

# AAS: Energy Systems

Curriculum Chair: Prof. Richard VanInwegen Tech T24 Tel # (914) 606-6877 Email: [Richard.VanInwegen@sunywcc.edu](mailto:Richard.VanInwegen@sunywcc.edu)

Associate Dean: Ted Nygreen TECH-106 Tel # (914) 606-6789 Email: [Ted.Nygreen@sunywcc.edu](mailto:Ted.Nygreen@sunywcc.edu)

## Developmental Courses as required based on placement scores

<input type="checkbox"/>	<b>No Developmental Courses Required</b>
<input type="checkbox"/>	<b>ENG 91</b> Writing for College 1 – Score of 4 E Code 1 and below Choose an item.
<input type="checkbox"/>	<b>ENG 92</b> Writing for College 2 – Score of 6 E Code 2 Choose an item.
<input type="checkbox"/>	<b>ESL 94</b> Academic Writing 1 – Score of 5 or 6 E Code 6 Choose an item.
3 <input type="checkbox"/>	<b>ESL 122</b> Academic Writing 2 – Score of 7 E Code 7 Choose an item.
<input type="checkbox"/>	<b>MATH 92</b> Pre-Algebra – Arithmetic score 44 and below, Elementary Algebra 54 and below Choose an item.
OR <input type="checkbox"/>	<b>MATH 93</b> Beginning Algebra – Arithmetic score 45 and above, Elementary Algebra 54 and below Choose an item.
	<b>MATH 94</b> Foundations of Mathematical Reasoning – Arithmetic score 45 and above, Elementary Algebra 54 and below Choose an item.
<input type="checkbox"/>	<b>READ 93</b> Foundation of College Reading – Score of 57 and below Choose an item.
3 <input type="checkbox"/>	<b>READ 105</b> Analytical Reading – Score of 58 and higher Choose an item.

## New General Education Requirements

3 <input type="checkbox"/>	<b>ENG 101</b> – Writing and Research <b>OR ENG 101H</b> Choose an item.
3 <input type="checkbox"/>	<b>ENG 102</b> – Writing and Literature <b>OR ENG 102H</b> Choose an item.
4 <input type="checkbox"/>	<b>MATH 135</b> – College Algebra with Trigonometry Choose an item.
4 <input type="checkbox"/>	<b>MATH 161</b> – Pre-Calculus Choose an item.
4 <input type="checkbox"/>	<b>PHYS 111</b> – College Physics 1: <b>MATH 135 is the prerequisite.</b> Choose an item.
	<b>SOCIAL SCIENCES GENERAL ED REQUIREMENTS – Select a 3 credit course:</b> <b>ANTHR 101, 102, 103, 201, CJ 111, ECON 101, 101H, 102, 102H, GEOG 101, HSERV 102, 200, LIN 201, POLSC 111, 111H, 115, PSYCH 101, 101H, 103, 103H, 107, 109, 110, 111, 112H, SOC 101, 101H, 102, 103, 104</b>
3 <input type="checkbox"/>	
	<b>THE ARTS, FOREIGN LANGUAGE, OTHER WORLD CIVILIZATIONS, AMERICAN HISTORY or WESTERN CIVILIZATIONS GENERAL ED REQUIREMENTS – Select a 3/4 credit course:</b> <b>ART 101, 102, 103, 104, 105, 106, 108, 109, 109A, 110, 111, 112, 125, 129, 130, 133, 134, 135, 137, 138, 140, 141, 147, 201, 203, 212, 265, DANCE 101, 102, 107, 120, 121, 205, 207, FILM 100, 101, 102, 130 MUSIC 110, 110H, 111, 120, 121, 130, 131, 132, 133, 150, 230, 231, 232, 233, THEAT 111, 113, 201</b> <b>CHINS 102, FREN 101, 102, 201, ITAL 101, 102, 103, 201, 201H, 202, 202H, 250, SPAN 101, 102, 103, 104, 201, 201H, 202, 202H, 203, 204</b> <b>ANTHR 120, 210, 215H, HIS 119, 128, 129, 131, POLSC 113</b> <b>ART 108, 109, HIS 101, 102, 104, 106, 110, 111, 112, 121*, 133**, 134**, POLSC 102, 104, 107</b> <i>*Students who complete this course cannot use HIS 133 or 134 to fulfill degree and/or general education requirements</i> <i>**Students who complete this course cannot use HIS 121 to fulfill degree and/or general education requirements</i>
3 <input type="checkbox"/> /4 <input type="checkbox"/>	

Degree Requirements			
3□	PHYSC 165– Principles of Energy	Choose an item.	
3□	ELEC 128 – Electrical Circuits:	<b>High School Algebra or MATH 93 is the prerequisite.</b> Choose an item.	
3□	ELEC 129 – Digital Logic:	<b>High School Algebra or MATH 93 is the prerequisite.</b> Choose an item.	
3□	ELEC 134 – Power Circuit Analysis	Choose an item.	
3□/5□	ELEC 160 - Electronics <sup>1</sup> :	<b>High School Algebra or MATH 93 is the prerequisite.</b>	
	OR		
	CHEM 107 – Inorganic Chemistry 1:	<b>MATH 130, 135 or higher level are the prerequisites.</b> Choose an item.	
3□	MECH 162 – CAD 1	Choose an item.	
3□	ELEC 218 – Introduction to Microprocessors	Choose an item.	
3□	MECH 127 – Introduction to Thermodynamics:	<b>MATH 135 is the prerequisite. PHYSC 111 is a co-requisite.</b> Choose an item.	
3□	MECH 120 – Mechanisms:	<b>MATH 135, PHYSC 101, MECH 113, and MECH 162 are prerequisites. Offered in Spring semester.</b> Choose an item.	
3□	CIS 110 – Computer Information Systems		
	OR		
	MGT 101 – Business Organization and Management	Choose an item.	
<b>ENERGY ELECTIVES: Select 3 courses from the following (See Below) – (9 credits)</b>			
3□		3□	
3□			

SEEN BY:

Completed credits      of 63 required

### Energy Electives

**Nuclear Power:** ELEC 245 – Nuclear Fundamentals, ELEC 246 – Reactor Materials, ELEC 247 – Radiation Detection, ELEC 248 – Reactor Theory

**Electrical Power:** ELEC 204 – Electrical Machinery (**ELECT 128 is the prerequisite**), ELEC 205 – Power Generation Systems (**MECH 204 is the prerequisite**), ELEC 206 - Power Plant Operation and Maintenance,

**Electrical Power Distribution:** ELEC 228 – Energy Conversion & Power, ELEC 229 – Distribution Systems Components, ELEC 230 – Transmission Line Theory and Practice

**Solar and Geothermal Power:** ELEC 139 – Solar and Geothermal Technologies (**MECH 127 is the prerequisite**), ELEC 207 – Instrumentation and Control Systems.

**Renewable Energy:** ELEC 211 – Photovoltaic System Design, ELEC 139 – Solar and Geo Thermal Technologies

<sup>1</sup> By Advisement of the Curriculum Chair.

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Academic Plan		Completed credits of 63 required			
		Fall/Spring		Fall/Spring	
<u>Class</u>	<u>Credits</u>	<u>Class</u>	<u>Credits</u>	<u>Class</u>	<u>Credits</u>
		Fall/Spring		Fall/Spring	
<u>Class</u>	<u>Credits</u>	<u>Class</u>	<u>Credits</u>	<u>Class</u>	<u>Credits</u>