

**Visiting Team Worksheet - Baccalaureate Level  
2003 Handbook**

**Industrial Technology**

**Visiting Team Report  
for the  
National Association of Industrial Technology**

**Institution: Purdue University, West Lafayette**  
**President or CEO: Dr. Martin Jischke, President**  
**City & State: West Lafayette, Indiana 47907**

**Previous NAIT Accreditation(s):**

Initial Accreditation: Initial  
Follow-up Visit: MARCH 29-31, 2006

**Visiting Team Members:**

Name: Dr. Mohammed F. Fahmy  
Organization: University of Northern Iowa

Name: Dr. Mohan S. Deygun  
Organization: Buffalo State University

Name: Dr. Paul J. Kauffmann  
Organization: East Carolina University

**Current Accreditation Request Date:**

September 6, 2005

**Date of Accreditation Self-Study Report:**

February 20, 2006

**Program(s) Reviewed (with Options):**

Program: Computer Graphics Technology  
Options : None

**Date of Visiting Team Report:**

April 10, 2006

## I. The On-Site Visit

### A. Date of the Visit

March 29-31, 2006

### B. The Visiting Team

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### Schedule for NAIT Visit to Review Industrial Technology Program

#### C. On-Site Visit Agenda

Arrival March 29, 2006			
<i>Time</i>	<i>Location</i>	<i>Purpose</i>	<i>Personnel</i>
1:00-2:00	INDY Airport	Arrival	NAIT Team
2:00		Transportation to WL	Team Drives to W. Lafayette
3:00	Purdue Memorial Union	Hotel check-in	Team: All
4:00	Purdue Memorial Union	Team caucus	Team: All
5:00	Meet Dr. Sarapin at PMU Hotel Desk	Tour Knoy Hall	Team: All
6:00	Sarge Oak City Center	Reception/Dinner with Select Faculty	Team: All
7:30	Knoy 352	Organizational Meeting with Department Head	Team: All
9:00	Purdue Memorial Union	Team caucus	Team: All

Day 1 March 30, 2006			
<i>Time</i>	<i>Location</i>	<i>Purpose</i>	<i>Personnel</i>
6:45-7:30	Purdue Memorial Union, Sagamore Room	Breakfast with visit CGT advisor and department head	Team: All
8:00-8:30	Hovde 100	Visit Provost Sally Mason	Team: All
8:45-9:15	Knoy 469	Visit Dean Dennis Depew College of Technology	Team: All
9:30-10:00	Knoy 352	Visit College of Technology Associate Dean Mary Sadowski	Team: All
10:15-10:45	Knoy 352	Visit COT Business Officers Lary Troutner and Rhonda Jones	Team Member: Kauffmann
11:00-11:30	Knoy 352	Visit with Department Heads and TCN Lonnie Bently, William Krug, Niaz Latif, David Sigman, Kerry Arnold	Team Member: All
11:30-11:45	Knoy 355	Visit Documentation Room Visit Classes	Team Members : All Kauffmann
12:00-12:45	PMU Lafayette Room	Lunch with GCT Faculty	Team Members : All
12:45-1:20	PMU Lafayette Room	Interview CGT Faculty as a group, and individually	Team Members: All CGT Faculty
1:30-2:45	Knoy B019	CGT 245 Lecture Observation: Morales	Team member: Kauffmann
1:30-2:15	Stewart Center 128	Visit Envision Center: Dr. Bertoline	Team member: Fahmy and Devgun
2:30-3:15	SCHL 109	Interview Admissions Assistant Director Al Hefner	Team Member: Devgun
3:30-4:20	Knoy B 109	CGT 256 Lecture Observation: S. Miller	Team Member: Kauffmann
4:30-5:00	Knoy 256	Meet with undergraduate students, and alumni	Team Member: All
5:00-5:30	Knoy 256 Reception Area	Pizza and sandwiches with students	Team Member: All CGT students
6:00	Knoy 352	Team caucus	Team Member: All
7:00	Purdue Memorial Union	Report planning	Team Member: All

<b>Day 2 March 31, 2006</b>			
<i>Time</i>	<i>Location</i>	<i>Purpose</i>	<i>Personnel</i>
7:30-8:30	Purdue Memorial Union	Breakfast with undergraduate and graduate Coordinators	Team Member: All
9:00-9:20	Stewart Center 318	Faculty and Advisory Board Introductions	Team Member: All
9:30-10:15	Stewart Center 318	Meet with CGT Advisory Board	Team Member: All
11:00-11:30	POTR 155	Interview Library Administration Michael Fosmire, Amy Van Epps	Team member: Kuaffmann
11:00-11:30	Stewart Center	Visit Center for Career Opportunities Timothy Luzader	Team Member: Devgun
11:00-11:30	SCHL 3 <sup>rd</sup> Floor	Interview Financial Aid Carol Cooper	Team Member: Fahmy
12:00-12:45	PMU Lafayette Room	Lunch with Advisory Board and CGT faculty	Team Member: All
1:00	Knoy 256	Meeting with Department Head	Team member: Fahmy
1:00	Knoy 256	Report Preparation	Team Member: All
2:30	Knoy 469	Exit Report in Dean's Office	Team Member : All
3:45	Transportation to INDY Airport	Indy Airport	Team Members : All
7:00	Flights	Indy Airport	

