

AS: Engineering Science

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

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

Developmental Courses as required based on placement scores

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

Core Requirements

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| 3 <input type="checkbox"/> | ENG 101 – Writing and Research Choose an item. |
| 3 <input type="checkbox"/> | ENG 102 – Writing and Literature Choose an item. |
| 4 <input type="checkbox"/> | MATH 181¹ – Calculus 1: MATH 161 or 165 are the prerequisites. Choose an item. |
| 4 <input type="checkbox"/> | MATH 191 – Calculus 2: MATH 181 is the prerequisite. Choose an item. |
| 4 <input type="checkbox"/> | MATH 230 – Calculus 3: MATH 191 is the prerequisite. Choose an item. |
| 4 <input type="checkbox"/> | MATH 240 – Differential Equations: MATH 191 is the prerequisite. Choose an item. |
| 5 <input type="checkbox"/> | PHYS 121 – Engineering Physics 1 and Lab: MATH 161 is the prerequisite and MATH 181 is a co-requisite. Choose an item. |
| 5 <input type="checkbox"/> | PHYS 122 – Engineering Physics 2 and Lab: PHYS 121 or equivalent and MATH 181 are the prerequisite and MATH 191 or instructor's permission is a co-requisite. Choose an item. |
| 4 <input type="checkbox"/> | CHEM 107 – Inorganic Chemistry 1 and Lab: MATH 130, 135 or higher level MATH course are the prerequisites. Choose an item. |
| 4 <input type="checkbox"/> | CHEM 111² – Inorganic Chemistry 2 and Lab: CHEM 107, MATH 130, 135 or higher level MATH course are the prerequisites. Choose an item. |
| | HUMANITIES: One course (3 credits) Courses include: <ul style="list-style-type: none"> ▪ Art (ART) 101, 103, 105, 108, 108A, 108B, 109, 109A, 125, 128, 129, 133, 139, 185, or 265. Additional fees and/or supplies may be required of ART classes; see catalog for details. ▪ Communications (COMM) 101, 103, 109, or 115 ▪ Dance (DANCE) 101, 102, 105, 107, 121, 205, or 207 OR A combination of three 1 credit dance classes to be chosen from DANCE 112, 115, 120, or 122 ▪ English (ENG) any ENG course EXCEPT ENG 101, 101H, 102, 102H, 124, or 222 CANNOT BE USED TO FULFILL Humanities elective. ▪ Film (FILM) 100, 101, 102, 103, 109, 113, 114H, 115H, 125, 125H, 220, 220H |

¹ Calculus I is the prerequisite or co-requisite Engineering Physics I & Lab.

² Inorganic Chemistry or an approved substitute.

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| | <ul style="list-style-type: none"> Foreign Language to be chosen from: ARABC, CHINS, FREN, GER, ITAL, JAPNS, RUSSN, SPAN. ITAL 104 or ITAL 105 CANNOT BE USED TO FULFILL a Foreign Language elective, but CAN BE USED TO FULFILL a Humanities elective Music (MUSIC) 100, 101, 102, 103, 111, 150, or 211 Philosophy (PHIL) 101A, 102A, 111, 150, 160, or 201H Theater (THEAT) 101, 103, 111, 113, or 201 <p>THEAT 117A is a 2 credit course which must be combined with another 1 credit approved Humanities elective.</p> |
| 3 <input type="checkbox"/> / 4 <input type="checkbox"/> | |
| | <p>SOCIAL SCIENCE: One course (3 credits) Courses include: History (HIS), Political Science (POLSC), Economics (ECON), and Geography (GEOG). <i>However SS 102 and SS 105 CANNOT BE USED TO FULFILL Social Science.</i></p> |
| 3 <input type="checkbox"/> | |
| | <p>BEHAVIORIAL SCIENCE: One course (3 credits) Courses include: Sociology (SOC), Psychology (PSYCH), Anthropology (ANTHR), Linguistics (ANTHR), and Geography (GEOG). <i>However SS 101 and SS 103 CANNOT BE USED TO FULFILL Behavioral Science.</i></p> |
| 3 <input type="checkbox"/> | |
| | <p>PEC/PEH/PES: A combination of two courses (2 credits) either PEH and PES, or PEC and PES, or PEC or PEH, PEC and PEC. PEC 110 (2 credits) <i>IS THE ONLY COMBINATION COURSE THAT FULFILLS BOTH P.E. REQ.</i></p> |
| 1 <input type="checkbox"/> | 1 <input type="checkbox"/> |

| Degree Requirements | |
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| 3 <input type="checkbox"/> | MECH 162 – CAD 1 OR Choose an item. |
| | MECH 255 – Solidworks Choose an item. |
| 3 <input type="checkbox"/> | COMSC 101 – Computer Programming 1: MATH 130, 135, 161, 181 or 191 are the prerequisites. Choose an item. |
| 3 <input type="checkbox"/> | MECH 126 – Statics: MATH 181 and PHYS 121 are the prerequisites. Choose an item. |
| | ENGINEERING ELECTIVES: Select three courses from list below (9 credits) |
| 3 <input type="checkbox"/> | 3 <input type="checkbox"/> |
| 3 <input type="checkbox"/> | |

SEEN BY: _____ **Completed credits** _____ **of 71 required**

NOTES:

- Chemical - **See Curriculum Chair**
- Civil & Mechanical** should take **MECH 227: Dynamics:** (Prerequisite **MECH 126: Statics**), **CIVIL 221: Strength of Materials:** (Prerequisite **MATH 181: Calculus 1** and **PHYS 101A: Engineering Physics 1**), plus 3 additional credits. **See Curriculum Chair.**
- Electrical** should take **ELEC 224 Network Transformations** (4 credits), **ELEC 255: Circuits for Engineers:** (Co-Requisite **MATH 165: Technical Math w Calculus**), plus 3 additional credits. **See Curriculum Chair.**

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| Academic Plan | | Completed credits | | of 71 required | |
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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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| <u>Class</u> | <u>Credits</u> | <u>Class</u> | <u>Credits</u> | <u>Class</u> | <u>Credits</u> |
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