

## COMMISSION FOR HIGHER EDUCATION

Friday, August 14, 2009

### DECISION ITEM A-1:

**Master of Science in Industrial Technology, Master of Science in Computer and Information Technology, and Master of Science in Computer Graphics Technology To Be Offered by Purdue University West Lafayette at West Lafayette**

### Staff Recommendation

That the Commission for Higher Education approve the Master of Science (M.S.) in Industrial Technology, Master of Science (M.S.) in Computer and Information Technology, and the Master of Science (M.S.) in Computer Graphics Technology to be offered by Purdue University West Lafayette at West Lafayette, in accordance with the background discussion in this agenda item and the *Abstract*, July 31, 2009; and

That the Commission recommend no new state funds, in accordance with the supporting document, *New Academic Degree Program Proposal Summaries*, July 31, 2009.

### Background

The Purdue University West Lafayette College of Technology currently offers an M.S. in Technology, which enrolled 270 headcount or 147 FTE students in FY2008 and graduated 77 students that same year. Purdue West Lafayette also offers a Ph.D. in Technology, which, in FY2008, enrolled 57 headcount or 37 FTE students and had 14 graduates.

The College of Technology is organized in nine departments, each of which offers courses in support of a specialization within the umbrella M.S. in Technology. In the case of three departments – Computer Graphics Technology, Computer and Information Technology, and Industrial Technology – there seems sufficient market appeal to warrant offering a specific degree in that field, instead of a specialization under the umbrella degree. The eventual goal of the College would be to evolve each of the specializations into a separate degree, in which case the umbrella M.S. in Technology would no longer be needed. No additional standalone master's degrees from the College of Technology are expected in the near future, although at least one other department is working on a separate degree proposal, but that is anticipated to be at least a year away from advancing.

The College of Technology has also proposed a Bachelor of Science in Engineering Technology to be offered at several sites

through Statewide Technology. That proposal is currently under consideration by the Commission and will occasion a general discussion about the future offering of associate and baccalaureate degrees through Statewide Technology, especially in light of the continuing development of Indiana's community college system.

### **Supporting Documents**

- (1) *Abstracts* - Master of Science in Industrial Technology, Master of Science in Computer and Information Technology, and Master of Science in Computer Graphics Technology, July 31, 2009
- (2) *New Academic Degree Program Proposal Summaries* – M.S. in Industrial Technology, M.S. in Computer and Information Technology, and M.S. in Computer Graphics Technology, July 31, 2009

## Abstract

Master of Science in Industrial Technology  
To Be Offered by  
Purdue University West Lafayette at West Lafayette

July 31, 2009

**Objectives:** To prepare industrial technology leaders, managers, and faculty who develop, implement, teach and improve via research and development, industrial technology in public and private sectors.

**Clientele to be Served:** Domestic and international post-baccalaureate students with relevant academic and professional experience in the fields of industrial technology, industrial distribution, and engineering/technology teacher education.

**Curriculum:** A minimum of 33 semester credit hours are required to complete the program, distributed as follows:

### Core Curriculum (9 credit hours)

- Measurement and Evaluation in Industry and Technology (3)
- Analysis of Research in Industry (3)
- Quality and Productivity in Industry in Technology (3)

### Industrial Technology Electives (12 – 15 credit hours)

- Chosen from graduate credit eligible courses offered by the Dept. of Industrial Technology. With permission by the student's graduate committee, up to six credit hours of coursework from other departments in the College of Technology may be used towards this requirement.

### Interdisciplinary Electives (6 credit hours or more)

- Chosen from courses offered outside of the department but rationally related to the candidate's career/disciplinary objective and approved by the student's graduate committee.

### Plan of Study Options (3 or 6 credit hours)

- Thesis (6)
- Directed Project (3)
- Coursework Only (6)

**Employment Possibilities:** Graduates who become educators will likely work in educational institutions such as community colleges, technical institutes, and universities; while those who opt for careers in the private sector will typically work in business and industrial arenas – largely in production and distribution contexts.

## Abstract

Master of Science in Computer and Information Technology  
To Be Offered by  
Purdue University West Lafayette at West Lafayette

July 31, 2009

**Objectives:** To prepare information technology researchers, leaders, and managers working toward addressing information technology (IT) issues in society, across industrial sectors and within organizations. The program will focus on theoretical, managerial, leadership and application-oriented issues.

**Clientele to be Served:** Primarily recent information technology bachelor degree recipients, but also part-time, currently employed students and non-traditional student who have previous information technology work experience and wish to pursue an advanced degree.

**Curriculum:** A minimum of 33 semester credit hours are required to complete the program, distributed as follows:

### Core Curriculum (9 credit hours)

- Impact on Society and Organizations (3)
- Research Fundamentals (3)
- Introductory Statistics (or an equivalent course; 3)

### Technical Electives (With Thesis – 18 credit hours; with Directed Project – 21 credit hours)

- Students will choose seven technical electives from Computer and Information Technology course offerings as well as approved graduate courses from other departments such as: Computer Science, Organizational Leadership and Supervision, Management, Industrial Technology, and Statistics

### Plan of Study Options

- Thesis (6)
- Directed Project (3)

**Employment Possibilities:** Graduates will be prepared for managerial, leadership, research and teaching positions in information technology in a variety of sectors including: business and industry, non-profit, government, and academia.