#### **D. Current Accreditation Status of Programs**

Initial

## II. General Information

### A. The Institution

Administrative Unit(s) Information

#### **Purdue University- West Lafayette**

Head: Dr. Martin C. Jischke, President  
Chief Academic Officer: Dr. Sally K. Mason, *Provost*  
Financial Officer: Dr. Morgan R Olsen, *Executive Vice President and Treasurer*

#### **College of Technology:**

Dr. Dennis Depew, *Dean*  
Dr. Mary Sadowski, *Associate Dean*  
Dr. Michael O'Hair, *Associate Dean*  
Dr. Melissa Dark, *Assistant Dean*

#### **Department of computer Graphics Technology:**

Department Head: Dr. Marvin I. Sarapin

**III. Compliance with Standards** (describe how each program and option complies with, or fails to comply with each standard - the final line shall indicate whether the program or option is in non-compliance, partial compliance, or compliance)

### 6.1 Preparation of Self-Study Report

**Self-Analysis: The Self-Study Report shall follow the guidelines and be completed by a representative portion of the institutions administrative staff, teaching faculty, and students.**

The self-study report was well prepared and thought out, and followed the NAIT guidelines. It was also validated that the information for the report came from across the Purdue campus including administration, professional staff, and faculty. However, the visiting team found out that student involvement was in providing information through a survey to a limited number of them. We could not interview a major student contributor during our campus visit due to previously scheduled job interviews as reported by Dr. Sarapin.

#### **Compliance**

### 6.2 Philosophy and Objectives

**6.2.1 Mission: The department, college, and institutional missions shall be compatible with the approved definition of Industrial Technology.**

The university mission and vision statements as well as those of the department and the School of Technology were presented on pages 7, 11 and Appendix B of the self-study. The program under review is one of eight programs in the College of Technology as reflected in organizational chart of the college presented in Appendix A.

The Department Mission and Vision Statements are presented on page 2 of its strategic plan document included in the self-study which also contains statements and goals that are compatible with the NAIT definition of industrial technology.

**Compliance**

**6.2.2 Program Definition: The major program definition and purpose shall be compatible with the approved definition of Industrial Technology.**

The statement regarding the Computer Graphics Technology Program is described as : “The CGT baccalaureate is a technical managerial program combining elements of the disciplines of art, science, and technology in focusing on applications of visual information.” As stated in the self-study report, “Students can choose to generalize in applied computer graphics technology or develop more in-depth knowledge and skills in areas such as interactive multimedia development; animation and spatial graphics; virtual product design graphics; or architectural and construction graphics technology.” It was determined that such definition is compatible with the NAIT definition of industrial technology.

**Compliance**

**6.2.3 Program Acceptance: Each major program shall be understood and accepted by appropriate individuals and representative groups within the internal university community and the external business and industrial community.**

The program is understood, accepted and supported internally and externally. Evidenced through conversations with the University Provost, the COT Dean and Associate Dean, the Center for Career Opportunities Office, the Financial Aids Office, Library Administration Staff, and the Industrial Advisor Council and past students indicated clearly that the CGT program is well understood and accepted as required by this standard.

**Compliance**

**6.2.4 Program Goals: Each major program shall have: (1) clearly written short and long range goals and objectives, which are consistent with the mission statements; and (2) plans for achieving them.**

The CGT Program identified five priority goals listed on page 14 of the Self-Study Report as well as metrics to achieve them. The five listed goals are consistent with the mission statement listed earlier. The listed goals, however, did not clearly identify short-range or long-range goals and objectives as required by this standard. The Strategic Plan documents for the College of Technology and that of the CGT Department did not provide such distinction either.

## **Partial Compliance**

### **6.3 Major Program(s)**

**6.3.1 Program Name: Each major program and/or program option shall have appropriate titles (titles such as business, engineering, or education that imply the focus of the program is in a related field of study are not appropriate).**

The program title is: Computer Graphics Technology (CGT) with no options offered.

#### **Compliance**

**6.3.2 Program Level: The major program shall lead to the baccalaureate degree, and not less than the junior and senior years of baccalaureate level study shall be offered by the institution seeking accreditation. Appropriate lower division requirements may be offered by the same institution or may be transferred from other institutions including community colleges and technical institutes.**

The program leads to a Bachelor of Science degree in Computer Graphics Technology which requires 123 semester hours of course work.

#### **Compliance**

**6.3.3 Program Definition: The major program may have more than one option, specialization, or concentration; but specific course requirements for each option shall be clearly specified, and all program options shall meet or exceed NAIT standards. Certain standards, such as follow-up studies of graduates, may not be appropriate for new options within established major programs and a waiver may be granted by the Board of Accreditation upon the recommendation of the visiting team.**

The Computer Graphics Technology program at Purdue University offers a Bachelor of Science degree in Computer Graphics Technology (CGT).

#### **Compliance**

**6.3.4 Program Emphasis: Primary emphasis in the major program shall reflect the technology of contemporary industry.**

Based on the written materials in the self-study, materials on file in the resource room, and in conversations with students and faculty the primary emphasis of the program reflects contemporary computer graphics technologies and industrial applications.

