific strengths, weaknesses, opportunities and threats related to each of the specific areas.

Specific SWOT Details
Administration and Support Staff
- Strengths
  - The support staff has much energy, passion, and many creative ideas. It is obvious that they function well as a team. It is likely they are the proverbial glue that holds together the SAT. The same behaviors are modeled and supported by the present dean.
  - The administrative staff serves as advisors to the students. The staff seems very flexible in doing what needs to be done. They demonstrate outstanding understanding of the programs, processes and procedures necessary to help students make degree progress.
  - Dr. Robert Brackett brings a unique set of experiences and skills to bear to the food program and is very well regarded within the food industry.
- Weaknesses
  - At many institutions, academic advising is done by professional staff that wholly focuses on advising. If significant growth occurs, having advising done by so many people –
particularly faculty – may be a limiting factor to managing the growth and maintaining a high level of service and quality.

- Quality and upkeep of the physical buildings was addressed as a major weakness. Restroom facilities, stained ceiling tiles, and other general maintenance items do not contribute to an environment that is aesthetically pleasing or inviting to prospective students, families or alumni.

- **Opportunities**
  - There are significant opportunities for growth in the programs and school.
  - Obtaining NCA accreditation, which will allow the institution to handle I-20 processing, should lead to even greater growth in the ESL program.
  - The SAT is in the process of hiring a dedicated recruiter that should help increase the visibility of the school’s programs and ultimately the number of qualified applicants and admits to the programs. This person would also serve as a liaison to the department of admissions.

- **Threats**
  - Dr. Robert Carlson, Dean of the SAT, carries a great number of titles and responsibilities. Is there a succession plan? What is the impact if there is significant growth in SAT programs (in which these responsibilities grow)?
  - Potential program growth could overload the infrastructure and personnel resources available. They already appear to be stretched thin with several people wearing multiple hats. The people involved seem to handle this well, but there is a limit to the number of tasks people can perform effectively.

**English as a Second Language (ESL)**

- **Strengths**
  - The ESL program is profitable and opens the door to other academic offerings within the SAT and the IIT as a whole.
  - Although ESL could be seen as an odd fit in the SAT, the leadership of the SAT has integrated it well and turned the program into a strength for both the SAT and the IIT.
  - Students spoke very highly of the program. Its existence in the SAT makes learning more relevant (and likely more motivating) for the students.

- **Weaknesses**
  - None noted or observed.

- **Opportunities**
  - If the institution becomes NCA accredited and able to grant I-20 visas, the program could grow substantially.

- **Threats**
  - Unmanaged growth could be a significant threat (i.e., the quality of the program could decrease; individuals could be over-tasked) if not adequately staffed.

**Research**

- **Strengths**
  - The Moffett Center and the FDA funding are strengths for the college, as are the IFSH faculty who have a proven track record of garnering research funding.
  - The FdSN M.S. program is an asset that should contribute to a greater number of publications and/or grant proposals.

- **Weaknesses**
Industrial Technology and Management (INTM) and Information Technology and Management (ITM) have not historically participated strongly in research. This will need to change over time so that they become equal partners in the SAT and the institution as a whole.

**Opportunities**
- As INTM and ITM faculty participate more fully in the research enterprise, the overall profile of the SAT will increase.
- There is an opportunity to raise the visibility of the SAT through graduate projects and graduate honors programs.
- Within Food Science and Nutrition (FdSN), there is an opportunity to increase the faculty’s portfolio of research funding from industry and governmental agencies.

**Threats**
- There needs to be a consistent definition of research productivity and associated expectations. Without that, attracting faculty and faculty progressing through the tenure/promotion process will be difficult.
- The FDA decision to not fund the nutrition program of FdSN is a challenge to that group. This increases the importance of pursuing and securing extramural funding.
- The highly competitive environment for federal funding overall is a challenge to all programs and units.

**Faculty**

**Strengths**
- Adjunct faculty are very dedicated and qualified; they teach highly relevant content in the classroom; they are highly respected by students. Teaching excellence is evident based on teaching scores and they appear to be managed very well – they feel well connected and well respected.
- The industrial experience of the faculty is a huge asset – and the guest lecturers (mentioned by faculty, leadership, and students) – are a unique and positive aspect of the SAT’s programs and courses.

**Weaknesses**
- There is an urgent need for more tenure track faculty in most of the SAT programs.
- There is a lack of defined expectations for tenure track faculty (the balance amongst undergraduate teaching, research and service).
- Marketing was acknowledged by the faculty as a significant problem. The IIT as an institution is relatively unknown within Chicago and beyond. The SAT and its programs are similarly unknown as widely as they should be. “IIT is a well-kept secret.” Branding and the identity of who the IIT is not well known.

**Opportunities**
- Faculty mentioned several areas that could be potential content areas that could be added as programs, concentrations or other programmatic aspects. These include: sustainability, environmental issues (grand challenges), resource management, and global impact issues.
- The IIT may want to consider finding ways to connect programs across campus through seminars, talks, etc. around broad themes (e.g., computing, engineering, science, management) that would draw faculty and students from traditional and non-traditional schools to create connections and spur synergies. IPRO could also be a vehicle to garner
such connections. An indirect effect of this effort may be breaking down traditional barriers across disciplines or schools.

