### ARTICULATION AGREEMENT between

## INDIANA UNIVERSITY PURDUE UNIVERSITY INDIANAPOLIS AND IVY TECH STATE COLLEGE-INDIANAPOLIS

for the following programs:

#### DESIGN TECHNOLOGY-CAD/CAM SPECIALITY (A.A.S.)

to

COMPUTER INTEGRATED MANUFACTURING TECHNOLOGY (B.S.)

The purpose of this Articulation Agreement is to provide a framework for students at Ivy Tech State College-Indianapolis to continue their formal education. These students have indicated that Indiana University Purdue University Indianapolis (IUPUI) is their selection for continuing their education in order to complete the requirements of the baccalaureate degree program.

To ensure a smooth transition to the baccalaureate degree program at IUPUI, the faculty of both institutions have developed the attached listing of course equivalencies approved for transfer beginning with the Fall Semester 1999-2000. The course listing consists of two parts. Part I identifies each course in the Ivy Tech State College-Indianapolis syllabus and exactly how that course will appear on the students official IUPUI transcript upon completion of the transfer. Part II, prepared for use by IUPUI academic advisors, details precisely how each of the transferred courses will be integrated into the student's academic program at IUPUI. To ensure consistency and accuracy, these documents must be periodically reviewed by representatives from both institutions to communicate and update information regarding curriculum and textbooks. A grade of "C" or above must be earned in a course in order to obtain credit toward the baccalaureate degree.

Any course taken prior to Fall 1999, will be evaluated by faculty from IUPUI in order to determine the transferability of the course work. This Articulation Agreement, including any modifications, may be reviewed by either institution upon request. While all parties to this agreement understand its purpose is to maximize opportunities for individual students, they also recognize that limits may be placed on courses accepted under provisions of this agreement should the student subsequently decide to change to another program other than that covered by this agreement.

Michael DeBourbon, Assistant Chair Business and Technology Division

Deanna S. Timmons, Chair Business and Technology Division

Thomas C. Cooke, Dean of Instruction Ivy Tech State College - Indianapolis

Kenneth E. Rennels, Chair

Department of Mechanical Engineering

Technology

H. Öner Yurtseven, Dean

Purdue School of Engineering and Technology

Indiana University-Purdue University

April 16, 1999

## PART I - DESIGN TECHNOLOGY (CAD-CAM SPECIALITY) A.A.S. DEGREE COURSE ARTICULATION PLAN ITSC/IUPUI

[APPROVED 4-16-99]

	IVY TECH STATE COLL	EGE			IUPUI		
DESIGN	TECH./CAD-CAM SPECIA	LITY (A.	A.S.)	COMPU	TER INTEGRATED MAN TECHNOLOGY (B.S.		RING
Course#	Course Title	Credit	Gr.	Course#	Course Title	Credit	Gr
DSN 103	CAD Fundamentals	3		TG #100	CAD Fundamentals	3	
ENG 111	English Composition	3		ENG W131	Elementary Composition I	3	
MAT 111	Intermediate Algebra	3		MATH 111	Algebra	3	
MTT 103	Milling Processes I	3			Not Accepted for Transfer		
TEC 102	Technical Graphics	3		TG #100	Technical Graphics	3	
TEC 104	Comp. Fund. for Technology	3		CPT #100	Comp. Fund. for Technology	3	
COM 101	Fund, of Public Speaking	3		COM R110	Fund. of Speech Comm.	3	
DCT 113	Intermediate CAD	3		TG #100	Intermediate CAD	3	
DSN 106	Descriptive Geometry	3		TG #100	Descriptive Geometry	3	
MAT 121	Geometry/Trigonometry	3		MATH 002	Geometry	3	
MTT 102	Turning Processes I	3			Not Accepted for Transfer		
MTT 208	CNC Programming I	3		MET #200	CNC Programming I	3	
DSN 220	Advanced CAD	3		TG #200	Advanced CAD	3	
DSN 221	Statics	3		MET #200	Statics	3	
MTT 220	CAD/CAM I	3		CIMT #200	CAD/CAM I	3	
PHY 101	Physics I	4		PHYS 218	General Physics	4	
TEC 101	Manufacturing Processes	3		MET 242	Manufacturing Processes II	3	
DSN 222	Strength of Materials	3		MET #200	Strength of Materials	3	
MTT 209	CNC Programming II	3		MET #200	CNC Programming II	3	
MTT 221	CAD/CAM II	3		CIMT #200	CAD/CAM II	3	
ELECTIVE	Humanities/Social Sci. Elective	3		7777	[if on transfer agreement list]	0-3	
TOTAL HOURS	S REQUIRED @ ITSC	64		TOTAL REPLA	CED BY ARTICULATION	29-32	
TOTAL HRS. A	APPROVED FOR ARTICULATION	29-32			RED FOR B.S. (CIMT)	98-101	
RS. APPROVI	ED FOR TRANSFER BUT NOT R DEGREE REQUIREMENTS	26			RED FOR GRADUATION	130	