## Compliance

**6.3.5 Foundation Requirements: Major programs shall be a minimum of 120 semester hours (or equivalent) and must meet the minimum foundation requirements shown in Table 6.1. Programs may exceed the maximum foundation requirements specified in each area, but appropriate justification shall be provided for each program and/or program option that exceeds the maximum limits. A specific list of courses and credit hours that are being counted toward each category shall be included in the Self-Study Report.**

**Table 6.1 - Major Programs  
Minimum - Maximum Foundation Requirements (semester hours)**

Categories	Required Hours	Pro/Opt 1 CGT
General Ed	18-36	18
Mathematics	6-18	11
Physical Science	6-18	7
Management	12-24	18
Technical	24-36	48
Electives	6-18	21

The Computer Graphics Technology Program at Purdue University meets the Foundation Requirements in the General Education, Mathematics, Physical Sciences, and management categories. The program, however, exceeds the NAIT requirements in two categories, namely the Technical, and the Electives categories. The visiting team observes that the College of Technology, where the CGT Program is housed offers structured technical degrees which require a greater depth and breadth of technical development of its graduates. The requirement for completing a BS degree in GCT also is 123 hours rather than the regular 120 hour requirement for other programs.

## Compliance

**6.3.6 Course Sequencing: There shall be evidence of appropriate sequencing of course work in each major program to ensure that advanced level courses build upon concepts covered in beginning level course work.**

Evidence of proper sequencing of coursework within the GCT program major was verified from the university catalog, and information and material provided during the on-campus visit in the resource room.

## Compliance

**6.3.7 Application of Mathematics and Science: Appropriate applications of the principles of mathematics and science shall be evident in technical course work.**

Pages 17 of the self-study indicate that appropriate math and science concepts are being applied in several courses. Inspection of the course material and student work on site also indicated that ample applications of mathematics and science principles were integrated into the technical work throughout the course work.

**Compliance**

**6.3.8 Computer Applications: The major program shall include instruction on computer applications and the use of computers for *information retrieval and problem solving*.**

The self-study report states on page 19 that: “Virtually every course in the CGT major includes extensive computer applications with a high degree of emphasis on student problem solving. Computer applications are pervasive in the CGT baccalaureate degree program. The CGT faculty is careful that instruction goes beyond the teaching of how to use specific software tools, making data visualization and problem solving the ultimate instructional priority.” This was, indeed, verified by team members during the course of the on-campus visit.

**Compliance**

**6.3.9 Communications: Oral presentations and technical report writing shall be evident in course requirements.**

A review of student coursework and program syllabi disclosed technical writing and presentation skills evident within the program as listed on pages 19 of the self-study document and material provided during the site visit. The team verified that the students take courses requiring oral presentations and technical report writing such as Com 114 which sets students up for oral communications. There is evidence that written reports are required throughout the curriculum in several courses taken by students. In addition, Purdue University maintains an On-Line Writing Lab (OWL) providing a range of resources to help students further develop written communication skills. Examples of student reports will be available during the campus visitation.

**Compliance**

**6.3.10 Industrial Experiences: Each major program shall include appropriate industrial experiences such as industrial tours, work-study options and cooperative education, or senior seminars focusing on problem-solving activities related to industrial situations. The industrial experiences shall be designed to provide an understanding of the industrial environment and what industry expects of students upon employment.**

Evidence through interviews with faculty, students, the Industrial Advisory members and a review of the course syllabi, it was evident the CGT students are introduced to appropriate industrial experiences through field trips organized by CGT faculty to industrial sites, the Co-op education and internship experiences which are encouraged on an optional basis. Furthermore CGT 411 and CGT 450 are two courses with focus on problem solving which afford students exposure to the business and industrial applications of computer graphics technology.

## **Compliance**

### **6.3.11 Competency Identification: Competencies shall be identified for each major program, including all available options, which are relevant to the employment opportunities available to graduates.**

A listing of individual course competencies are listed for each course which was described as a course-imbedded competency model followed by the CGT Program at Purdue. The program faculty, industrial advisors, select program employers, and alumni were surveyed to solicit their reactions and evaluation of the course-embedded competencies. These course competencies were then modified according to the responses of the surveyed experts. While this effort is an excellent effort, no reporting was done on how these competencies would be achieved in each of the major areas of the CGT program.

## **Partial Compliance**

### **6.3.12 Competency Validation: Validation of major program outcomes/student competencies shall be an on-going process and shall be accomplished through a combination of external experts, an industrial advisory committee(s), and follow-up studies of program graduates. Documentation of this validation shall be provided in the Self-Study Report.**

The program has made a good start at complying with this standard by identifying the course level outcomes and getting input from students, faculty, and IAB members on importance of these competencies. Currently, there is no clear and direct evidence of accomplishment of these outcomes. We encourage the program faculty to continue to work on this area and define specific ways to measure accomplishment of these goals and outcomes.

## **Partial Compliance**

### **6.3.13 Program Development, Revision, and Evaluation: Major program development, revision, and evaluation shall involve currently enrolled students, individuals responsible for instruction, program graduates, and representative employers.**

The department has embarked on an extensive curricular review and solicited input from faculty, students, employers of program graduates, and advisory council members. This process resulted in the change in focus of the department's degree offerings from its early history in Engineering Graphics, through its intermediate emphasis on Industrial Illustration, into the current dynamic program in Applied Computer Graphics Technology. Documentation of such consultations were verified during the campus visit.

## **Compliance**

**6.3.14 Transfer Course Work: Institution and/or department policies shall be used to evaluate course work transferred from other institutions. All programs/options, including those with a significant amount of transfer course work, must meet the minimum credit hour foundation course requirements (Tables 5.1 and 6.1) in each category.**

There is a university wide policy for the evaluation of transferred work from other institutions. Significant evidence was provided through interviews and web sites to disclose policies and procedures for evaluating transfer work and to substantiate its meeting and/or exceeding minimum credit foundations requirements.

