Westchester Community College
State University of New York

AS: Engineering Science

Curriculum Chair: Prof. Kyriakos Ioannou TECH-33 Tel # (914) 606-8561 Email: Kyriakos.Ioannou@sunywcc.edu
Academic Dean: Dr. Kwesi Amoa TECH-106 Tel # (914) 606-6789 Email: Kwesi.Amoa@sunywcc.edu

	Developmental Courses as required based on placement scores
☐	**ENG 91** Writing for College 1 – Score of 4 E Code 1 and below, **30.01** Choose an item.
☐	**ENG 92** Writing for College 2 – Score of 6 E Code 2, **30.02** Choose an item.
☐	**ENG 99** Writing Studio with linked ENG 101+ - Score of 6 E Code 2, **30.02** OR successful completion of ENG 91
☐	**ESL 94** Academic Writing 1 – Score of 5 or 6 E Code 6, **20.01**.
3☐	**ESL 122** Academic Writing 2 – Score of 7 E Code 7, **21.01**
☐	**MATH 92** Pre-Algebra – Arithmetic score 44 and below, Elementary Algebra 54 and below, **40.01** Choose an
OR ☐	**MATH 93** Beginning Algebra – Arithmetic score 45 and above, Elementary Algebra 54 and below, **40.02** Choose an item. **MATH 94** Foundations of Mathematical Reasoning – Arithmetic score 45 and above, Elementary Algebra 54 and below, **40.02** Choose an item.
☐	**READ 93** Foundation of College Reading – Score of 57 and below, **10.01** Choose an item.
3☐	**READ 105** Analytical Reading – Score of 58 and higher **11.01** Choose an item.

	New General Education Requirements
3☐	**ENG 101** – Writing and Research **OR ENG 101H** Choose an item.
3☐	**ENG 102** – Writing and Literature **OR ENG 102H** Choose an item.
4☐	**MATH 181**[1] – Calculus 1: **MATH 161 or 165 are the prerequisites.** Choose an item.
4☐	**MATH 191** – Calculus 2: **MATH 181 is the prerequisite.** Choose an item.
4☐	**MATH 230** – Calculus 3: **MATH 191 is the prerequisite.** Choose an item.
4☐	**MATH 240** – Differential Equations: **MATH 191 is the prerequisite.** Choose an item.
5☐	**CHEM 107** – Inorganic Chemistry 1 and Lab: **MATH 130, 135 or higher level MATH course are the prerequisites.** Choose an item.
5☐	**PHYSC 121** – Engineering Physics 1 and Lab: **MATH 161 is the prerequisite and MATH 181 is a co-requisite.** Choose an item.
5☐	**PHYSC 122** – Engineering Physics 2 and Lab: **PHYSC 121 or equivalent and MATH 181 are the prerequisite and MATH 191 or instructor's permission is a co-requisite.** Choose an item.
	SOCIAL SCIENCES GENERAL ED REQUIREMENTS – Select a 3 credit course: **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, 201 **SOC** 101, 101H, 102, 103, 104
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[1] Calculus I is the prerequisite or co requisite Engineering Physics I & Lab.

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	AMERICAN HISTORY, THE ARTS, FOREIGN LANGUAGE, OTHER WORLD CIVILIZATIONS, or WESTERN CIVILIZATION GENERAL ED REQUIREMENTS – Select a 3/4 credit course: **ART** 101, 102, 103, 104, 105, 106, 107, 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 **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 **ANTHR** 120, 210, 215H, **HIS** 101, 102, 104, 106, 110, 111, 112, 121*, 133**, 134**, 119, 128, 129, 131, **POLSC** 102, 104, 107, 113 *Students who complete this course cannot use HIS 133 or 134 to fulfill degree and/or general education requirements* **Students who complete this course cannot use HIS 121 to fulfill degree and/or general education requirements,*
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**. Choose an item.
3☐	**MECH 109** – Intro to Engineering: **MATH 181 or higher is the co-requisite.**
3☐	**MECH 126** – Statics: **MATH 181 and PHYSC 121 are the prerequisites.** Choose an item.
	ENGINEERING ELECTIVES: Select four courses from list below (Minimum 12 credits). SUGGESTED ENGINEERING ELECTIVES CONSULT CURRICULUM CHAIR.
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SEEN BY: **Completed credits   of 65 required**

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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 Fall Semester,** Prereq**: MATH 181**
  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, Prereq**: H.S Algebra or MATH 93**
  7. **ELEC 223 –** Digital Logic and Switching Circuits
  8. **ELEC 227 –** Electrical System Analysis, **Offered Fall & Spring,** Prereq**: ELEC 128**
  9. **ELEC 255 –** Circuits for Engineers
  10. **MECH 127 –** Intro to Thermodynamics, Coreq: **PHYSC 111,** Prereq**: MATH 135 or higher and PHYSC 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 fall semester,** Prereq: **MATH 181** – Calculus 1 and **PHYSC 101A** – Engineering Physics 1
  3. **CIVIL 214** – Surveying 1, **Offered fall semester** Prereq: **MATH 135** – College Algebra with Trigonometry
  And select 1 of the following:
  1. **BIOL 101**
  2. **CHEM 111**
  3. **PHYSC 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 – Offered fall and spring,** 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 Fall Semester** Prereq: **MATH 181** – Calculus 1 and **PHYSC 101A**: Engineering Physics 1
  3. **MECH 127** – Intro to Thermodynamics, Coreq: **PHYSC 111** – College Physics 1 & Lab, Prereq: **MATH 135** – College Algebra with Trigonometry and PHYSC 101 – Technical Physics 1
  4. **ELEC 255** – Circuits for Engineers

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Academic Plan		Completed credits		of 65 required	
		Fall/Spring		**Fall/Spring**	
Class	**Credits**	**Class**	**Credits**	**Class**	**Credits**
		Fall/Spring		**Fall/Spring**	
Class	**Credits**	**Class**	**Credits**	**Class**	**Credits**