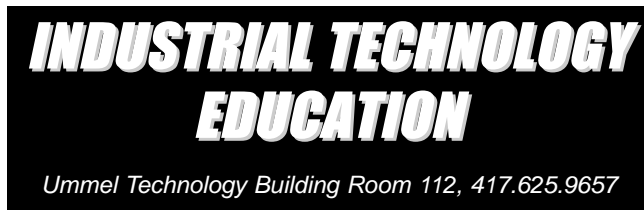


CAMT 160	Inspection and Gaging	3
IET 315	Probability & Statistics for Engineers	3
IET 320	Applied Statistical Quality Control	3
		15

* or Placement Test or acceptable ACT Score.

For additional information contact:

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Faculty Bartholet

Mission

The Industrial Technology Education degree has certifications for both middle school (grades 5-9) and secondary (grades 9-12). The middle school certification in Industrial Technology is one of two areas of concentration that a student may select from to complete their education degree. The student who desires to teach in a secondary school will have a single teaching field. Technology education is an applied discipline designed to promote technological literacy at all levels. It is the intent of such study to provide students with an understanding of their technological culture so they can become intelligent consumers of their technology. Therefore, the program is designed to produce individuals who can solve problems involving the technical means humans use for their survival. Technology education capitalizes on the needs humans have for expressing themselves with tools and materials. Technology literacy is considered a basic and fundamental study for all persons regardless of educational or career goals. As a result of these goals, the discipline is both academic and laboratory oriented.

Bachelor of Science in Education Middle School Education Grades 5-9 Certification in Industrial Technology

(This degree is 1/2 of a dual degree for Middle School Certification.)

Bachelor of Science in Education with a major in Industrial Technology Grades 5-9 Certification One of Two Teaching Fields

	Semester Hours
Core Requirements (p. 34) [51*]	48*
Education Certification Requirements	51
Educ 347 Industrial Technology Methods	3

Industrial Technology Requirements:	21
Communications	6
CADD 110 Engineering Graphics (3)	
CADD 271 Graphic Information Technology I (3)	
Energy & Power	3
IET 381 Basic Energy & Power (3)	
Materials & Process	9
CAMT 100 Introduction Machine Tool Processes . (3)	
CAMT 240 Engineering Materials (3)	
IET 391 Wood Working & Plastic (3)	
Organization and Administration	3
IET 350 Industrial Supervision (3)	
Second Teaching Field	25-28
TOTAL	145-148

*Required course in psychology satisfies the requirement for three hours of the Core Curriculum.

Bachelor of Science in Education Middle School Education

Candidates who elect middle school (grades 5-9) as their major must complete two areas of concentration consisting of 22-32 hours in each area. The curriculum for these areas is a joint effort by the departments of teacher education and the teaching specialty. Students who desire to teach in a middle school may choose to become qualified in any two of the following seven areas: Language Arts (English), Math, Science, Social Studies, Business, Industrial Technology, or Speech/Theatre.

Middle School Professional Education sequence Grades 5-9

	Semester Hours
Math 119 Math Elementary I	3
Math 120 Math Elementary II	3
Psy 305 Child/Adolescent Development	4
Psy 310 Educational Psychology	2
Psy 412 Measure & Evaluation	2
Educ 100 Introduction to Teacher Education I . . .	1
Educ 280 Foundations of Education in a Global Society	3
Educ 301 Use of Computer Software	3
Educ 302 Exceptional Child	2
Two content area Methods Courses (Educ 322, 330, 333, 336, 339, 340, 344)	4-6
Educ 321 Microteaching	2
Educ 329 Pedagogical Theory	4
Educ 342 Development Reading	3
Educ 343 Content Area Lit: MS	3
Educ 402 Foundations of Education	2
Educ 412 Philosophy, Organization & Curriculum	2
Educ 413 Methods Teaching in Middle Grades . . .	2
Educ 423 Classroom Management	2
Educ 432 Critical Issues	2
Educ 452 Student Teaching	8