## **Compliance**

**6.3.15 Upper Division Course Work: Students shall successfully complete a minimum of 15 semester hours of junior or senior level major courses at the institution seeking program accreditation.**

The CGT program advisory sheet indicates the students complete in excess of 15 hours of upper division courses.

## **Compliance**

**6.3.16 Program Publicity - Adequate and Accurate Public Disclosure: Institutions shall broadly and accurately publicize, particularly to prospective students: (a) Industrial Technology program goals and objectives, (b) preadmission testing or evaluation requirements and standards, (c) assessment measures used to advance students through the program(s), (d) educational achievement rates of graduates, and (e) fees and other charges.**

Visits by team members with such university administrators and personnel as the Dean of the college, Admissions Office personnel and other administrators revealed ample evidence that the CGT program is publicized through several channels. Some examples of such channels are the Purdue Marketing and Information Services Office which designs and produces traditional and electronic publications featuring the College of Technology and the Department of Computer Graphics Technology. Furthermore, there exists extensive World Wide Web presence for the University, College of Technology, and Department of Computer Graphics Technology.

## Compliance

**6.3.17 Legal Authorization: Only institutions legally authorized under applicable state law to degree provide a program beyond the secondary level and that are recognized by the appropriate regional accrediting agency are considered for accreditation.**

Purdue University has been accredited by The North Central Association of Colleges and Schools (NCA) since 1913. The university is a land-grant institution, originating with the Morrill Act in 1862 to teach “agriculture and the mechanic arts and developed over the years to become an international leader in technology, engineering, and agricultural education.

## Compliance

### 6.4 Instruction

**6.4.1 Study Guides: Course Syllabi which clearly describe appropriate course objectives, content, references utilized, student activities, evaluation criteria, and a range of examples of students graded work shall be available for each course.**

The CGT program has a standard format which requires each course syllabus to clearly describe the course objectives, content, references utilized, student activities, and evaluation criteria. Exhibits which were made available to the visiting team in the resource room during the on-campus visit contained samples of student graded work and other instructional activities for each course.

## Compliance

**6.4.2 Reference Materials: Appropriate reference books, library materials such as periodicals, audio-visual materials, and computer application software (when appropriate) shall be utilized for each course or series of courses to supplement textbooks or course packs.**

There are several discipline-specific libraries at Purdue university such as: Purdue Library System <http://www.lib.purdue.edu/libraries/>, John W. Hicks Undergraduate Library <http://www.lib.purdue.edu/ugrl/> , and Siegesmund Engineering Library <http://gemini.lib.purdue.edu/ENGRdatabases/index.cfm>. CGT students have ample opportunities to access reference materials in these libraries as well as audiovisual and computing resources. In addition, the College of Technology computing resources are managed by the Technology Computer Network TCN which provides support and services for all the CGT program computing needs. Another unique resource for the CGT faculty and students is the state-of-the-art Envision Center for Data Perceptualization which was opened in the summer of 2004.

## Compliance

**6.4.3 Program Balance: Appropriate laboratory activity shall be included in the program(s) and a reasonable balance must be maintained in course work between the practical application of how and the conceptual emphasis of why.**

The self study report and material inspected on campus identify which course have lab components. Following a review of the provided documentation and a tour of the laboratory facilities it was determined that an appropriate balance exist.

**Compliance**

**6.4.4 Problem-Solving Activities: Emphasis in instruction shall be appropriately focused on problem-solving activities which reflect contemporary industrial situations.**

Review of the course binders revealed a significant emphasis on problem solving activities such as required by class projects, presentations, and team activities. These appear to be complex assignments that challenge student accomplishment and problem solving.

**Compliance**

**6.4.5 Motivation of Students: Effective motivation of students shall be evident.**

Several examples of student motivation were evident. These include enthusiasm displayed by students in interviews with the team. In addition, the class room and laboratory observations indicated student involvement and activity. Finally, there are active student societies which invite outside speakers, visit industry, and hold meetings for professional development

**Compliance**

**6.4.6 Supervision of Instruction: Appropriate supervision of instruction shall be evident throughout the program.**

The department has a Department Head who has the primary responsibility for the supervision of instruction assisted by a team of course supervisors who are tenure-line faculty members with appropriate expertise related to the courses they supervise and are responsible for planning, organizing, delivering, assessing, and overseeing the consistent delivery of courses in the major.

**Compliance**

**6.4.7 Scheduling of Instruction: The organization and scheduling of instruction shall allow adequate time for completion of appropriate homework assignments and laboratory problem-solving activities.**

A senior department faculty member serves as the Undergraduate Program Coordinator and Schedule Deputy to help the department head plan the course offering schedule and to secure classroom and laboratory resources working closely with the Purdue Space Management and Academic Scheduling (SMAS) office. The scheduling of instructional activities for both lecture and lab sessions for the CGT Program were deemed to allow adequate time to students to complete their course work and related assignments.

## **Compliance**

### **6.5 Faculty**

**6.5.1 Full-Time Faculty: Each major program and program option shall have an adequate number of appropriately qualified full-time faculty. Faculty qualifications shall include emphasis upon extent, recency, and pertinence of: (a) academic preparation, (b) industrial professional level experience (such as technical supervision or management), (c) applied industrial experience (such as technical applications), (d) membership and participation in appropriate Industrial Technology professional organizations, and (e) scholarly activities.**

Review of the faculty vitae, and discussion with faculty on campus indicate clearly that the CGT program has an adequate number of qualified full-time faculty who meet all the items listed for this standard.

