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ARTICULATION AGREEMENT

**UNIVERSITY OF MINNESOTA, CROOKSTON
AND
DAKOTA COUNTY TECHNICAL COLLEGE**

(APRIL 2006)

ARTICULATION AGREEMENT

The University of Minnesota, Crookston (UMC) and Dakota County Technical College (DCTC) share a student/workplace-centered approach to the delivery of higher education. This agreement is designed to build a partnership that will further the facilitation of student access to higher education.

The purpose of this agreement is to facilitate credit transfer and provide a smooth transition from DCTC Nanoscience Technology A.A.S. Degree to the UMC Bachelor of Manufacturing Degree program. Current students, graduates, and faculty of DCTC Nanoscience Technology A.A.S. degree are eligible for credit evaluation under the terms of this agreement.

PROGRAM DESCRIPTION:

The Bachelor of Manufacturing is a workplace-centered degree program designed to meet the increasing demand for baccalaureate education from students and their employers. The content is flexible enough to recognize the worth of prior learning, yet focused on course-work that provides tangible value both immediate and long term. Key features include application-oriented four-year integrated curriculum and alternative delivery options.

The Bachelor of Manufacturing program is designed to meet the needs of those already in the workplace and two-year graduates that want to continue their education to Bachelor level. The program of study includes management, technology, and some job-specific courses customized to learner needs.

The Bachelor of Manufacturing is the result of considerable discussion with employers and industry professionals. As a result of this practical guidance, the program is designed for working graduates in industrial and business fields who have experience in manufacturing or other business settings. It is specifically tailored to those individuals for whom baccalaureate level management and technology skills will pay dividends in the workplace. The program recognizes the value of previous college coursework, specialized training and life experience, and adds a combination of technological and business skills to prepare graduates for future opportunities. The program is designed to suit the needs of working adults.

TERMS OF AGREEMENT:

1. **ADMISSION**

DCTC students both present and past, seeking admission to UMC are required to satisfy all admissions requirements for the Bachelor of Manufacturing degree.

2. **TRANSFER OF COURSEWORK**

The evaluation criteria for coursework to be considered in transfer shall be in compliance with UMC transfer guidelines. Both degree recipients and non-degree recipients shall be eligible for transfer consideration.

a. **Associate of Applied Science Degree Recipients:**

Students receiving the Associate of Applied Science Degree in Nanoscience Technology shall receive 72 credits towards the Bachelor of Manufacturing degree. Up to 9 additional credits may be evaluated to satisfy some of the elective requirements.

b. **Non-degreeed students:**

Students that received credits from DCTC will be able to transfer their credits towards the Bachelor of Manufacturing degree.

3. **JOINT ADMISSION OPTION**

Students may be admitted to both institutions simultaneously. With joint admissions, students may concurrently enroll in courses at both institutions. Students will have access to advising and other services at both institutions.

COLLABORATION

Administration, faculty and staff at both institutions will cooperate in scheduling course offerings in a convenient, flexible manner. The resources of both institutions, including faculty, staff and space, will be used in a manner that enhances this education opportunity.

In addition:

- UMC intends to offer the upper division courses required for graduation in this degree in the metro area and they will also be available online.
- Both institutions will jointly promote the associate, and bachelor programs to potential metro area students.
- Both institutions will strive to find solutions regarding counseling, advising, transcription, registration and financial aid procedures to facilitate administration and management of student enrollment.

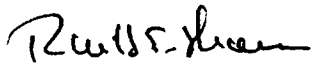
ARTICULATION IMPLEMENTATION AND AGREEMENT REVIEW

The Chief Academic Officer or designee of the collaborating institutions shall be responsible for implementing this agreement, incorporating any changes into subsequent agreements, and for conducting periodic reviews of this agreement.

This agreement becomes effective immediately upon completion of signature, and remains in effect unless terminated or amended by either party with reasonable prior written notice.

Dakota County Technical College

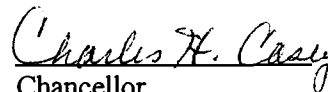
University of Minnesota, Crookston



President

5/25/06

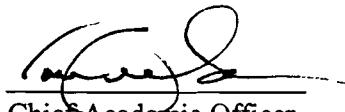
Date



Chancellor

4/24/06

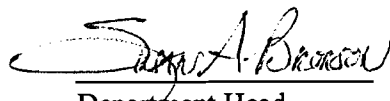
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Chief Academic Officer

5/18/06

Date



Department Head

4/26/06

Date



Dean

5/17/06

Date



Program Director

4/26/06

Date

FOR MORE INFORMATION CONTACT:

Dakota County Technical College

Name: Ruth Lawrence

Phone: 651.423.8384

Email: ruth.lawrence@dctc.edu

University of Minnesota, Crookston

Name: Christo Robberts

Phone: 218-28108144

Email: crobbert@mail.crk.umn.edu

UNIVERSITY OF MINNESOTA, CROOKSTON AND DAKOTA COUNTY TECHNICAL COLLEGE

ATTACHMENTS:

DCTC Curriculum

Course	Title	Credits
NANO1100	Fundamentals of Nanoscience I	3
NANO1200	Fundamentals of Nanoscience II	3
NANO1210	Computer Simulation	1
NANO 2101	Nanoelectronics	3
NANO2111	Nanobiotech/Ag.	3
NANO2121	Nanomaterials	3
NANO2131	Manufacturing Quality Assurance	2
NANO2151	Career Planning and Industry Tours	1
NANO2970	Industry Internship & Observation	2
NANO2140	Interdisciplinary Lab	3
	TOTAL	24

Capstone at the University of Minnesota (U of M)

MT3111	Elements of Microelectronics Manufacturing	3
MT3112	Micro and Nano Fabrication Lab	1
MT3121	Thin Film Deposition	3
MT3131	Intro to Materials Characterization	3
MT3132	Materials Characterization Lab	1
MT3141	Principles/Apps. of Nanobiotechnology	3
MT3142	Nanoparticles and Biotechnology Lab	1
	TOTAL	15

General Education

BIOL1500	General Biology	4
COML1400	Intro to Computers	3
ENGL1100	Writing and Research Skills	3
CHEM1500	Introduction to Chemistry	4
MATS1250	Principles of Statistical Analysis	4
MATS1300	College Algebra	4
PHYS1020	Intro to Physics	4
PHYS1200	College Physics II	4
SPEE1020	Interpersonal Communication	3
	TOTAL	33
	TOTAL PROGRAM REQUIREMENTS	72

UMC Curriculum

Course	Title	Credits
	<i>Transfer Credits</i>	72 ¹
	<i>Communication Credits</i>	
Comp 1011	Composition 1	3
Comp 3562	Writing in your profession	3
Spch 3431	Persuasion	3
	<i>Management Credits</i>	
Acct 2101	Principles of Accounting 1	3
Econ 2101	Microeconomics	3
Mgmt 3100	Managerial Finance	3
Mgmt 3200	Principles of Management	3
Mgmt 3210	Supervision and Leadership	3
Mgmt 3250	Operations Management	3
Mktg 3300	Principles of Marketing	3
BM 3034	Quality Management Systems	3
BM 3012	Applied Engineering Principles	3
	<i>Electives</i> ²	6
	TOTAL UPPER DIVISION CREDITS	42
	TOTAL CREDITS	120

¹ If a student has completed any of the required coursework elsewhere, the student may be able to transfer in more than 57 credits.

² Electives could include any of the subjects in the quality track as well as any subject in management, marketing or entrepreneurship. Students can also complete credits in individual studies.