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The Core Curriculum and Department of Education requirements for the middle school program total 100 hours. The number of hours added to this Core depends on the two content areas chosen. The possible choices and hours are listed below:

IT/SS	=	35
IT/S-T	=	50
IT/LA	=	41
B/IT	=	50
Sci/IT	=	43
Math/IT	=	43

Psy 305	Child/Adolescent Development	4
CORE	[Humanities/Fine Arts (2C)]	3
CORE	[Humanities/Fine Arts (2A)]	3
CAMT 100	Introduction Machine Tool Processes	3
CADD 110	Engineering Graphics	3
Concentration 2nd Area		3
		19#

Summer-Sophomore Year

Concentration 2nd Area		4-8
		4-8

Junior Year

1st Semester

Candidate must be tentatively admitted to the Teacher Education Program before courses with an "Educ" prefix can be taken. (Exceptions: Educ 100, Educ 200, Educ 301 and Educ 302).

Educ 321	Microteaching	2
Educ 329	Pedagogical Theory, Methods, & Practices	4
Educ 342	Developmental Reading: Elementary	3
Educ 423	Classroom Management	2
Concentration 2nd Area		3
IET 391	Wood Working & Plastics	3
		17

2nd Semester

Must be fully admitted to the Teacher Education Program

Educ 302	Exceptional Child	2
Educ 343	Content Area Literature: M.S. (WI)	3
Psy 310	Educational Psychology	2
CORE	[IB 310 International Business]	3
CADD 271	Graphics Information Technology I	3
CAMT 240	Engineering Materials	3
Concentration 2nd Area		2-3
		18-19#

Junior-Summer

Educ 330	Industrial Technology Methods	3
Concentration 2nd Area		2-8
		5-11

Senior Year

1st Semester

Educ 412	Middle School Curriculum	2
Psy 412	Measurement & Evaluation	2
Educ	2nd Certification Area	2-3
IET 350	Industrial Supervision	3
Concentration 2nd Area		4-5
CORE	[PSc 120 Gov't: US/St/Loc]	3
		16-18

2nd Semester

Educ 402	Historical and Philosophical Perspectives in Education (WI)	2
Educ 413	Methods of Teaching Middle School	2
Educ 432	Critical Issues	2
Educ 452	Student Teaching	8
		14

(Prerequisites)

[Department Recommendations]

*Candidate must have speech evaluation filed in the Education Dean's Office.

** This is a certification requirement and must be taken by all teacher education candidates prior to Junior Block or concurrently.

#See page 38. Must have prior written permission from Dean of School of Technology to enroll in more than 18 hours during a semester.

Suggested Order of Study

Bachelor of Science in Education Middle School Education with Industrial Technology Concentration

Candidates will need to check with their advisers for additional courses that must be taken in each of two chosen areas of concentration: Language Arts, Social Science, Science, Industrial Technology, Business, Speech/Theatre, or Math.

Freshman Year

1st Semester

Course	Hours	
Educ 100	Introduction to Teacher Education I	1
CORE	[Eng 101 College Composition I (WI)]	3
CORE	[Math 119 Math Elementary I]	3
CORE	[Econ 180 American Economic System]	3
Psy 120	College Orientation	1
CORE	[Comm 100 Oral Communication] *	3
CORE	[Kine 101 Physical Activity]	1
		15

2nd Semester

CORE	[Math 120 Math Elementary II]	3
CORE	[Eng 102 College Composition II (WI)]	3
CORE	[Hist 110 U.S. History 1492-1877]	3
Psy 100	General Psychology	3
CORE	[Bio 101 General Biology]	4
		16

Summer-Freshman

Concentration Area		4-8
		4-8

Sophomore Year

1st Semester

CORE	[Phys 101 Physical Science for Elementary Teachers]	5
CORE	[Hist 120 U.S. History 1877-present]	3
CORE	[Kine 103 Lifetime Wellness]	2
Educ 301	Computer Software Classroom**	3
Educ 200	Introduction to Teacher Education II	1
CORE	[Humanities/Fine Arts (2B)]	3
IET 381	Basic Energy & Power	3
		19#

2nd Semester

Pass C-Base test for admission. Verify that ACT score is 20+. Have a 2.5 GPA in the teaching specialty area and a 2.75 cumulative GPA. Apply for admission to the Teacher Education Program. Get faculty recommendation, write autobiography, and file admission papers for tentative admission. If ACT is less than 20, candidate should retake the ACT.

