CENTRAL WASHINGTON UNIVERSITY

Your future is Central.

STUDENT ADVISING HANDBOOK

Industrial/Technology Education

Industrial and Engineering Technology Department
Central Washington University

Revised Fall 2008

Industrial/Technology Education Program

I INTRODUCTION

Welcome to the Industrial and Engineering Technology Department and to the Industrial/ Technology Education program. This handbook was prepared as a supplement to information found in the Undergraduate/Graduate Catalog and is intended to assist students in planning and completing a Bachelor of Science Degree in Industrial/Technology Education.

The information contained in this handbook is not a substitute for the catalog or class schedule. It should be noted that it is the student's responsibility to become familiar with important dates, deadlines, regulations and rules contained in the catalog and class schedule. Upon acceptance to Central Washington University you should have received a hard copy of the catalog. In addition, an electronic version is available on Central's web site: http://www.cwu.edu/~catalogs. A schedule of classes can be viewed on-line using the Wildcat Information Network (WIN).

II THE PROGRAM

Technology refers to the diverse collection of processes and knowledge that people use to extend human abilities and to satisfy human needs and wants. Technological literacy is the ability to use, manage, assess, and understand technology.

The four-year Bachelor of Science Degree in Industrial/Technology Education is one of a number of degrees offered through the Industrial and Engineering Technology (IET) Department, which is in turn part of the College of Education and Professional Studies (CEPS). The program is housed in the Hogue Technology Building, where many of the courses in the major are held.

The program prepares students who will become teachers of Technology Education usually in middle/junior high and/or high school levels. Students selecting this major must have a basic background in woods, metals, drafting, and mathematics through trigonometry.

Students taking this major are required to complete the professional education program requirements offered through the Department of Education. Additional information may be obtained by visiting the Industrial Education web site at http://www.cwu.edu/~iet/programs/ie/teched.html

Accreditation
Central Washington University is accredited by the Northwest Commission on Colleges and Universities (NWCCU). As part of the Teacher Education program, Industrial Technology Education is accredited by the National Council for Accreditation of Teacher Education (NCATE).

Career Opportunities
Industrial/Technology teachers are currently in high demand. A recent publication from the Washington Education Association named the following teacher shortages: math, ESL, science, **technology education**, special education, and Japanese. Recent graduates have virtually 100% job placement. Our graduates have been heavily recruited by school districts both in and out of state.

Curriculum

In *addition* to the University's General Education requirements, students must complete the following course work. It should be noted that some courses require prerequisites. It is imperative that each student meets with his or her faculty advisor each quarter prior to registration. Note that there are two options within the program; the "Broad Area Major" and the "Industrial Education Major".

Technology Education Broad Area Major

These are required courses in the major, which must be taken **in addition to** the University's General Education, and Professional Education Program requirements.

Course Prefix	Course Name	Credits
IET 145	Machine Woodworking	4
IET 160	Computer Aided Design & Drafting	4
IET 210	Energy Sources & Power	3
MET 255	Metal Machining	4
IET 265	3-D Modeling	4
EET 221	Basic Electricity & Lab	3 + 1
EET 312	Basic Electronics	4
EET 371	Digital Circuits	4
MET 345	Production Technology	4
MET 357	Welding/Fabrication	4
IET 385	Industrial Design	3
SHM 325	Manufacturing Safety	3
MET 382/483	Plastics/Ceramics & Composites	4
IET 430	Methods in Teaching Industrial Ed.	3
IET 433	Industrial Education Lab Planning	3
OCED 410	Vocational School to Work Program	4
Select from Specialty Courses		7-10
	Total	**66-69**

Note: Students selecting this major are also required to obtain 2,000 hours of paid occupational experience for career & technical education (vocational) certification.

Students admitted to the program are required to present a complete electronic portfolio demonstrating their content, pedagogical and professional knowledge, skills, and disposition as a partial fulfillment of their graduation requirements.