# PART II - DESIGN TECHNOLOGY (CAD-CAM SPECIALITY) A.A.S. DEGREE COURSE ARTICULATION PLAN ITSC/IUPUI [APPROVED 4-16-99]

	IUPUI SYLLABUS				IVY TECH STATE COLL	EGE	
COMPU	TECHNOLOGY (B.S.)		RING	DI	ESIGN TECHNOLOGY/CA SPECIALITY (A.A.S.	D-CAM	
Course #	Course Title	Credit	Gr.	Course #	Course Title	Credit	G
CIMT 100	Introduction to CIM	1					+
ENG W131	Elementary Composition I	3		ENG 111	English Composition	3	$\vdash$
MATH 151	Algebra and Trigonometry	5				-	$\vdash$
MET 105	Intro. to Engrg. Technology	3					-
TG 110	Engineering Graphics	3		TG #100 & TG #100 & TG #200	Descriptive Geom. [DSN 106] Intermediate CAD [DCT 113] Advanced CAD [DSN 220]	9	
COMM R110	Intro. Speech Communications	3		COM 101	Fund, of Public Speaking	3	
CPT 140	Programming Constructs Lab	3					
EET 116	Electrical Circuits	4					
CHEM C101	General Chemistry	5					
MET 141	Materials I	3					
EET 302	Intro. to Control Systems	4					
MATH 221	Calculus for Technology I	3					_
MET 242	Manufacturing Processes II	3		TEC 101	Manufacturing Processes	3	_
PHYS 218	General Physics I	4		PHY 101	Physics I	4	
ELECTIVE	Social Science Elective	3		?	[if on transfer agreement]	0-3	
CIMT 244	Automated Manufacturing II	3		CIMT #200 CIMT #200	CAD/CAM I [MTT 220] and CAD/CAM II [MTT 221]	6	2/
CIMT 224	Production Control & MRP	3					_
MET 212	Applications of Engrg. Mech.	4		MET #200 MET #200	Statics [DSN 221] and Strength of Mat'ls [DSN 222]	6	3/
HYS 219	General Physics II	4					-
LECTIVE	Technical Selective	3		CPT #100	Comp.Fund. Tech. [TEC 104]	3	-

<sup>1/</sup> Credit for TG 110 granted only if all three of the following courses are completed: DCT 113, DSN 106 and DSN 220.

This special advising guide represents agreement for an articulated program between IUPUI and ITSC. Changes and/or course substitutions may not be made without authorization from the Chair, Department of Mechanical Engineering Technology. Use of this guide for advising other students may be inappropriate. [EFFECTIVE FOR ALL COURSES COMPLETED AT ITSC BEGINNING FALL SEMESTER 1997.]

<sup>2/</sup> Credit for CIMT 244 granted only if both MTT 220 and MTT 221 are completed.

<sup>3/</sup> Credit for MET 212 granted only if both DSN 221 and DSN 222 are completed.

