

INDUSTRIAL MAINTENANCE TECHNOLOGY

(Wallace & Sparks Campus)

The Industrial Maintenance Technology program provides instruction and skills development in the rapidly growing, related fields of Industrial Systems Maintenance and Nuclear Systems Maintenance. Instruction is presented at a highly technical level, involving the applications of mathematics, science, and communication skills as well as hands-on training in AC and DC fundamentals, process controls, and principles of industrial mechanics and maintenance, robots, programmable controllers, hydraulics and pneumatics, radiation protection and detection, reactor plant protection and safety, and nuclear plant systems. Students will be exposed to a common core of technical courses and will then choose an area of specialization in Industrial Systems Maintenance or Nuclear Systems Maintenance. Successful completion of the program prepares graduates for entry-level employment in a variety of industrial-related fields.

DEGREE CURRICULUM

<i>Course</i>	<i>Credit Hours</i>
Area I: Written and Oral Communications	6
ENG 101 English Composition I	3
SPH 106 Fundamentals of Oral Communication OR	
SPH 107 Fundamentals of Public Speaking	3
Area II: Humanities and Fine Arts	3
Humanities/Fine Arts Elective	3
Area III: Natural Sciences, Mathematics, and Computer Science	9-10
CIS 146 Microcomputer Applications	3
MTH 100 Intermediate College Algebra	3
PHS 112 Physical Science II	4
(Industrial Systems Maintenance only)	
CHM 104 Introduction to Inorganic Chemistry	4
(Nuclear Systems Maintenance only)	
Area IV: History, Social and Behavioral Sciences	3
PSY 200 Psychology	3
Area V: Career and Technical Courses	
Required Orientation Courses	
ORI 101 Orientation to College OR	
ORI 105 Orientation and Student Success	1-3
ORI 104 WorkKeys® Assessment and Advisement	1
Required Field of Concentration Courses	
INT 101 DC Fundamentals	3
INT 103 AC Fundamentals	3
ELT 221 Electronics for Electricians	3
INT 184 Introduction to Programmable Logic Controllers	3
INT 113 Industrial Motor Controls I	3
INT 213 Industrial Motor Controls II	3
Total Core Technical Credits	20-22

INT 117	Principles of Industrial Mechanics	3
INT 134	Principles of Industrial Maintenance	
	Welding and Metal Cutting Techniques	3
INT 139	Introduction to Robot Programming	3
INT 105	Introduction to Process Technology	3
INT 208	Advanced Process Simulation	3
INT 284	Advanced Principles of Programmable Controllers	3
INT 288	Applied Principles of Programmable Controllers	3
INT 118	Fundamentals of Industrial Hydraulics and Pneumatics	3
INT 222	Special Topics	3
	Total Concentration Credits	27
	Total Credits for Degree	68-70

NUCLEAR SYSTEMS MAINTENANCE CONCENTRATION

<i>Course</i>	<i>Credit Hours</i>
Area V: Required Field of Concentration Courses	28
MTH 103 Introduction to Technical Mathematics	3
PHY 115 Technical Physics	4
INT 105 Introduction to Process Technology	3
INT 117 Principles of Industrial Mechanics	3
INT 118 Fundamentals of Industrial Hydraulics and Pneumatics	3
NUC 118 Radiation Protection and Detection	3
NUC 119 Reactor Plant Protection and Safety Design	3
NUC 120 Nuclear Plant Systems I	3
NUC 121 Nuclear Plant Systems II	3
Total Concentration Credits	28
Total Credits for Degree	70-72

Industrial Systems Maintenance Associate in Applied Science Degree Suggested Course Sequence

<i>FIRST SEMESTER</i>	<i>SECOND SEMESTER</i>	<i>THIRD SEMESTER</i>
CIS 146	INT 103	INT 113
PHS 112	INT 184	ORI 104
INT 101	SPH 106 or 107	INT 134
ENG 101	PSY 200	ELT 221
ORI 101 or 105*	Humanities/Fine Arts Elective	MTH 100
<i>FOURTH SEMESTER</i>	<i>FIFTH SEMESTER</i>	
INT 213	INT 118	
INT 105	INT 139	
INT 284	INT 208	
INT 117	INT 288	
PHS 112	INT 222	

Note: Students may choose from one of the following concentrations.

INDUSTRIAL SYSTEMS MAINTENANCE CONCENTRATION

<i>Course</i>	<i>Credit Hours</i>
Area V: Required Field of Concentration Courses	27

***Nuclear Systems Maintenance
Associate in Applied Science Degree
Suggested Course Sequence***

FIRST SEMESTER	SECOND SEMESTER	THIRD SEMESTER
CIS 146	INT 103	INT 113
MTH 100	INT 184	ORI 104
INT 101	SPH 106 or 107	INT 134
ENG 101	PSY 200	ELT 221
ORI 101 or 105*	Humanities/Fine Arts Elective	CHM 104

**If applicable, ORI 101 or 105 is required for all first-time college students.*

FOURTH SEMESTER	FIFTH SEMESTER	SIXTH SEMESTER
ELT 212	MTH 103	INT 292
INT 105	ELT 221	INT 118
NUC 118	NUC 119	NUC 120
PSY 200	PHY 115	NUC 121
INT 213	INT 117	ORI 104

**SHORT CERTIFICATE CURRICULUM
INDUSTRIAL MAINTENANCE TECHNOLOGY**

Course	Credit Hours
Area V: Required Field of Concentration Courses	
INT 118 Fundamentals of Industrial Hydraulics and Pneumatics	3
INT 113 Industrial Motor Controls I	3
INT 213 Industrial Motor Controls II	3
INT 101 DC Fundamentals	3
INT 103 AC Fundamentals	3
INT 134 Principles of Industrial Maintenance Welding and Metal Cutting Techniques	3
INT 184 Introduction to Programmable Logic Controls	3
INT 284 Advanced Principles of Programmable Controllers	3
INT 288 Applied Principles of Programmable Controllers	3
Total Credits for Short Certificate	27