Industrial Education Major

Industrial Education Major Option
These are required courses in the major, which must be taken **in addition to** the University's
General Education, and Professional Education Program requirements.

Course Prefix	Course Name	Credits
IET 145	Machine Woodworking	4
IET 160	Computer Aided Design & Drafting	4
IET 210	Energy Sources & Power	3
MET 255	Metal Machining	4
IET 265	3-D Modeling	4
EET 221	Basic Electricity & Lab	3 + 1
EET 312	Basic Electronics	4
EET 371	Digital Circuits	4
MET 345	Production Technology	4
MET 357	Welding/Fabrication	4
IET 385	Industrial Design	3
IET 430	Methods in Teaching Industrial Ed.	3
IET 433	Industrial Education Lab Planning	3
	Total	**48**

Note: Students enrolled in this major are also required to obtain a minor.

Students admitted to the program are required to present a complete electronic portfolio
demonstrating their content, pedagogical and professional knowledge, skills, and disposition as a
partial fulfillment of their graduation requirements.

Professional Education Program

The purpose of the Professional Education Program is to prepare prospective teachers to become facilitators of learning within the dynamic socio-cultural milieu of the school and community. The Professional Education Program curriculum provides opportunities to acquire the pedagogical knowledge and skills that allow students to demonstrate a positive impact on K-12 student learning. To this end, the program offers information about and experience in integrating research and "best practice" based pedagogical constructs, for a spectrum of diverse learning situations.

Students should begin the professional education program during their second or third quarter of their sophomore year. EDCS 300 is offered prior to the normal starting time for fall quarter. Students typically enroll for their pre-autumn field experience prior to their junior year.

Foundational Knowledge Block		
EDCS 300	Pre-Autumn Field Experience	4
EDCS 444	Educational Issues and Law	3
EDF 301	Teaching an Orientation	3
PSY 314	Human Development and the Learner	4
EDF 302	Introduction to Students with Exceptionalities	4
Effective Teaching Block		
PSY 315	Educational Psychology	4
EDCS 316	Educational Technology	3
EDCS 311	Teaching: Curriculum Methods, and Materials	5
Select One: EDCS 431, ETS 101, ANTH 130, SOC 365		3-5
EDCS 424	Reading in the Content Fields	3
Professional Development Block		
EDCS 442	Student Teaching	16
	Total	**52-54**

Students must complete a minimum of 16 quarter credits of student teaching on an all-day basis for one quarter. Students should plan to not take any other courses during student teaching.

III   ADMISSION TO THE PROGRAM

Admission to the university does not assure admission to the Industrial/Technology Education program nor to the professional education program.

Requirements: Admission to the technology education program requires that students complete CHEM 111, MATH 153, and PSY 111.

Procedure: Candidates interested in the major are urged to speak with the advisor as soon as possible. Major application forms are available in the Hogue Office #107. Students should fill in the required personal information and get the proper signatures from the IET advisor and an education advisor. After completion of the form and all required signatures, return the form to the Hogue Office.

Maintaining Major Status: In addition to meeting the academic standards of Central Washington University, once admitted to the major and the teacher preparation program, students are expected to meet the following standards:
- Grade point average of 3.0 for the last 45 graded credits.
- GPA of at least 2.5 for major, minor, and professional education sequences.

IV PROGRAM REQUIREMENTS

Finger Print Clearance
School districts now require fingerprint clearance for all extensive field placements. Therefore, at the time of application to the Teacher Preparation Program students are advised to have their fingerprints taken as soon as possible so they are cleared for Pre-Autumn and Student Teaching as well as any program required practica.

West B
To be admitted to a teacher education program in any college or university in the state of Washington, you must pass the Washington Educator Skills Test – Basic (WEST-B). This requirement is the result of legislation (House Bill 2760), which the Washington legislature passed in 2000 and became effective September 1, 2002.
1. To prepare for the writing portion of the WEST-B, refer to English and language arts texts. The writing portion includes two writing exercises: an expository and a persuasive writing assessment;
2. To prepare for the reading comprehension portion of the test, refer to language arts and literature texts;
3. To prepare for the mathematics portion of the test, refer to mathematics study guides and/or to the websites **www.mathforum.com** and to **www.math.com**.