COMP. II	NTEGRATED MFG. TECH	[DESIGN	TECH./CAD-CA	AM SPECIALITY] - Page 2	2
MET 102	Production Design & Specifications	3			T
MATH 222	Calculus for Technology II	3			+
IET 150	Quantitative Methods in Tech.	3			+
IET 350	Engineering Economy	3			+
TCM 220	Technical Report Writing	3			+
IET 104	Industrial Organization	3			
IET 300	Metrology	3			-
TCM 340	Corres. Business & Industry	3			+
MET 271	Programming for Num. Control	3	MET #200 MET #200	CNC Program. I [MTT 208] CNC Program. II [MTT 209]	
CIMT 260	Robotics & Automated Material Handling	3			
MET 230	Fluid Power	3			
IET 454	Statistical Quality Control	3			+
TCM 370	Oral Practicum Tech. Managers	3			+
CIMT 310	Plant Layout & Material Handling	3			T
OLS 252	Human Relations in Organizations	3			
CIMT 245	Computer-Aided Tool and Fixture Design	3			$\top$
CIMT 481	Capstone Project	3			
ELECTIVE	Technical Selective	3			+
ELECTIVE	Technical Selective	3			-
ELECTIVE	Technical Selective	3			-
ELECTIVE	Social Science Elective	3			-
TOTAL HRS. R	EPLACED BY ARTICULATION	29-32	TOTAL HOU	RS APPROVED FOR TRANSFER	55-
SURPLUS HOU	RS/HOURS EXCLUDED	26	The Control of the Co	S FOR SPECIFIC SUBSTITUTIONS	14
ADD'L HRS. RI	MAINING FOR COMPLETION	98-101	The state of the s	US HOURS NOT COUNTED	12
TOTAL HOURS	REQUIRED FOR GRADUATION	130	Same of same	ACCEPTED TOWARD DEGREE	29-

#### INDIANA UNIVERSITY PURDUE UNIVERSITY INDIANAPOLIS

#### MEMORANDUM

TO:

Michael DeBourbon, Chair, Technology Division

Robert Wood, Chair, Visual Communications

Ivy Tech State College-Indianapolis

PURDUE SCHOOL OF ENGINEERING AND TECHNOLOGY

FROM:

David Bostwick, Director

Engineering Education Excellence Center

SUBJECT:

Computer Graphics Technology Articulation Agreements

DATE:

March 30, 2001

Attached are signed copies of the five new articulation agreements recently concluded between Ivy Tech State College-Indianapolis and the Purdue School of Engineering and Technology at IUPUI.

Despite reviews by several people prior to actually placing signatures on these documents it has been discovered that each agreement inadvertently displays an incorrect degree title for the IUPUI program. The appropriate title should be "Computer Graphics Technology" vice "Computer Integrated Manufacturing Technology." The title for each option at IUPUI is correct as are the titles used on Part I and Part II, respectively, for each agreement.

Please attach a copy of this memorandum as an addendum to each agreement.

cc: Dr. Rosalie Hine, ITSC Dr. Nasser Paydar, IUPUI Ken Rennels, IUPUI Doug Acheson, IUPUI

Attachments (as stated)

OFFICE OF THE DEAN

Purdue School of Engineering and Technology IUPUI 799 West Michigan Street Indianapolis, Indiana 46202-5160

317-274-2533 Fax: 317-274-4567 e-mail: dean@engriupui.edu http://www.engriupui.edu



# Design Technology CAD & Advanced Manufacturing Associate of Applied Science Ivy Tech Community College – Central Indiana Academic Year 2005-2006

Students who earn an associate of applied science in CAD and Advanced Manufacturing will have the skills required to adapt to various industrial settings and respond to change in the work place. This degree prepares students for employment with companies utilizing CAD and CAM in the design and manufacturing of products.