## **Compliance**

**6.5.2 Minimum Faculty Qualifications: The minimum academic qualifications for a tenure track faculty member (except in unusual circumstances which must be individually justified) shall be a bachelors and masters degree in a discipline closely related to the faculty members instructional assignments.**

All 21 CGT faculty who have instructional responsibilities meet the minimum requirements of this standard.

## **Compliance**

**6.5.3 Academic Preparation of Faculty: A minimum of fifty percent of the regular full-time faculty members assigned to teach in the major program(s) shall have an earned doctorate (exceptions to this standard will be granted only for unique programs such as Marine Transportation). If more than one major program exists at an institution, this standard will apply to all regular full-time faculty assigned to teach major programs in Industrial Technology at the institution. Exceptions *may be granted* to this standard if the institution has a program in place that will bring the institution into compliance within a reasonable time.**

As listed in page 30 of the self-study report and verified during the on-campus visit, of the 21 full-time faculty in the CGT program 8 earned a doctorate degree, two are ABDs, and

the rest with a master degree. The visiting team was informed that a new faculty member, holding a doctorate degree, accepted a new position while the team was on campus. In addition the visiting team found that the department has a well documented plan to hire more faculty with terminal degrees in the field in the future.

### **Partial Compliance**

#### **6.5.4 Selection and Appointment Policies: Policies and procedures utilized in the selection and appointment of regular faculty shall be clearly specified and shall be conducive to the maintenance of high quality instruction.**

Selection and appointment of faculty for the CGT Program are governed by established policies and procedures for the College of Technology as well as the university and are well documented.

### **Compliance**

#### **6.5.5 Tenure and Reappointment Policies: Faculty tenure and reappointment policies and procedures shall be comparable to other professional program areas in the institution. Requirements in the areas of teaching, service, and scholarly activity shall be clearly specified for faculty in Industrial Technology.**

Promotion and tenure and reappointment policies are well documented at the university and College of Technology levels and are communicated to faculty at the new faculty orientation program.

### **Compliance**

#### **6.5.6 Faculty Loads: Faculty teaching, advising, and service loads shall be comparable to the faculty in other professional program areas at the institution. Consideration shall be given in faculty teaching load assignments to high contact hours resulting from laboratory teaching assignments.**

Faculty loads in the Computer Graphics Technology department are comparable to other departments within the College of Technology. Furthermore, Purdue university has a well established criteria dealing with faculty loads which is made up of three basic areas of learning, discovery, and engagement expectations. The CGT department head adjusts faculty loads each semester depending on the individual faculty member's involvement in discovery and engagement for the semester.

### **Compliance**

## **6.6 Students**

**6.6.1 Admission and Retention Standards: Admission and retention standards shall be used to ensure that students enrolled are of high quality. These standards shall compare favorably with the institutional standards. Sources of information may include admission test scores, secondary school rankings, grade point averages, course syllabi, course examinations, written assignments, and oral presentations.**

University admission office has a well documented admission procedure and related criteria to insure the admission of high quality students comparable to other programs.

### **Compliance**

**6.6.2 Scholastic Success of Students: Students in Industrial Technology shall have scholastic success comparable to those in other curricula in the institution. Grading practices in Industrial Technology courses shall be comparable to other departments and/or programs in the institution. Evidence shall be presented to indicate the scholastic achievement level of Industrial Technology students in both basic studies and major course work.**

As evidenced by material provided on site, information listed in the self-study, and visits to different offices on campus the College of Technology and the CGT Program students are on par scholastically or above the students in other curricular programs. Students must earn a GPA of 2.5 in the CGT freshman sequence to be admitted to the BS degree program in CGT. Students may not use a CGT course to count toward graduation unless they earn a grade of C or better. Students may not repeat a course twice without special permission to do so.

### **Compliance**

**6.6.3 Placement of Graduates: The initial placement, job titles, job descriptions, and salaries of graduates shall be consistent with the program(s) goals and objectives. The advancement of graduates within organizations shall be tracked to ensure advancement to positions of increasing responsibility. Industry's reaction to graduates as employees must be favorable. Follow-up studies of graduates shall be conducted every two to five years. Summary statistics relating to follow-up study of graduates shall be made available to prospective students. These statistics shall include placement rates as well as salary levels of program graduates.**

The data regarding initial placement and advancement of graduates are available showing the progress of graduates in positions of responsibility. Salary levels and the position title of the graduates are available to prospective students. However, students feel that more efforts should be dedicated to placement of graduates through recruiting more companies to visit campus and interview graduates of the program.

### **Compliance**

**6.6.4 Graduate Studies: If an objective of the program(s) is to prepare students for graduate studies, then the success of Industrial Technology graduates in graduate programs shall be tracked and confirmed.**

The department does not have the preparation of students for graduate studies as a primary goal or objective.

**Not Applicable**

**6.6.5 Student Evaluation of Program(s): Evaluations of the Industrial Technology program(s) shall be made by its graduates on a regular basis (two to five years). Their reactions and recommendations shall be considered in program revisions.**

Only two senior survey evaluations (Appendix L, Spring and Fall 2005) were available to the team. It is understood that the first cohort group of students, after the program revision into its new format, started in 2004. However, no evidence of the use of the results of these surveys in any program revisions was evident.