Other information concerning the WEST-B is available at www.west.nesinc.com.

West E

Legislation enacted in 2001 required the Washington Professional Educator Standards Board (PESB) to adopt examinations for assessing skills in reading, writing, and mathematics for teachers licensed under Board authority and to adopt rules for the implementation and ongoing administration of the examinations. In addition, Washington's RCW 28A.410.220 also required the Board to adopt subject knowledge assessments for teacher certification in 33 endorsement areas. The ruling stipulated that the selected assessments must be aligned with the knowledge and skills required of K-12 students as defined by Washington's Essential Academic Learning Requirements (EALRs). The PESB elected to require The Praxis Series tests to meet the mandate for subject knowledge tests.

Effective September 1, 2005, applicants for Washington teacher certification must meet the new licensure testing requirements. To locate current information on frequently asked questions, costs, cut-off scores, testing sites and dates, go to http://www.ets.org/praxis/prxwa.html.

Student Teaching

Student teaching applications are available at http://www.cwu.edu/~education/stdtch.html. Completed applications should be returned to Black 101.

Students must complete the following before student teaching:
* Admission to the Teacher Preparation Program
* GPA must be 3.0 (the last 45 graded credits or cumulative)
* Successful completion of required professional education core courses
* At least 75% of major and minor courses completed
* Have OPP and comprehensive fingerprint clearance
* Evidence of Liability Insurance (see below)
* Must have taken WEST-E exam (see below)

Beginning with students who declare a Major and Minor under the 2006-2007 catalog:

☑ Students will be required to take, but not necessarily pass, the WEST-E prior to student teaching. By taking the WEST-E prior to student teaching, students who do not pass the exam the first time have at least one more test-date prior to the completion of student teaching.

☑ Students are required to purchase $1 million in liability insurance prior to student teaching. Beginning Winter Quarter 2007, students will be required to attach proof of purchase to their student teaching application. Insurance can be purchased through student organizations such as SWEA.

V CERTIFICATION AND GRADUATION REQUIREMENTS

Teacher Certification

Applications for Degree and Certification are due the first week of the quarter preceding the quarter you plan to student teach. Undergraduates must submit all items listed below:

1. Application for Graduation

2. Application for Washington Residency Teaching Certificate

3. Character and Fitness Supplement

4. CWU Graduating Senior Questionnaire

5. $67 check made payable to CWU

Certification applications are to be submitted to the Certification Office in Black Hall, room 228. All forms can be downloaded at: http://www.cwu.edu/~cert/gradApplication.html

Career and Technical Education (Vocational) Certification

Career and Technical Education is a planned program of courses and learning experiences that begins with exploration of career options, supports basic academic and life skills, and enables achievement of high academic standards, leadership, options for high skill, high wage employment preparation, and advanced and continuing education.

Initial CTE Certificates are issued in one of five broad endorsement areas (agriculture education, family & consumer science education, business education, marketing education, and technology education) upon completion of a state-approved teacher preparation program in the area, and documentation of 2,000 hours of paid occupational experience in the broad endorsement area. An application form can by found at: http://www.k12.wa.us/certification/certapp/4075.pdf

Graduation Requirements

Check the deadline dates for Graduation applications at Mitchell Hall.

* A minimum of 180 quarter credits is required
* A minimum of 60 credits of upper division study is required. (These are earned in courses numbered 300 and above.)
* Students must study on the university campus or at an established university center at least three quarters and earn a minimum of 45 credits. Credits earned through industrial or military experience, or through credit by examination may not be used to meet residency requirements.
*No more that forty-five (45) total quarter credits through CLEP or other sources of non-traditional credit may apply to graduation.
* Transfer students must earn from CWU a minimum of 10 credits in the major and, if a minor is declared, 5 credits in the minor

Graduation applications are to be submitted directly to Degree Checkout in Mitchell Hall.