For additional information contact:

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 Phone: 417.625.9567
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**Bachelor of Science in Education
 Industrial Technology Emphasis**

Major Code 9040
 Grades 9-12 Certification

	Semester Hours
Core Requirements (p. 34) [51].	48*
Education Certification Requirements (p. 197)	43-45
Industrial Technology Requirements	36
Communications: (minimum 7)	9
CADD 110 Engineering Graphics (3)	
CADD 220 Architectural Drafting (3)	
CADD 271 Graphic Information Technology (3)	
Energy & Power: (minimum 7)	9
IET 381 Introduction to Power & Energy (3)	
IET 305 Basic Electricity & Electronics (3)	
IET 383 Power Generation Pneumatics & Hydraulics (3)	
Materials & Process: (minimum 7)	9
CAMT 100 Introduction Machine Tool Processes (3)	
CAMT 240 Engineering Materials (3)	
IET 391 Woodworking & Plastics (3)	
Organization/Administration: (minimum 5)	6
IET 350 Industrial Supervision (3)	
IET 310 Production Planning & Control (3)	
Additional related: (for a total of 36)	3
IET 393 Wood & Plastics Science (3)	
Total	127/129

* Required course in psychology satisfies the requirements for three hours of the Core Curriculum.

2nd Semester		
CADD 110	Engineering Graphics	3
CAMT 100	Introduction to Machine Tool Processes	3
CORE	[Kine 103 Lifetime Wellness]	2
CORE	[Eng 102 College Composition (WI)]	3
CORE	[Hist 110 U.S. History1492-1877]	3
CORE	[Bio 101 General Biology]	4
		18

Sophomore Year

1st Semester		
<i>Follow teaching specialty department recommendations for core courses and teaching specialty courses.</i>		
Educ 200	Introduction to Teacher Education II	1
Educ 302	Exceptional Child	2
CORE	[Phys 100 Fundamentals of Physical Science]	5
CORE	[Hist 120 U.S. History 1877-present]	3
IET 391	Wood Working & Plastics	3
IET 381	Introduction to Power & Energy	3
		17

*Pass first available C-Base test.
 Verify that ACT score is 20. Have a 2.5 GPA in the teaching specialty area and a 2.75 cumulative GPA. Get faculty recommendation, write autobiography, and file admission papers for tentative admission.*

2nd Semester		
<i>Follow teaching specialty department recommendations for core courses and teaching specialty courses.</i>		
Educ 301	Computer Software Classroom**	3
Psy 301	Adolescent Development	3
CADD 220	Architectural Drafting	3
CAMT 240	Engineering Materials	3
CORE	[Humanities/Fine Arts (2C)]	3
CORE	[Humanities/Fine Arts (2A)]	3
		18

Junior Year

1st Semester		
<i>Candidate must be tentatively admitted to the Teacher Education Program before courses with an "Educ" prefix can be taken (Exceptions: Educ 100, Educ 200, Educ 301, and Educ 302).</i>		
Educ 329	Pedagogical Theory, Methods, & Practices	4
Educ 321	Microteaching	2
Educ 423	Classroom Management	2
CORE	[PSc 120 Gov't: US/St/Loc]	3
IET 350	Industrial Supervision	3
CORE	[Humanities/Fine Arts (2B)]	3
		17

Summer-Junior

Educ 330	Industrial Technology Methods	3
		3

Follow departmental recommendations for teaching specialty courses. If recommended by Junior Block instructors and by the teacher education faculty, receive full admission to teacher education.