- There is an opportunity to improve the relationship between ITM and the Board of Overseers.

**Threats**
- Finding qualified tenure track candidates may be a challenge for some programs.
- As tenure track faculty are added, political issues may arise (adjunct versus tenure track faculty).

**Students**

**Strengths**
- Things that draw students to the SAT include: the city of Chicago, the reputation of the programs, the fact that faculty are industry professionals (both knowledge and the faculty’s networks). The students represent the institution and their programs very well. The students felt that the programs and faculty were personable, down-to-earth, and accessible.
- Special connections to organizations such as the IBEW, the FDA, and the food industry in general were specifically noted by students.
- Global partnership programs (such as the agreement with Spain) were perceived as highly valuable. A draw for international students are programs such as these that allow them to remain and work in the U.S. under OPT and CPT programs.
- Several students noted that the student organizations (CSCN groups) help them connect with one another and with the industry as a whole.
- Students receive very good advising (both professional and academic) before and during their time here.

**Weaknesses**
- Students said the career fairs and the Career Management Center did not really help them or include them. The best information and opportunities comes through the school and/or faculty and staff in the departments. The software (“Nacelink”) used at the Career Management Center could be greatly improved.
- Students acknowledged that the video quality of the online materials were sometimes poor. The resolution of the video as well as the syncing of the audio and video were often lacking. Students also suggested that they would like to have access to online course materials beyond the end of the semester that they took the course.
- Students would like to be exposed to a wider range of industry tools. A specific example was that they were taught Oracle but would like to also learn Microsoft IIS or mySQL. Another example was the opportunity to learn CISCO technologies. Students suggested that the institution may be able to garner access to online materials or other things (certifications) that students could use to supplement their learning on their own.

**Opportunities**
- Development of undergraduate and Ph.D. food science programs.
- Accreditation of the ITM program by ABET CAC could benefit the programs, students and their reputations.
- ITM is an acknowledged Center of Academic Excellence in information assurance and cybersecurity, which allows application to the National Science Foundation
(NSF) for Scholarship for Service funding. This funding could greatly benefit students, reduce cost of attendance, and provide career path options.

- **Threats**
  - Competing for jobs with graduates in the Chicago and northern Illinois region.

**Facilities**

- **Strengths**
  - The IFSH has strong facilities with unique capabilities. The Moffett campus pilot plants offer opportunities that few can match.
  - The Clinical Nutrition group is well positioned and has a very nice facility. They have the potential to be a draw both for students and collaborative research.
  - The Rice building has two very well provisioned labs, one for telecommunications work and another for cyber forensics. The faculty leading the labs have deep knowledge and influence in their areas of expertise.
  - The way that SAT has structured their online recording facilities for distance education has likely strengthened both the online experience as well as the on-campus experience (because on-campus students have access to the recorded online materials). Students have access to materials in multiple learning modes for different learning styles.

- **Weaknesses**
  - The IFSH pilot plants (i.e., BSL3) are a high cost item but offer extraordinary opportunities.
  - Having the food science students take classes on the main campus but go to Moffett for the microbiology lab is not optimal.
  - Space constraints are a problem, as is the aged nature of the available buildings.
  - The Rice building has no basement and limited storage, which is very constraining.

- **Opportunities**
  - IFSH has a large pilot plant area (Moffett campus) that has great potential, but it is outdated (equipment, building infrastructure) and would need significant refurbishment to modernize it. This is a potential fundraising item.
  - The Rice campus seems to have a lot of potential space for expansion.

- **Threats**
  - The space constraints on main campus may be a hindrance to the probable growth of the program.
  - Balancing programs across the various campuses seems to be a challenge.

**Future Directions**

- Adding new tenure track faculty to the SAT is an imperative, particularly in light of the significant growth potential that the committee believes is imminent.
- There needs to be a succession plan developed for the dean of SAT, who has multiple responsibilities.
- If growth occurs (students and faculty) as the committee suspects, there may need to be a delegation of tasks and responsibilities by the dean to assist with that growth.
- A decision needs to be made about the future of the Rice campus and how it will be utilized.
- To assist the faculty in being more effective with grant writing and grant productivity, the SAT may want to consider using short-term consultants to conduct training on grant writing or sending faculty to grant writing workshops that are offered nationally. Faculty may need to be briefed on the services offered at IIT, such as the Office of Sponsored Research.
• The institution should invest in marketing and branding within the Chicago area, as well as nationally.
• The Office of Institutional Advancement should begin developing relationships with the alumni base of the SAT. Although the school is new, some programs with graduates have existed for as long as 17 years. Development-oriented relationships should be started immediately with alumni. Efforts should also focus on corporate and industrial donors who need to be made aware of the new school’s efforts and the graduates who could be beneficial to their companies.