

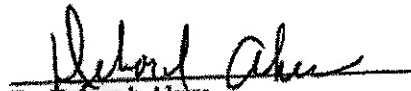
ARTICULATION AGREEMENT

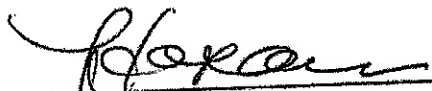
Mercer County Technical Education Center
Project Lead the Way
Drafting Concentration


Bluefield State College
Engineering Technology and Computer Science


Entered into this 22ND day of July, 2014
(date) (month)


Dr. Marsha V. Krotseng
President
Bluefield State College


Dr. Deborah Akers
Superintendent
Mercer County Schools


Dr. Zakir Hossain, Provost
Vice President of Academic Affairs
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Linda Cox
Director
Mercer County Technical Education Center


Dr. Shannon Bowling, Dean
School of Engineering Technology
& Computer Science
Bluefield State College

This agreement is effective with new Bluefield State College admits Fall 2014.
This agreement will be reviewed biennially.

ARTICULATION AGREEMENT

Mercer County Technical Education Center and Bluefield State College, Engineering Technology and Computer Science.

Mercer County Technical Education Center (hereafter referred to as MCTEC), a technical education center in Princeton, WV and Bluefield State College (hereafter referred to as BSC), a college in Bluefield, West Virginia agree to offer an articulated program allowing students who have complete specified classes in the Project Lead the Way (PLTW) program and drafting concentrations at MCTEC to transfer credits into the Engineering Technology Program at Bluefield State College. They further agree that students from MCTEC will be accepted in the A.S. and/or B.S. Engineering Technology program given that the students meet the required acceptance criteria. The following general principles guide the operation of this Agreement:

1. The program is designed for student who have complete courses in PLTW and the drafting program at MCTEC. A maximum of 12 credit hours from MCTEC will be allowed toward fulfillment of the minimum 120 credit hours required for baccalaureate completion at BSC.
2. Students must maintain a 2.0 cumulative grade point average in order to transfer courses.
3. Students must complete and submit a provisional enrollment form from BSC to receive transfer credit. Students must then register for the equivalent transfer course(s) as a fee waiver course at BSC.
4. MCTEC students who have completed the PLTW or the drafting program will be given every consideration for financial assistance and will be eligible to compete for academic scholarships once they are enrolled as a full-time student at BSC.
5. This agreement becomes effective on the date set forth on the first page of this document. MCTEC and BSC agree to publicize this program. They further agree to monitor the performance of this agreement and to revise it as necessary. The agreement may be terminated by either party for due cause and after adequate notice to the other. Termination of the agreement will not affect any students currently enrolled at MCTEC in the PLTW or the drafting program at the time of termination, and they shall be able to transfer credits pursuant to this agreement.

*when are
MCTEC hours
added to
transcript? since
student needs
to maintain
2.0 GPA.?*

*what if student
has lower
than 2.0
GPA when
certificate
is received*

PURPOSE OF AGREEMENT

This agreement is entered into to serve the instructional needs of MCTEC students and graduates. The general purpose of this agreement is to make clear the terms of this articulation agreement.

There are three specific goals under this agreement. First, it is the intent that this articulation agreement will facilitate a smooth transition from MCTEC PLTW and drafting programs to Engineering Technology programs at BSC as efficiently as possible.

MCTEC graduates will understand how BSC transfers the credits they earn at MCTEC, as well as the changes in requirements that may permit more flexible scheduling once the student has been admitted to and enrolled at BSC. This agreement provides a systematic plan for students to continue their higher education beyond the certificates from MCTEC.

Second, this agreement is a publication of a clear set of understandings and expectations for both institutions and programs. Making our expectations clear to students and between institutions not only contributes to the first goal, but also allows institutions to work collaboratively to meet the needs of MCTEC graduates. Like any policy agreement, this articulation agreement will need to be updated, revised and refined as instructional programs are revised.

