

## Manufacturing Engineering Technology (BP/EP) Associate in Applied Science Degree

### Semester Sequence

#### Offered at Brooklyn Park and Eden Prairie

#### First Semester

FLPW1101	Fluid Power Technology I	3
FLPW1231	Industrial Electricity I	3
METS1200	Industry Practices and Procedures	3
METS2000	Engineering Design Principles	3

Choose one of the following if required for your specialization:

ENGC1100	AutoCAD for Engineering	4
ENGC1160	Inventor	4
ENGC1250	SOLIDWORKS I	4
ENGC2100	Basic Creo Parametric	4
	or	
	Choose three credits from your specialization courses	3

#### Total Credits 15

#### Second Semester

ENGC1011	Engineering Drawing	3
METS1020	Industrial Manufacturing Processes	3

Choose one of the following:

MACH1205	Brooklyn Park Campus Machine Tool Technology	3
PLST1041	and Introduction to Plastics Molding Processes	3
	or	
ARET1140	Eden Prairie Campus Computer Integrated Manufacturing	3
ENGC1050	and Additive Manufacturing	3

Choose three credits from your specialization courses

#### Total Credits 15

#### Third Semester

METS1050	Quality Control	3
	Choose 3 credits from MnTC Goal Area 2	3

Choose six credits from your specialization courses

	Choose one of the following:	
MATH1150	Applications of Quantitative Reasoning	3
MATH1250	Introduction to Statistics	3
MATH1400	College Algebra	4

**Fourth Semester**

METS2100	Statics and Strength of Materials	3
	General Education Electives	6
	Choose three credits from your specialization courses	3
	Choose one of the following:	
ENGL1070	Technical Writing	3
ENGL1100	Writing and Research	4

**Total Credits 15**

**Automation Robotics Engineering Technology Specialization - 15 Credits**

ARET1130	Maintenance Operations	2
ARET1155	Automation Controls	3
ARET1165	Vision Systems for QA/SPC	3
ARET1190	Programmable Logic Controllers	3
ARET1200	Introduction to Robotics	2
ARET2200	FANUC Robotics Operations	2

**Engineering CAD Technology Specialization - 15 Credits**

	Choose one of the following:	
ENGC1100	AutoCAD for Engineering	4
ENGC1160	Inventor	4
ENGC1250	SOLIDWORKS I	4
ENGC2100	Basic Creo Parametric	4
	Choose at least eleven credits from:	
ENGC1021	Working Drawings	3
ENGC1041	Geometric Dimensioning and Tolerancing	3
ENGC1201	Industrial CAD Project	3
ENGC1255	SOLIDWORKS II	4
ENGC2110	Advanced Creo Parametric	4

**Machine Tool Technology Specialization - 15 Credits**

MACH1056	Blueprint Reading I	3
MACH1110	Turning Technology I	3
MACH1125	Milling Technology I	3
MACH2400	CNC Setup and Operation	3
MACH2406	CNC Programming	3

**Welding and Metal Fabrication Specialization - 15 Credits**

WLDG1135	Gas Metal Arc Welding I	3
WLDG1182	Blueprint Reading for Welders	2
WLDG1220	Gas Tungsten Arc Welding I	3
WLDG1350	Flux Cored Arc Welding I	3
	Choose four additional WLDG credits	4

**Electronics Technology Specialization - 15 Credits**

ELEC1000	DC Circuits	4
ELEC1050	AC Circuits	4
ELEC1100	Complex AC Circuits - deleted Summer 2024	3
ELEC1150	Diodes and Rectifiers	2
ELEC1200	Soldering Skills	1
	Choose one additional ELEC credit	1

**Fluid Power Specialization - 15 Credits**

	Choose one of the following:	
ENGC1100	AutoCAD for Engineering	4
ENGC1160	Inventor	4
ENGC1250	SOLIDWORKS I	4
ENGC2100	Basic Creo Parametric	4

	Choose at least eleven credits from:	
FLPW1106	Fluid Power Technology II	4
FLPW1181	Pumps and Actuators	4
FLPW1191	Hydraulic Components	3
FLPW1236	Industrial Electricity II	3
FLPW1320	Hydraulic Circuits	2
FLPW1340	Pneumatic Circuits and Air Logic	4
FLPW2000	Programmable Logic Controllers	3

### Plastics Engineering Technology Specialization - 15 Credits

PLST1008	Fundamentals of Plastics/Chemistry/Ingredients	4
PLST2007	Properties and Tests of Selected Plastics	4
PLST2012	Extrusion Processes I	4
PLST2017	Extrusion Processes II	4
PLST2035	Medical Device Polymer Processes	3
PLST2129	Injection Molding Process I	5
PLST2139	Injection Molding Process II	3
PLST2144	Injection Molding Process III	3

### MnTC Goal Area 2

A complete list of MnTC courses and Goal Areas that can be used to meet General Education requirements can be found at [www.hennepintech.edu](http://www.hennepintech.edu). The same course cannot satisfy more than one MnTC Goal Area requirement.

BIOL1000	Biology in Society	4
BIOL1100	Nutrition and Health	3
BIOL1300	Introduction to Forensic Science	3
BIOL1400	Human Biology	4
BIOL2005	General Biology I	4
BIOL2125	Anatomy and Physiology I	4
BIOL2225	Anatomy and Physiology II	4
BIOL2235	Microbiology	4
COMM1260	Small Group Communication	3
MATH1150	Applications of Quantitative Reasoning	3
PHIL1100	Critical Thinking for College Success	3
PHYS1005	Introductory Physics I	3
PHYS1010	Introductory Physics II	3
SOCI1100	Introduction to Sociology	3

### Choose a Total of: 3 Credits

#### General Education Electives

Choose credits from Hennepin Technical College's Minnesota Transfer Curriculum (MnTC) general education courses.

### Choose a Total of: 6 Credits

#### Graduation (60 Credits)

Semester listings reflect the recommended sequence. Due to circumstances beyond our control, the information herein is subject to change without notice.

1/12/2024: BP 4504 / EP 4505