2nd Semester		
<i>Follow departmental recommendations for teaching specialty courses.</i>		
Psy 310	Educational Psychology	3
CADD 271	Graphics Information Technology	3
IET 305	Basic Electricity & Electronics	3
IET 383	Power Generation Pneumatics And Hydraulics	3
IET 393	Woods & Plastic Science	3
		15

Senior Year

1st Semester		
<i>Follow the departmental recommendations for teaching specialty courses. Apply for student teaching during the second week of the semester.</i>		

Suggested Order of Study

**Bachelor of Science in Education
 Secondary Education (9-12)
 Industrial Technology Emphasis**

Major Code 9040

Freshman Year

	Hours	
1st Semester		
Course		
Educ 100	Introduction to Teacher Education I	1
Psy 100	General Psychology	3
CORE	[Eng 101 College Composition I (WI)]	3
CORE	[Math 130 College Algebra]	3
Psy 120	College Orientation	1
CORE	[Comm 100 Oral Communication]*	3
CORE	[Kine 101 Physical Activity]	1
		15

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Educ 422	Content Area Lit: Sec. (WI)	2
Psy 412	Measurement & Evaluation	
OR		
Educ 412	Middle School Curriculum	
OR		
Educ 420	Introduction to Counseling	2-3
IET 310	Production Planning & Control	3
CORE 5a	[IB 310 International Business]	3
CORE 4a	[Econ 180 American Economic System]	3
		13-14
2nd Semester		
Educ 402	Historical and Philosophical Perspectives in Education (WI)	2
Educ 432	Critical Issues	2
Educ 462	Student Teaching Secondary	8
		12

(Prerequisite)

[Department Recommendations]

*Candidate must have speech evaluation filed in the Education Dean's Office.

** This is a certification requirement and must be taken by all teacher education candidates prior to Junior Block or concurrently.

For additional information contact:

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Course Descriptions

Educ 330 (Su) 3 hrs. cr.

Industrial Technology Methods

This is a required education course, which is an introduction to the instructional planning, materials, philosophy, rationale, and methods of teaching Industrial Technology. Prerequisite: Recommend concurrent enrollment with junior block. Must be taken prior to professional semester.

COMPUTER INFORMATION SCIENCE

Matthews Hall 223, 417.625.9383

Faculty Oakes - Head, Collins, Herr, Mays, Pinet, Schiavo, Tunnell

Mission

The Computer Information Science (CIS) Department provides opportunities for a broad undergraduate education in the many aspects of computer hardware and software. The program offers courses of instruction that develop a thorough understanding of current methods used in the design and implementation of information technology based solutions.

Fundamental Values: Pursuant to the department's educational mission, the faculty:

- Maintains the currency of the curriculum through ongoing research and consultation with industry representatives.
- Engages in professional development that allows its members to remain current in their fields and to provide technological leadership to the university community.
- Is committed to the success of its students, both during and after college.

Program Goals: The Computer Information Science program will produce graduates who:

- Understand and can utilize core information technologies.
- Can analyze, design, and implement effective technology based solutions.
- Have requisite communication and quantitative skills.
- Work effectively as team members.
- Are committed to lifelong personal and professional development.
- Conduct themselves in an honorable and ethical manner.

Curricula Options: Within this context, the Department offers the following curricula options:

- Bachelor of Science in CIS-Information Technology
- Bachelor of Science in CIS-Information Systems
- Bachelor of Science in CIS-Computational Mathematics
- Bachelor of Science in CIS-Bioinformatics
- Bachelor of Science in CIS-Computer Forensics
- Bachelor of Science in CIS-Computer Technology
- Minor in CIS-Network Systems Administration
- Minor in CIS-Information Systems
- Minor in CIS-Website Administration
- Associate of Science in CIS

The six **Bachelor of Science in CIS** alternatives prepare the student for graduate school or entry-level positions such as systems programmer, systems analyst, applications programmer, database administrator, bioinformatics specialist, computer forensics analyst, user support specialist, network administrator, or website administrator.

Information Technology and Information Systems are distinguished by selected courses that develop the student's understanding of an organization's information requirements and procedures for designing and implementing an information system that will facilitate its management.