Third, MCTEC encourages graduates to continue their educational pathway for both personal and professional development, as well as career advancement in a technical profession. This articulation agreement facilitates students' successful achievement of credentials in the field.

The following sections describe the specifics of the agreement.

Transfer Courses from MCTEC PLTW to BSC

The following courses will transfer from MCTEC PLTW into BSC Engineering Technology Program

- | | |
|--|---------------------------------------|
| MCTEC 2461 Intro to Engr Design | 3-MEET 112 Computer Aided Drafting✓ |
| MCTEC 2463 Principles of Engineering | 3-MEET 111 Engineering Drafting✓ |
| MCTEC 2462 Digital Electronics | 4-ELET 218 Fundamentals of Computers✓ |
| MCTEC 2466 Civil Engr and Architecture | 2-ENGR Technical Elective |

add up to 12? see first page

Please add credit hours to articulation agreements

Course descriptions of MCTEC classes and BSC classes.

2461 Introduction to Engineering Design

Introduction to Engineering Design is a component of the Project Lead the Way (PLTW) pre-engineering curriculum. This course teaches problem-solving skills using a design development process. Models of product solutions are created, analyzed, and communicated using solid modeling computer design software. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organizations, WV SkillsUSA or WV TSA (Technology Student Association). The West Virginia Standards for Global 21 Learning include the following components: Global 21 Content, Literacy and Numeracy, Entrepreneurship, and Technology Standards. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and content standards and objectives.

2462 Digital Electronics

Digital Electronics is a component of the Project Lead the Way (PLTW) pre-engineering curriculum. This is a course in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organizations, WV SkillsUSA or WV TSA (Technology Student Association). The West Virginia Standards for Global 21 Learning include the following components: Global 21 Content, Literacy and Numeracy, Entrepreneurship, and Technology Standards. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and content standards and objectives.

2463 Principles of Engineering

Principles of Engineering is a component of the Project Lead the Way (PLTW) pre-engineering curriculum. This course will help students understand the field of engineering and engineering technology. Exploring various technology systems and manufacturing processes help students learn how engineers and technicians use math, science, and technology in an engineering problem solving process to benefit people. The course also includes concerns about social and political consequences of technological change. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organizations, WV SkillsUSA or WV TSA (Technology Student Association). The West Virginia Standards for Global 21 Learning include the following components: Global 21 Content, Literacy and Numeracy, Entrepreneurship, and Technology Standards. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and content standards and objectives.

2466 Civil Engineering and Architecture

Engineering Design and Development is a component of the Project Lead the Way (PLTW) pre-engineering curriculum. This is an engineering research course in which students work in teams to research, design, and construct a solution to an open-ended engineering problem. Students apply principles developed in the four preceding courses and are guided by a community mentor. They must present progress reports, submit a final written report, and defend their solutions to a panel of outside reviewers at the end of the school year. Safety instruction is integrated into all activities. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organizations, WV SkillsUSA or WV TSA (Technology Student Association). The West Virginia Standards for Global 21 Learning include the following components: Global 21 Content, Literacy and Numeracy, Entrepreneurship, and Technology Standards. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and content standards and

objectives.

BSC Equivalent Courses

MEET 111 Engineering Drafting

Designed to develop the student's ability to read and draw orthographic projections including sectional and auxiliary views and freehand sketches. Emphasis is placed on industrial drafting practices including techniques which show principles of design and fabrication. Dimensioning, notations, and precision in lettering are also stressed.

ELET 218 Fundamentals of Computers

A study of the electronic construction and operation of digital computers, integrated components and elements electronically interconnected for obtaining basic digital computer performance, including an introduction to microprocessors. Individual components and elements are analyzed using Boolean algebra and Karnaugh mapping to insure the most simple and most economical networks. Some basic networks studied are: exclusive OR, half adders, full adders, shift registers, comparators, counters, arithmetic, memory units and microprocessors. PR: GNET 116.