**Partial Compliance**

**6.6.6 Student Enrollment: Enrollment shall be adequate in each program area to operate the program(s) efficiently and effectively. The level of available resources shall be considered as a constraint on the maximum number of qualified students to be admitted to the program(s). Enrollment shall be tracked, and factors affecting enrollment patterns shall be identified and analyzed. Enrollment projections shall be made which relate closely to short and long-range goals and resource needs.**

The self study report lists the number of undergraduate students enrolled in the program for the period of 2002-2006. It seems that there is an adequate number of majors and that it almost stays stable. The team was made aware of the fact that the CGT department has a comprehensive enrollment management plan and a strategic plan addressing the enrollment history and target for the BS and MS degree programs in Computer Graphics Technology.

**Compliance**

**6.6.7 Advisory and Counseling Services: Adequate and timely advising and counseling services shall be available for students.**

Several different advising and counseling avenues or services are available for students starting or transferring to the university. The CGT department employs 1.5 FTE personnel who are in charge of student academic advising. In addition, Purdue University maintains a Center for Career Opportunities located in Stewart Center (<https://www.cco.purdue.edu/>) open to all majors. The center offers a full range of resources for students, alumni, employers, and faculty including career counseling, resume writing, career fairs, employer presentations, placement, and advisory services. The center has a liaison to the College of Technology.

## **Compliance**

### **6.6.8 Ethical Practices: Ethical practices shall be fostered, including equitable student tuition refunds and nondiscriminatory practices in admissions and employment.**

Admissions are governed by established regulations for Purdue University and are well documented. Refund, ethical, and non-discrimination policies of the university are published and available to the public on the university web site and several publications as well.

## **Compliance**

### **6.7 Administration**

#### **6.7.1 Program Administration: Programs in Industrial Technology are expected to have an identifiable, qualified individual with direct responsibility for program coordination and curriculum development. This individual should be a full-time employee of the institution.**

Dr. Marvin Sarapin is the Department Head, who has direct administrative responsibilities for the CGT Program, is a well qualified individual with extensive experience prior to joining Purdue University and the department.

## **Compliance**

#### **6.7.2 Administrative Leadership: Individuals assigned to administer Industrial Technology programs must demonstrate effective leadership and satisfactory support for Industrial Technology.**

The Computer Graphics Technology Department Head, and the College of Technology Dean are capable leaders and work together as a team.

## **Compliance**

#### **6.7.3 Administrative Support: There must be appropriate support for Industrial Technology from the personnel holding leadership positions in the departments and colleges where Industrial Technology is administratively located.**

The Dean supports the program. The visiting team was provided documentation which clearly reflects the fact that the program is allocated resources in an equitable manner compared to the other units in the college. The team's visit with provost also indicated a high level of support to the college and department.

## **Compliance**

### **6.8 Facilities and Equipment**

**6.8.1 Adequacy of Facilities and Equipment: Physical facilities and equipment, which are suitable to serve the goals and objectives of the program(s), shall be available for each program option. Where facilities and equipment appear to be minimal to support a quality program(s), comparisons with support levels for other relevant programs at the institution will be made by the visiting team.**

The self study report as well as observations made by the visiting team on site clearly indicates that there is an adequate support of the CGT department facility and equipment. . The program is computer intensive and has extensive computer facilities supported by the university's Technology Computer Network (TCN) and the Information Technology at Purdue (ITAP).

### **Compliance**

**6.8.2 Support for Facilities and Equipment: Facility and equipment needs shall be reflected in the long range goals and objectives for the program(s), and sources of potential funding shall be identified.**

Facilities and equipment are supported through a competitive proposal process for all the departments in the College of Technology. The department computers are upgraded on a predetermined cycle and are kept up to date with the needed software for the CGT applications. CGT students along with COT students have access to the Envision Center which is a state-of-the-art interactive and animation facility supported through federal funding. The only concern that the team found here is that there is no full-time technician to maintain/repair equipment or computers. CGT faculty do such tasks which are believed to take away some valuable time and effort that could be otherwise directed to research and scholarly activities.

### **Compliance**

**6.8.3 Appropriateness of Equipment: Equipment shall be appropriate to reflect contemporary industry.**

An adequate number of computers is available through the CGT department, the College of Technology, and Purdue University to serve the CGT needs. Both hardware and software needs are updated regularly to meet program instructional needs.

### **Compliance**

## **6.9 Computer Systems**

**6.9.1 Availability of Computer Systems: Appropriate computer systems shall be available to students and faculty to cover appropriate functions and applications in each program area. These systems may be on or off-site and centralized or**

**decentralized as long as the systems are accessible to students and faculty by means of remote terminals and/or input-output devices.**

Computers are in use in CGT department laboratories, and faculty offices. In addition, several dedicated computer labs are available throughout the university and college for CGT student's use. Support material provided to the team in the document room reflected ample open-time lab hours for CGT students in both departmental or COT and university labs.

## **Compliance**

**6.9.2 Utilization of Computer Systems: Evidence shall be available which indicates students and faculty are making adequate and appropriate use of computer systems.**

Inspection of lab schedules and curricular review indicates a high utilization of computer facilities. However, a concern has been raised by students related to availability of lab times and some specialized versions of software (especially related to room 346) at the times of intense project deadlines.