General	Education Core - 19 Credits	Credits	Grade	Prerequisites
COM 101	Fundamentals of Public Speaking	2		
ENG 111	English Composition	3		ENG 025, ENG 032
MAT xxx	1st Course in a Series	3		ENG 025, ENG 032
MAT xxx	20d C	3	9	See appropriate course description
	2 <sup>nd</sup> Course in a Series	3		See appropriate course description
PHY 101	Physics I	1		See appropriate course description
Xxx xxx	Humanities/Social Sciences Elective	4		MAT 121
	The section of the se	3		See appropriate course description

DONILOS	onal/Technical Core - 45 Credits	Credits	Grade	Prerequisites
DSN 103	CAD Fundamentals	3		
DSN 106	Descriptive Geometry	3	-	None
DSN 220	Advanced CAD	3		TEC 102
DSN 221	Statistics	3		DSN 103, TEC 102,
DSN 225	Portfolio Preparation	3		MAT 121
TEC 102	Technical Graphics	3		See program advisor
DSN 222	Strength of Materials	3		ENG 024, ENG 031, MAT 044
MTT 208	CNC Programming I	3		DSN 221
MTT 220	CAD-CAM I	3		MAT 121
MTT 221	CAD-CAM II	3		MTT 208
TEC 101		3		MTT 220
DSN 227	Processes and Materials	3		ENG 024, ENG 031, MAT 044
DSN 288	Geometric Dimensioning and Tolerance	3		TEC 102
The state of the s	Special Topics/DSN	3		See program advisor
DS 292	Special Topics/IDS	3		
MTT 209	CNC Programming II	3		See program advisor MTT 208

Total Required Credits 64

## Sample Full-time Curriculum Sequence Two Academic Years

Semester 1	o readenite Tears	Credits
DSN 103	CAD Fundamentals	Credits
ENG III	English Composition	3
MAT 111	Intermediate Alexa	3
	Intermediate Algebra	3
TEC 101	Processes & Materials	3
TEC 102	Technical Graphics	3
	Total Credits	15

Semester 2		Credits
CIS 113	Logic, Design, & Program	3
DSN 227	Geometric Dimensioning and Tolerancing	3
MAT 121	Geometry/Trigonometry	3
DSN 220	Advanced CAD	3
Xxx xxx	HUM/SOC SCI Elective	3
	Total Credits	15

Semester 3		Credits
DSN 221	Statics	3
MTT 208	CNC Programming I	3
DSN 106	Descriptive Geometry	3
COM 101	Fund. Of Public Speaking	3
DSN 288	Prototyping & Design	3
DSN 225	Portfolio Prep	3
	Total Credits	3
	Total Cituits	18

Semester 4		Credits
DSN 288- 02	Adv. Prototype & Design	3
IDS 292	Lean Production	3
MTT 220	CAD/CAM I	3
PHY 101	Physics I	4
MTT 209	CNC Programming II	3
	Total Credits	16

#### Schedule of Semester Course Offerings

Course N	umber and Name	F	all	Sp	ring	S	am
		D	E	D	E	D	E
DSN 227	Geometric Dimensioning and Tolerancing	X			Х		1
DSN 103	CAD Fundamentals	X	X	X	X	77	-
DSN 106	Descriptive Geometry	^	^	Ŷ	X	X	X
DSN 220	Advanced CAD	X	X	-	-	-	-
DSN 221	Statistics	X	^	-	X	X	-
DSN 222	Strength of Materials	^	X	37	X	-	_
MTT 102	Turning Processes	X	X	X	**	-	_
MTT 103	Milling Processes	X	-	X	X	X	X
MTT 208	CNC Programming I	- ^	X	X	X	X	X
MTT 209	CNC Programming II	-	X	-	X		
MTT 220	CAD/CAM I	-	X		X		
MTT 221	CAD/CAM II	-	X				
TEC 101	Processes and Materials	-	3/		X		
TEC 102	Technical Graphics	v	X	X			
	- companies	X	X	X	X	X	X

My Curriculum Plan
Use this chart to plan the length of time until you complete your program.

Semes	ter I	Credits
	Total Credits	

Semester		Credits
	Total Credits	

Semes	ter 3	Credits
-35		
_		
	Total Credits	

Semester 4	Credits
Total Credits	

Semester 5		Credits
	Total Credits	

Semester 6		Credits
	Total Credits	