ENGR Technical Elective *# 7 HOURS*

Technical electives are courses of a technical nature that support the student's career interests, such as additional mathematics, basic sciences, engineering technology courses in the student's own or other disciplines, computer science, etc. Sound professional judgment is expected in the student-advisor role when choosing electives.

Transfer Courses from MCTEC Drafting Concentration to BSC

The following courses will transfer from MCTEC PLTW into BSC Engineering Technology Program

MCTEC 1725 Mechanical Drafting	MEET 111 Engineering Drafting
MCTEC 1727 Drafting Techniques	MEET 112 Computer Aided Drafting
MCTEC 1729 Fundamentals of Drafting	ENGR Technical Elective

*how many
elective hours*

Course descriptions of MCTEC classes and BSC classes.

1725 Mechanical Drafting

This course introduces the student to the knowledge base and technical skills necessary for mechanical drafting. Areas of study include advanced dimensioning techniques, assembly drawings, threads and fasteners, gears and cams, welding, and basic solid modeling. Emphasis will be placed on personal and professional ethics, and students will explore a variety of career opportunities. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organizations, WV SkillsUSA. The West Virginia Standards for Global 21 Learning

include the following components: Global 21 Content, Literacy and Numeracy, Entrepreneurship, and Technology Standards. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and content standards and objectives.

1727 Drafting Techniques

This course introduces the student to techniques used in advanced orthographic projection. Areas of study include sectioning, pictorial views, auxiliary views, patterns and developments, dimensioning, advanced 2D CAD techniques, and basic 3D modeling in CAD. Students will demonstrate knowledge and technical expertise in various fundamental drafting techniques. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organizations, WV SkillsUSA. The West Virginia Standards for Global 21 Learning include the following components: Global 21 Content, Literacy and Numeracy, Entrepreneurship, and Technology Standards. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and content standards and objectives.

1729 Fundamentals of Drafting

This course introduces the student to the knowledge base and technical skills for all courses in the Drafting concentration. Areas of study include tools and equipment, measurement, basic drafting techniques, freehand technical sketching, orthographic projection, dimensioning, basic computer skills, and drawing techniques. Emphasis will be placed on personal and professional ethics, and students will explore a variety of career opportunities. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organizations, WV SkillsUSA. The West Virginia Standards for Global 21 Learning include the following components: Global 21 Content, Literacy and Numeracy, Entrepreneurship, and Technology Standards. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and content standards and objectives.

BSC Equivalent Courses

MEET 111 Engineering Drafting

Designed to develop the student's ability to read and draw orthographic projections including sectional and auxiliary views and freehand sketches. Emphasis is placed on industrial drafting practices including techniques which show principles of design and fabrication. Dimensioning, notations, and precision in lettering are also stressed.

MEET 112 Computer Aided Drafting

General introduction to the principles of computer aided drafting including the study of CAD system components, entity creation, and methods of editing and manipulation, with the major emphasis placed on hands-on practice in the CAD laboratory.

ENGR Technical Elective

Technical electives are courses of a technical nature that support the student's career

interests, such as additional mathematics, basic sciences, engineering technology courses in the student's own or other disciplines, computer science, etc. Sound professional judgment is expected in the student-advisor role when choosing electives.

Overview and Summary

For students following this agreement, the steps are as follows:

Step 1: Enroll in either the PLTW or Drafting Concentration at MCTEC.

Step 2: Complete and submit a provisional enrollment form from BSC.

Step 3: Register for the equivalent transfer course(s) as a fee waiver course at BSC.

Step 4: Complete the required course(s) and obtain at least a 2.0 GPA in all courses offered.

Step 5: Apply for admission at BSC in an Engineering Technology program and provide BSC with copy of official transcripts.

Students should link to www.bluefieldstate.edu to begin the admissions process.