

**PAYMENT DUE** [Click here to enter a date.](#)

## AS: Engineering Science

**Curriculum Chair:** Prof. John Collins TECH-136 Tel # (914) 606-6941 Email: [John.Collins@sunywcc.edu](mailto:John.Collins@sunywcc.edu)

**Academic Dean:** Dr. Kwesi Amoa TECH-106 Tel # (914) 606-6789 Email: [Kwesi.Amoa@sunywcc.edu](mailto:Kwesi.Amoa@sunywcc.edu)

### Developmental Courses as required based on placement scores

|                             |   |
|-----------------------------|---|
| <input type="checkbox"/>    | <b>ENG 91</b> Writing for College 1 – Score of 4 E Code 1 and below, <b>30.01</b> Choose an item.   |
| <input type="checkbox"/>    | <b>ENG 92</b> Writing for College 2 – Score of 6 E Code 2, <b>30.02</b> Choose an item.   |
| <input type="checkbox"/>    | <b>ENG 99</b> Writing Studio (with linked section of ENG 101+) - Score of 6 E Code 2, <b>30.02</b>  |
| <input type="checkbox"/>    | <b>ESL 94</b> Academic Writing 1 – Score of 5 or 6 E Code 6, <b>20.01</b> .   |
| 3 <input type="checkbox"/>  | <b>ESL 122</b> Academic Writing 2 – Score of 7 E Code 7, <b>21.01</b>   |
| <input type="checkbox"/>    | <b>MATH 92</b> Pre-Algebra – Arithmetic score 44 and below, Elementary Algebra 54 and below, <b>40.01</b> Choose an                                 |
| OR <input type="checkbox"/> | <b>MATH 93</b> Beginning Algebra – Arithmetic score 45 and above, Elementary Algebra 54 and below, <b>40.02</b> Choose an item.                     |
|                             | <b>MATH 94</b> Foundations of Mathematical Reasoning – Arithmetic score 45 and above, Elementary Algebra 54 and below, <b>40.02</b> Choose an item. |
| <input type="checkbox"/>    | <b>READ 93</b> Foundation of College Reading – Score of 57 and below, <b>10.01</b> Choose an item.  |
| 3 <input type="checkbox"/>  | <b>READ 105</b> Analytical Reading – Score of 58 and higher <b>11.01</b> 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 181<sup>1</sup></b> – Calculus 1: <b>MATH 161 or 165 are the prerequisites.</b> Choose an item.   |
| 4 <input type="checkbox"/> | <b>MATH 191</b> – Calculus 2: <b>MATH 181 is the prerequisite.</b> Choose an item.  |
| 4 <input type="checkbox"/> | <b>MATH 230</b> – Calculus 3: <b>MATH 191 is the prerequisite.</b> Choose an item.  |
| 4 <input type="checkbox"/> | <b>MATH 240</b> – Differential Equations: <b>MATH 191 is the prerequisite.</b> Choose an item.  |
| 5 <input type="checkbox"/> | <b>CHEM 107</b> – Inorganic Chemistry 1 and Lab: <b>MATH 130, 135 or higher level MATH course are the prerequisites.</b> Choose an item.  |
| 5 <input type="checkbox"/> | <b>PHYS 121</b> – Engineering Physics 1 and Lab: <b>MATH 161 is the prerequisite and MATH 181 is a co-requisite.</b> Choose an item.  |
| 5 <input type="checkbox"/> | <b>PHYS 122</b> – Engineering Physics 2 and Lab: <b>PHYS 121 or equivalent and MATH 181 are the prerequisite and MATH 191 or instructor’s permission is a co-requisite.</b> Choose an item.   |
|                            | <b>SOCIAL SCIENCES GENERAL ED REQUIREMENTS – Select a 3 credit course:</b><br><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"/> |   |

<sup>1</sup>Calculus I is the prerequisite or co-requisite Engineering Physics I & Lab.

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|--|--|
|  | <p align="center"><b>AMERICAN HISTORY, THE ARTS, FOREIGN LANGUAGE, OTHER WORLD CIVILIZATIONS, or WESTERN CIVILIZATION GENERAL ED REQUIREMENTS – Select a 3/4 credit course:</b></p> <p align="center"><b>HIS 110, 111, 112, 121*, 133**, 134**, POLSC 102, 104, 107</b></p> <p align="center"><i>*Students who complete this course cannot use HIS 133 or 134 to fulfill degree and/or general education requirements</i></p> <p align="center"><i>**Students who complete this course cannot use HIS 121 to fulfill degree and/or general education requirements,</i></p> <p><b>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</b></p> <p align="center"><b>MUSIC 110,</b></p> <p align="center">110H, 111, 120, 121, 130, 131, 132, 133, 150, 230, 231, 232, 233, <b>THEAT 111, 113, 201</b></p> <p><b>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</b></p> <p align="center"><b>ANTHR 120, 210, 215H, HIS 119, 128, 129, 131, POLSC 113, or ART 108, 109, HIS 101, 102, 104, 106</b></p> |
| 3 <input type="checkbox"/> /4 <input type="checkbox"/> |  |

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

**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 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, Coreq: **MATH 165 – Technical Math w/ Calculus**
  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, Coreq: **MATH 165** – Technical Mathematics with Calculus
  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, Coreq: **MATH 165** – Technical Mathematics with Calculus

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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> |
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|               |                | Fall/Spring                      |                | Fall/Spring  |                |
| <u>Class</u>  | <u>Credits</u> | <u>Class</u>                     | <u>Credits</u> | <u>Class</u> | <u>Credits</u> |
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