VI   ADVISING

Who will be your advisor?
You will have two advisors, one in the IET Dept. and one from the Department of Education. The advisor and contact information for the industrial/technology major is:

     Scott Calahan   Hogue Technology Office #206   963-3218   calahans@cwu.edu

When, where and how will you arrange to meet with your advisor?
Students are responsible for meeting with their advisor each quarter to develop an academic plan that will meet the requirements of the University and of their major. It is the <u>responsibility of the student</u>, rather than the advisor, to continuously audit his/her program for successful completion of the requirements. As soon as the class schedule becomes available each quarter, usually about two weeks prior to pre-registration, students should contact their advisor for an advising appointment.

VII   ACADEMIC PERFORMANCE

Academic performance is governed by the standards set forth in the University Catalog. You should become familiar with University policies pertaining to study load, withdrawal from a course, grade point average, repetition of courses, incomplete grades and scholastic standards.

VIII   STUDENT ETHICS AND CONDUCT

Ethical conduct is an integral part of education and students in the Industrial/Technology Education major are expected to take full personal responsibility to comply with those aspects of the profession that are applicable to students. Students are clearly expected to do their own work and not copy the work of others. The dignity of the classroom setting is important to learning. It is expected that education majors would follow all rules established by University faculty and honor all rules governing class and lab use in the Hogue Technology Building.

Students are encouraged to familiarize themselves and act in accordance with the Code of Professional Conduct (Chapter 180-87 WAC – Washington State Board of Education Administration Rules).

IX   STUDENT ORGANIZATIONS

Students are strongly encouraged to become involved with the Central Technology Education Association, as well as any of the other student organizations (of interest) in the IET Department.

Central Technology Education Association (CTEA)
The CTEA is a student led educational organization devoted to the development and advancement of technology education at CWU and in the state of Washington and is the main club that students majoring in the Tech. Ed. program typically belong to. A portion of the annual dues goes toward student membership in the Washington Industrial Technology Education Association. The club's

activities include guest speakers, field trips, competitions, and other projects. Professor Calahan serves as the faculty advisor.

Student Washington Education Association (SWEA)
SWEA is a pre-professional organization run by education students for education students and is the student program of the Washington Education Association and the National Education Association. The purpose of the Student Washington Education Association is to provide learning opportunities that address student needs, represent student interests, build and sustain association and institutional relationships, link students with their profession, and provide student teaching liability insurance through W.E.A. For more info on SWEA at CWU, visit http://www.cwu.edu/~swea/

X USE OF HOGUE FACILITIES

The Hogue Technology Building is open Monday through Friday and students are encouraged to fully utilize the facilities that it has to offer. Lockers are available on the first and second floor for student use free of charge. Choose a locker and report the locker number to the department secretary. Students are responsible for providing their own locks and making sure that their locker is clean and their lock removed when vacating the locker. The student lounge, which includes a microwave oven, is available as a student study and break area. Please keep it clean.

The computer lab, located in Hogue 210, is used as a classroom regularly during the week. All students may use the lab, provided that a class is not in session at the time. Absolutely no food or drinks are allowed in the room. Students must have approval of an instructor prior to using the plotter.

The woods lab, metals lab, and other labs located on the first and second floors are all used for specific classes. Students desiring to use these labs must follow rules and guidelines established by the IET Department and obtain instructor approval prior to using any lab.

