

AS: Engineering Science

Curriculum Chair: Prof. Kyriakos Ioannou TECH-33 Tel # (914) 606-8561 Email: Kyriakos.Ioannou@sunywcc.edu

Academic Dean: Dean Raymond Houston TECH-106 Tel # (914) 606-6789 Email: Raymond.Houston@sunywcc.edu

Developmental Courses as required based on placement scores

<input type="checkbox"/>	ENG 91 Writing for College 1 – Score of 4 E Code 1 and below, 30.01
<input type="checkbox"/>	ENG 92 Writing for College 2 – Score of 6 E Code 2, 30.02
<input type="checkbox"/>	ENG 99 Writing Studio with linked ENG 101+ - Score of 6 E Code 2, 30.02 OR successful completion of ENG 91
<input type="checkbox"/>	ESL 94 Academic Writing 1 – Score of 5 or 6 E Code 6, 20.01 .
3 <input type="checkbox"/>	ESL 122 Academic Writing 2 – Score of 7 E Code 7, 21.01
<input type="checkbox"/>	MATH 92 Pre-Algebra – Arithmetic score 44 and below, Elementary Algebra 54 and below, 40.01
OR <input type="checkbox"/>	MATH 93 Beginning Algebra – Arithmetic score 45 and above, Elementary Algebra 54 and below, 40.02
	MATH 94 Foundations of Mathematical Reasoning – Arithmetic score 45 and above, Elementary Algebra 54 and below, 40.02
<input type="checkbox"/>	READ 93 Foundation of College Reading – Score of 57 and below, 10.01
3 <input type="checkbox"/>	READ 105 Analytical Reading – Score of 58 and higher 11.01

New General Education Requirements

3 <input type="checkbox"/>	ENG 101 – Writing and Research OR ENG 101H
3 <input type="checkbox"/>	ENG 102 – Writing and Literature OR ENG 102H
4 <input type="checkbox"/>	MATH 181 – Calculus 1: MATH 161 is the prerequisite.
4 <input type="checkbox"/>	MATH 191 – Calculus 2: MATH 181 is the prerequisite.
4 <input type="checkbox"/>	MATH 230 – Calculus 3: MATH 191 is the prerequisite.
4 <input type="checkbox"/>	MATH 240 – Differential Equations: MATH 191 is the prerequisite.
5 <input type="checkbox"/>	CHEM 107 – Inorganic Chemistry 1 and Lab: MATH 135 or higher, except MATH 138 &140 is the prerequisite.
5 <input type="checkbox"/>	PHYS 121 – Engineering Physics 1 and Lab: MATH 161 is the prerequisite and MATH 181 is a co-requisite.
5 <input type="checkbox"/>	PHYS 122 – Engineering Physics 2 and Lab: PHYS 121 is the prerequisite, and MATH 191 is a pre or co-requisite.
	SOCIAL SCIENCES GENERAL ED REQUIREMENTS – Select a 3 credit course: ANTHR 101, 102, 102H, 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, 201 SOC 101, 101H, 102, 103, 104
3 <input type="checkbox"/>	

	<p>AMERICAN HISTORY, THE ARTS, FOREIGN LANGUAGE, OTHER WORLD CIVILIZATIONS, or WESTERN CIVILIZATION GENERAL ED REQUIREMENTS – Select a 3/4 credit course:</p> <p>ART 101, 102, 103, 104, 105, 106, 107, 107H, 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, 112, 115, 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</p> <p>ARABC 101, 102, CHINS 102, FREN 101, 102, 201, ITAL 101, 102, 103, 201, 201H, 202, 202H, 250, JAPNS 101, 102, RUSSN 101, SPAN 101, 102, 103, 104, 201, 201H, 202, 202H, 203, 204</p> <p>ANTHR 120, 210, 215H, HIS 101, 102, 104, 106, 110, 111, 112, 121*, 133**, 134**, 119, 128, 129, 131, POLSC 102, 104, 107, 113, ENG 227</p> <p><i>*Students who complete this course cannot use HIS 133 or 134 to fulfill degree and/or general education requirements</i></p> <p><i>**Students who complete this course cannot use HIS 121 to fulfill degree and/or general education requirements,</i></p>
3□/4□	