## Abstract

Master of Science in Computer Graphics Technology  
To Be Offered by  
Purdue University West Lafayette at West Lafayette

July 31, 2009

**Objectives:** To prepare students to demonstrate leadership potential in applied computer graphics professions and to advance the knowledge in the application and teaching of computer graphics.

**Clientele to be Served:** Primarily recent computer graphics technology-related bachelor degree recipients, but also part-time, currently employed students and non-traditional student who have previous computer graphics technology work experience and wish to pursue an advanced degree.

**Curriculum:** A minimum of 33 semester credit hours are required to complete the program, distributed as follows:

### Core Curriculum (12 credit hours)

- Foundations of Graphics in Technology (3)
- Experimental Statistics I (3)
- Computer Graphics Pipeline and Production (3)
- Research Fundamentals in Computer Graphics Technology (3)

### Technical Electives (15 – 18 credit hours)

- At least six credit hours must be from within courses offered within the Computer Graphics Technology department. The balance may be taken from the graduate courses offered at Purdue University that support the graduate student's research and career interests. Up to six credits of undergraduate coursework may be taken as long as each undergraduate course is followed by a more advanced graduate course.

### Research (Thesis – 6 credit hours; Directed Project – 3 credit hours)

- Students working in areas with a substantial discovery component will be encouraged to pursue the thesis option. Students working in an area of engagement or something that applies existing knowledge (as opposed to generating it) will be encouraged to pursue the directed project option.

**Employment Possibilities:** Graduates will be qualified to gain employment in a variety of industrial, governmental, and academic areas.

**NEW ACADEMIC DEGREE PROGRAM PROPOSAL SUMMARY**

July 31, 2009

**I. Prepared by Institution**

Institution/Location: Purdue University West Lafayette to be offered at West Lafayette

Program: M.S. in Industrial Technology

	Year 1 FY2010	Year 2 FY2011	Year 3 FY2012	Year 4 FY2013	Year 5 FY2014
Enrollment Projections (Headcount)					
Full-Time	112	115	120	125	130
Part-Time	5	5	5	5	5
Total	117	120	125	130	135
Enrollment Projections (FTE)					
Full-Time	112	115	120	125	130
Part-Time	3	2	2	2	2
Total	135	117	122	127	132
Degree Completions Projection	52	53	54	55	57
New State Funds Requested (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds Requested (Increases) *	-0-	-0-	-0-	-0-	-0-

**II. Prepared by CHE**

New State Funds To Be Considered For Recommendation (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds To Be Considered For Recommendation (Increases) *	-0-	-0-	-0-	-0-	-0-

CHE Code: 09-16

Campus Code: 1825

County: Tippecanoe

Degree Level: 07

CIP Code: Federal - 150000; State - 150000

\* Excludes new state dollars that may be provided through enrollment change funding.

**NEW ACADEMIC DEGREE PROGRAM PROPOSAL SUMMARY**

July 31, 2009

**I. Prepared by Institution**

Institution/Location: Purdue University West Lafayette to be offered at West Lafayette

Program: M.S. in Computer and Information Technology

	Year 1 FY2010	Year 2 FY2011	Year 3 FY2012	Year 4 FY2013	Year 5 FY2014
Enrollment Projections (Headcount)					
Full-Time	45	50	55	60	65
Part-Time	5	5	5	5	5
Total	50	55	60	65	70
Enrollment Projections (FTE)					
Full-Time	45	50	55	60	65
Part-Time	2	2	2	2	2
Total	47	52	57	62	67
Degree Completions Projection	12	13	114	18	18
New State Funds Requested (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds Requested (Increases) *	-0-	-0-	-0-	-0-	-0-

**II. Prepared by CHE**

New State Funds To Be Considered For Recommendation (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds To Be Considered For Recommendation (Increases) *	-0-	-0-	-0-	-0-	-0-

CHE Code: 09-17

Campus Code: 1825

County: Tippecanoe

Degree Level: 07

CIP Code: Federal – 119999; State – 119999

\* Excludes new state dollars that may be provided through enrollment change funding.

**NEW ACADEMIC DEGREE PROGRAM PROPOSAL SUMMARY**

July 31, 2009

**I. Prepared by Institution**

Institution/Location: Purdue University West Lafayette to be offered at West Lafayette

Program: M.S. in Computer Graphics Technology

	Year 1 FY2010	Year 2 FY2011	Year 3 FY2012	Year 4 FY2013	Year 5 FY2014
Enrollment Projections (Headcount)					
Full-Time	30	35	40	45	50
Part-Time	4	4	4	4	4
Total	34	39	44	49	54
Enrollment Projections (FTE)					
Full-Time	30	35	40	45	50
Part-Time	2	2	2	2	2
Total	32	37	42	47	52
Degree Completions Projection	5	7	9	10	12
New State Funds Requested (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds Requested (Increases) *	-0-	-0-	-0-	-0-	-0-

**II. Prepared by CHE**

New State Funds To Be Considered For Recommendation (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds To Be Considered For Recommendation (Increases) *	-0-	-0-	-0-	-0-	-0-

CHE Code: 09-30

Campus Code: 1825

County: Tippecanoe

Degree Level: 07

CIP Code: Federal – 110803; State – 110803

\* Excludes new state dollars that may be provided through enrollment change funding.