## **Compliance**

### **6.10 Financial Resources**

**6.10.1 Financial Support: The budget for the Industrial Technology program(s) shall be adequate to support program objectives. When judging sufficiency, the visiting team may wish to make comparisons with the support levels given to other professional programs at the institution.**

Support levels for the CGT program and similar professional programs within the university and within the college are comparable. The self-study report describes a system in which: "Department heads in the College of Technology at Purdue University have great fiduciary autonomy and are assigned a business manager who is housed in the college. Funds can be transferred between accounts and can be carried forward to the next year, since the money given to the departments is fungible." All material inspected by the team and discussions with several administrators indicate that the financial support for the program is adequate.

## **Compliance**

**6.10.2 External Financial Support: There shall be evidence of external support for the program(s) in Industrial Technology. However, this external support shall be treated as supplementary support and be used to achieve and maintain a high level of excellence. This external support shall not be used to displace funding support normally provided by the institution.**

The self-study report lists several external funding in several such areas as: internal grants, travel grants, external grants, cash gifts, and gifts-in-kind. The level of funding for these areas, as listed in the self study and verified on campus, is consistent and adequate for the program needs.

## **Compliance**

### **6.11 Library Services**

**6.11.1 Library Resources: The administrative unit containing the Industrial Technology program(s) and/or the institutional library shall maintain a collection of Industrial Technology literature and reference materials adequate to meet the curriculum and research needs of students and faculty.**

The technology students primarily are supported by the Siegesmund Library. This facility is well equipped and the staff collaborates with the CGT program to order books and other resources. Approval plans exist to select needed additions to the collection for CGT related topics. The faculty also has access to web forms to request purchase of library resources.

## **Compliance**

**6.11.2 Utilization of Library Resources: Evidence shall be available which indicates that students and faculty are making adequate and appropriate use of library resources.**

Discussion with the Siegesmund Library staff indicates that a significant number of CGT texts are active and used by CGT students. Relative to research and library use skills, the self study indicates that faculty require that students to include references to trade and industry journals in assignments and expand beyond simple web searches. CGT226 is described in the self study as a course that requires professional writing skills through literature and searched reports. However, mention of this was not found in the resource information available to the team for CGT 226.

The CGT department should consider integrating a formal presentation and orientation to the use and availability of the library as a part of one of the core courses, perhaps CGT 101.

## **Compliance**

### **6.12 Support Personnel**

**Support Personnel: Personnel such as teaching assistants, student work-study assistants, secretaries and service technicians shall be adequate to support program objectives.**

The support personnel as required by this standard are deemed adequate as listed in the self study report and verified by the on-campus observations of the visiting team. However hiring a full-time technical staff to maintain equipment and ensure safety practices during lab sessions would a great and needed improvement and would free faculty time for ather activities such as research and scholarly activities.

## **Compliance**

### **6.13 Placement Services**

**6.13.1 Placement Services: Appropriate services shall be available to assist with the placement of program graduates. Placement of graduates shall be tracked and the effectiveness of the services shall be evaluated by the administrative unit containing the Industrial Technology program(s).**

In addition to individual faculty, there exists a centralized placement office, The Center for Career Opportunities, which provides students with various opportunities to seek suitable employment after graduation. These include job fairs, resume writing, interview skills, on campus interviews, and off site career fairs.

## **Compliance**

**6.13.2 Cooperative Education: If cooperative education is either a required or an elective part of the program, then appropriate services shall be provided to assist with the placement and supervision of cooperative education students.**

Cooperative education and internships are not required by the program however these activities are encouraged and supported by faculty and the advisory board. The department has assigned responsibility for both internships and cooperative education activities. This is an area of focus in the senior surveys and the department plans to continue to track and develop this important area. Although not required by the curriculum, the department is making positive efforts, with the support of the advisory board to promote this important area for developing career skills.

## **Compliance**

### **6.14 Industrial Advisory Committee(s)**

**6.14.1 Program Advisory Committee(s): An industrial advisory committee shall assist in the validation of program content. If more than one major program or program option is available, then appropriately qualified industrial representatives shall be added to the committee or more than one committee shall be maintained. Evidence shall be presented to indicate the: (a) procedures used in selecting members, (b) length of appointment, (c) organization of the committee, (d) committee responsibilities, (e) frequency of meetings, and (f ) methods of conducting business.**

The program provided minutes of advisory committee meetings ranging over five years. In addition the visiting team met for over an hour with the advisory board. In general, the board meets regularly and is involved in program validation, development, and improvement. They are also interested in supporting all areas of program development including funding, equipment, employment, and curriculum. In addition, procedures for the advisory board are documented and were provided. These cover appointment of members and board operation.

## **Compliance**

**6.14.2 Advisory Committee Meetings: The industrial advisory committee(s) shall meet at least once each year, and appropriate minutes shall be kept of these meetings showing agenda items, actions taken, and recommendations made.**

The Advisory Committee meets twice a year. Minutes were provided for the meetings held in the following dates: 4/9/1999, 10/8/1999, 3/31/2000, 10/6/2000, 4/5/2002, 4/4/2003, 4/2/2004, 4/22/2005, and 10/7/2005. Agenda items were found for all of the meetings. While the meeting minutes reflected extensive discussions, no documentation for actions taken by the committee or the department as a result of committee decisions were found.

## **Compliance**

### **6.15 Educational Innovation**

**6.15.1 Educational Innovation: There shall be evidence that innovation furthering program objectives is being carried out in the administrative unit housing the Industrial Technology program. This includes developing and testing new learning approaches and technologies and disseminating the results.**

The program demonstrated compliance with this criterion in several ways. These include participation of the faculty in the Envision Center, the availability of the Center for Instructional Resources, and additional examples of developing and testing innovative means of instructional delivery.