XI SCHOLARSHIPS

The Jere Cary and Owen Shadle Memorial scholarships are annual scholarships available exclusively to Industrial/Technology Education majors. Applications are usually due on or around March 1st. Additional scholarships are available; check with the financial aid office for more information. All students are encouraged to apply for any scholarship for which they may be eligible. The scholarship office (Barge 102) has the most recent scholarship information available at http://www.cwu.edu/~scholar

Academic Plan Worksheet for Tech Ed. Majors

Fall Quarter	Cr.
_____	____
_____	____
_____	____
_____	____
_____	____
Total Cr.	____

Winter Quarter	Cr.
_____	____
_____	____
_____	____
_____	____
_____	____
Total Cr.	____

Spring Quarter	Cr.
_____	____
_____	____
_____	____
_____	____
_____	____
Total Cr.	____

Fall Quarter	Cr.
_____	____
_____	____
_____	____
_____	____
Total Cr.	____

Winter Quarter	Cr.
_____	____
_____	____
_____	____
_____	____
Total Cr.	____

Spring Quarter	Cr.
_____	____
_____	____
_____	____
_____	____
Total Cr.	____

Fall Quarter	Cr.
_____	____
_____	____
_____	____
_____	____
Total Cr.	____

Winter Quarter	Cr.
_____	____
_____	____
_____	____
_____	____
Total Cr.	____

Spring Quarter	Cr.
_____	____
_____	____
_____	____
_____	____
Total Cr.	____

Fall Quarter	Cr.
_____	____
_____	____
_____	____
_____	____
Total Cr.	____

Winter Quarter	Cr.
_____	____
_____	____
_____	____
_____	____
Total Cr.	____

Spring Quarter	Cr.
_____	____
_____	____
_____	____
_____	____
Total Cr.	____

4-year plan for Technology Education (Broad Area) Majors

	Fall Quarter	Cr.	Winter Quarter	Cr.	Spring Quarter	Cr.
Fr.	Univ 101 Academic Advising Seminar	1	English 102	4	Perspectives on Cultures W Ethnic Stud	4-5
Fr.	English 101	4	Math 153	5	IET 101 (Applicationss of Natural Science)	5
Fr.	Math, Philosophy, or Comp. Science	4-5	Information Tech. or Computer Science	3-4	The Aesthetic Experiences	4-5
Fr.	CHEM 111 (Fund of Phys & Bio Sciences)	5	Philosophy & Cultures of the World	4-5		
Freshman		**14-15**		**16-18**		**13-15**
So.	IET 160 Computer Aided Design/Drafting	4	IET 145 Modern Woodworking	4	EET 221 Basic Electricity	4
So.	MET 255 Metal Machining	4	ETS 101 (Perspectives on World Cultures)	4	IET 265 3-D Modeling	4
So.	Patterns & Connections in the Nat. World	4-5	Literature & the Humanities	4-5	IET 210 Energy Sources & Power	3
So.	Physics 111 (Fund of Phys & Bio Sciences)	5			Foundations of Human Adaptive Behavior	4-5
Sophomore		**17-18**		**12-13**		**15-16**
Sept.	EDCS 300 Pre-Autumn Field Experience	4				
Jr.	MET 345 Producation Technology	4	EET 312 Basic Electronics	4	SHM 325 Manufacturing Safety	3
Jr.	MET 357 Welding/Fabrication	4	*MET 310 Hydraulics & Pneumatics*	4	OCED 410 School to Work Program	4
Jr.	EDF 301 Teaching an Orientation	3	EDCS 311 Teaching: Curriculum, Methods	5	*CMGT Light Commercial Construction*	4
Jr.	PSY 314 Human Development & Learner	4	EDF 302 Introduction to Students w/Excep	4	PSY 315 Educational Psychology	4
Junior		**15/19**		**17**		**15**
Sr.	IET 430 Methods of Teaching Ind. Ed.	3	IET 433 Industrial Ed. & Lab. Planning	3	EDCS 442 Student Teaching	16
Sr.	IET 385 Industrial Design	3	MET 382/483 Plastics and Composites	4		
Sr.	EET 371 Digital Circuits	4	EDCS 444 Ed. Issues and Law	3		
Sr.	EDCS 316 Educational Technology	3	EDCS 424 Reading in the Content Field	3		
Senior		**13**		**13**		**16**

Also Required: 2,000 hours of paid industrial work experience (for CTE certification)

- Basic
- Breadth
- Tech. Major
- Tech. Specialty *may be other approved course*
- Professional Ed. Sequence