Degree Requirements	
4□	COMSC 101 – Computer Programming 1: Prerequisite: Placement Reading score of 80 or above or passing READ 105. MATH 181 or higher are pre/ co-requisites.
3□	MECH 109 – Intro to Engineering: MATH 181 or higher is the pre or co-requisite.
3□	MECH 126 – Statics: MATH 181 and PHYSC 121 are the prerequisites.
	ENGINEERING ELECTIVES: Select four courses from list below (Minimum 12 credits). SUGGESTED ENGINEERING ELECTIVES CONSULT CURRICULUM CHAIR.
3□	
3□	
3□	
3□	

SEEN BY: _____ **Completed credits** _____ **of 65 required**

ENGINEERING ELECTIVES:

- **NO CONCENTRATION – Select 12 credits from the following course options:**
 1. **CIVIL 214** – Surveying 1, **Offered Fall Semester**, Prereq: **MATH 135**
 2. **CIVIL 221** – Strength of Materials, **Offered Spring Semester**, Prereq: **MATH 181 & PHYSIC 121**
 3. **COMSC 110** – Computer Programming 2, Prereq: **COMSC 101 with a C or higher**
 4. **COMSC 201** – Data Structures, Prereq: **COMSC 110 with a C or higher**
 5. **ELEC 128** – Electrical Circuits, Coreq: **MATH 93**, Prereq: **H.S Algebra or MATH 93**
 6. **ELEC 129** – Digital Logic
 7. **ELEC 223** – Digital Logic and Switching Circuits
 8. **ELEC 227** – Electrical System Analysis, Prereq: **ELEC 128**
 9. **ELEC 255** – Circuits for Engineers
 10. **MECH 127** – Intro to Thermodynamics, Coreq: **PHYSIC 111**, Prereq: **MATH 135 or higher and PHYSIC 101 or higher.**
 11. **MECH 227** – Dynamics, **Offered evenings in fall, Offered days in spring**, Prereq: **MECH 126**

- **CIVIL –**
 1. **MECH 227** – Dynamics, **Offered evenings in fall, Offered days in spring**, Prereq: **MECH 126**
 2. **CIVIL 221** – Strength of Materials, **Offered Spring Semester**, Prereq: **MATH 181 & PHYSIC 121**
 3. **CIVIL 214** – Surveying 1, **Offered Fall Semester**, Prereq: **MATH 135**

And select 1 of the following:

 1. **BIOL 101**
 2. **CHEM 111** – Prerequisite: **CHEM 107 with a grade of C or higher and MATH 135 or higher, except MATH 138 & 140.**
 3. **PHYSIC 143**

- **ELECTRIAL –**
 1. **ELEC 255** – Circuits for Engineers
 2. **MATH 215** – Linear Algebra, Prereq: **MATH 191 – Calculus 2 Offered once a year**
 3. **ELEC 223** – Digital Logic & Switching
 4. **ELEC 227** – Electrical System Analysis, Prereq: **ELEC 128**

- **MECHANICAL –**
 1. **MECH 227:** Dynamics, **Offered evenings in fall, Offered days in spring**, Prereq: **MECH 126 – Statics**
 2. **CIVIL 221** – Strength of Materials, **Offered Spring Semester**, Prereq: **MATH 181 & PHYSIC 121**
 3. **MECH 127** – Intro to Thermodynamics, Coreq: **PHYSIC 111**, Prereq: **MATH 135 or higher and PHYSIC 101 or higher.**
 4. **ELEC 255** – Circuits for Engineers

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Academic Plan		Completed credits of 65 required			
		Fall/Spring		Fall/Spring	
<u>Class</u>	<u>Credits</u>	<u>Class</u>	<u>Credits</u>	<u>Class</u>	<u>Credits</u>
		MATH 181	4	MATH 191	4
		ENG 101	3	ENG 102	3
		MECH 109	3	PHYSC 122	5
		PHYSC 121	5	MECH 126	3
		Fall/Spring		Fall/Spring	
<u>Class</u>	<u>Credits</u>	<u>Class</u>	<u>Credits</u>	<u>Class</u>	<u>Credits</u>
		MATH 230	4	MATH 240	4
		CHEM 107	5	COMSC 101	4
		Engineering Elective	3	Engineering Elective	3
		Engineering Elective	3	Engineering Elective	3
		Social Science Gen Ed	3	Arts/FL/OWC/Am.Hist/ West Civ. Gen Ed	3