## **Compliance**

### **6.16 Assessment**

**6.16 Assessment Plan and Integration: An assessment plan shall be comprised of, but not limited to, the following for each program: (1) program mission statement, (2) the desired program outcomes/student competencies, (3) evidence that the program incorporates these outcomes/student competencies, (4) the assessment measures used to evaluate student mastery of the student competencies stated, (5) compilation of the results of the assessment measures, and (6) evidence that these results are used to improve the program.**

The program has started to build assessment processes and has outlined this in block diagram in appendix O. In addition, the mission statement is a part of the strategic plan. However, several critical assessment components are not completed. First, as previously mentioned, the larger program outcomes (at a level above course objectives) have not been defined and without these it is not possible to measure general skills at graduation or measure alumni performance. With respect to the course objectives, the specific approaches to measure accomplishment of these outcomes have not been clearly defined in the self study. Finally and most important, the continuous improvement and integration of results into documented changes in the courses and the program has not been completed. For example, there is no evidence in the self study of measurement of learning objectives, no indication that student feedback is utilized, and no indication of changes in courses, content, or instruction based on measurement of learning to improve the program.

### **Partial Compliance**

## **IV. Summaries and Recommendations**

### **A. Summaries:**

1. Place a “C” in the appropriate space if the Program/Option meets all the criteria of the standard.
2. Place a “P” in the appropriate space if the Program/Option meets most of the stated criteria for the standard, but has weaknesses or deficiencies that need to be corrected.
3. Place an “N” in the appropriate space if the Program/Option fails to substantially meet the criteria of the standard.

Note: Duplicate this table if there are more than six (6) Program/Options.

<b>Standards</b>	<b>Program/Option _Mfg._</b>
<b>6.1</b>	<b>C</b>
<b>6.2.1</b>	<b>C</b>
<b>6.2.2</b>	<b>C</b>
<b>6.2.3</b>	<b>C</b>

<b>6.2.4</b>	<b>PC</b>
<b>6.3.1</b>	<b>C</b>
<b>6.3.2</b>	<b>C</b>
<b>6.3.3</b>	<b>C</b>
<b>6.3.4</b>	<b>C</b>
<b>6.3.5</b>	<b>C</b>
<b>6.3.6</b>	<b>C</b>
<b>6.3.7</b>	<b>C</b>
<b>6.3.8</b>	<b>C</b>
<b>6.3.9</b>	<b>C</b>
<b>6.3.10</b>	<b>C</b>
<b>6.3.11</b>	<b>PC</b>
<b>6.3.12</b>	<b>PC</b>
<b>6.3.13</b>	<b>C</b>
<b>6.3.14</b>	<b>C</b>
<b>6.3.15</b>	<b>C</b>
<b>6.3.16</b>	<b>C</b>
<b>6.3.17</b>	<b>C</b>
<b>6.4.1</b>	<b>C</b>
<b>6.4.2</b>	<b>C</b>
<b>6.4.3</b>	<b>C</b>
<b>6.4.4</b>	<b>C</b>
<b>6.4.5</b>	<b>C</b>
<b>6.4.6</b>	<b>C</b>
<b>6.4.7</b>	<b>C</b>

<b>Standards</b>	<b>Program</b>
<b>6.5.1</b>	<b>C</b>
<b>6.5.2</b>	<b>C</b>
<b>6.5.3</b>	<b>PC</b>
<b>6.5.4</b>	<b>C</b>
<b>6.5.5</b>	<b>C</b>
<b>6.5.6</b>	<b>C</b>
<b>6.6.1</b>	<b>C</b>
<b>6.6.2</b>	<b>C</b>
<b>6.6.3</b>	<b>C</b>
<b>6.6.4</b>	<b>NA</b>
<b>6.6.5</b>	<b>PC</b>
<b>6.6.6</b>	<b>C</b>
<b>6.6.7</b>	<b>C</b>
<b>6.6.8</b>	<b>C</b>
<b>6.7.1</b>	<b>C</b>
<b>6.7.2</b>	<b>C</b>

6.7.3	C
6.8.1	C
6.8.2	C
6.8.3	C
6.9.1	C
6.9.2	C
6.10.1	C
6.10.2	C
6.11.1	C
6.11.2	C
6.12	C
6.13.1	C
6.13.2	C
6.14.1	P
6.14.2	P
6.15.1	C
6.16	PC

B. Visiting Team Recommendation (the recommendation should include accreditation level and conditions)

Program/Options (Please List)	Accreditation	Accreditation Report in 2 Years	Accreditation On-Site Visit in 2 Years	Non Accreditation
BS in CGT	X			

The Visiting Team further recommends that the Computer Graphics Technology Program be brought in line with the Industrial Technology Program for re-accreditation in 2010, at which time it is expected that the CGT self-study document will include reporting on the progress in all areas pertinent to standards receiving Partial Compliance in this report.

C. Conditions:

- 1. Accreditation - Report in Two Years:** A written progress report is required in two years which details the corrective action taken to meet standards.
- 2. Accreditation Report and On-Site Visit in Two Years:** A written progress report by the institution and an on-site visit by one of the initial visiting team members is required in two years.

- 3. Non-Accreditation:** Denial of accreditation occurs when a program does not substantially comply with standards. If a program receives Non-Accreditation status, the application for reaccreditation will be considered as an initial application and the maximum period of accreditation granted will be four years.