NC STATE Wilson College of Textiles

## Prospective Student Degree Planning Sheet

### B.S. Degree in Polymer & Color Chemistry (PCC)
### *Concentration: ACS Certification* – Effective Fall 2024

Use as a guide only. Students will enter the most current curriculum as of the semester in which they are first enrolled at NC State. Current curricula can be found on the NC State Catalog Page: http://catalog.ncsu.edu/undergraduate/textiles/#departmentsandplanstext

Students can search course equivalencies through NC State's Transfer Course Credit Database: https://webappprd.acs.ncsu.edu/php/transfer/ or the Transfer Planner

| NC State Requirement | NCCC Equivalent | Equivalent Course at Current Institution | Credit Hours |
|---|---|---|---|
| **Orientation** | | | |
| T 101 – Strategies for Success in the Wilson College of Textiles | No equivalent | No equivalent | 1 |
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| **Major Requirements** | | | |
| PCC 101 & 104 – Introduction to Polymer & Color Chemistry with lab<br>*courses are co-requisites | No equivalent | | 3 |
| PCC 106 – Polymer Chemistry and Environmental Sustainability<br>*pre-requisite CH 101; co-requisite CH 221 | No equivalent | | 3 |
| TE 200 – Introduction to Polymer Science and Engineering<br>*pre-requisite C- or better in CH 101 | No equivalent | | 3 |
| TE-201 – Fiber Science<br>*pre-requisite: CH 101 and grade of C- or better in MA 131 or MA 141 | No equivalent | | 4 |
| TMS 212 – Yarn and Fabric Formation and Properties<br>*pre-requisite TE 201 | No equivalent | | 2 |
| PCC 201 – Impact of Industry on the Environment and Society | No equivalent | | 3 |
| PCC 301 & 304 – Technology of Dyeing and Finishing with lab<br>*pre-requisite PCC 106 or TE 200; courses are co-requisites | No equivalent | | 4 |
| PCC 350 & 354 – Introduction to Color Science and Its Applications with lab<br>*pre-requisite PCC 301 and PY 212; courses are co-requisites | No equivalent | | 3 |
| PCC 412 & 414 – Textile Chemical Analysis with lab<br>*pre-requisite PCC 301 and (CH 331 or CH 433 or TE 303); courses are co-requisites | No equivalent | | 3 |
| PCC 442 – Theory of Physico-Chemical Processes in Textiles II<br>*pre-requisite TE 303 or CH 331 or CH 433 | No equivalent | | 3 |
| PCC 461 & 464 – Chemistry of Polymeric Materials with lab<br>*pre-requisite CH 220 & TE 200 OR CH 223; courses are co-requisites | No equivalent | | 4 |
| PCC 462 – Characterization and Physical Properties of Polymers<br>*pre-requisite PCC 461 | No equivalent | | 3 |
| PCC 471 – Chemistry of Synthetic and Natural Bipolymers<br>*pre-requisite CH 221 | No equivalent | | 3 |
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| **Math and Sciences** | | | |

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| MA 141 – Calculus 1<br>*pre-requisite C- or better in MA 108 or MA 111 or 550 or better on the SAT Math Subject Test Level 2 or the NCSU Math Skills Test, or 2 or better on the AP Calculus Exam | MAT 271 | | 4 |
| MA 241 – Calculus 2<br>*pre-requisite C- or better in MA 141 or Math Placement Score | MAT 272 | | 4 |
| MA 242 – Calculus 3<br>*pre-requisite C- or better in MA 241 or Math Placement Score | MAT 273 | | 4 |
| MA 341 – Applied Differential Equations 1<br>*pre-requisite MA 242 | MAT 285 | | 3 |
| CH 101 & 102 – Chemistry A Molecular Science with lab<br>*pre-requisite C- or better in CH 111 or Chem Placement Score | CHM 131/131A or CHM 151 | | 4 |
| CH 201 & 202 – Chemistry A Quantitative Science with lab<br>*pre-requisite C- or better in CH 101 | CHM 136 or CHM 152 | | 4 |
| CH 221 & 222 – Organic Chemistry I with lab<br>*pre-requisite C- or better in CH 101 | CHM 251 | | 4 |
| CH 223 & 224 – Organic Chemistry II with lab<br>*pre-requisite C- or better in CH 221 | CHM 252 | | 4 |
| CH 431 – Physical Chemistry 1<br>*pre-requisite CH 201 and MA 242 and PY 208; co-requisite MA 341 | No equivalent | | 3 |
| CH 433 – Physical Chemistry 2<br>*pre-requisite MA 341 | No equivalent | | 3 |
| CH 401 – Systematic Inorganic Chemistry 1<br>*pre-requisite C- or better in CH 201 | No equivalent | | 3 |
| PY 205 & 206 – Physics for Engineers and Scientists I with lab<br>*pre-requisite C- or better in MA 141 | PHY 251 | | 4 |
| PY 208 & 209 – Physics for Engineers and Scientists II with lab<br>*pre-requisite C- or better in PY 205 and MA 241 | PHY 252 | | 4 |
| ST 370 – Probability and Statistics for Engineers<br>*pre-requisite MA 241 | No equivalent | | 3 |
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| **ACS Electives** | | | |
| EC 201 – Microeconomics<br>(or ARE 201 or EC 205) | ECO 251 | | 3 |
| PCC Electives (4 hours) | | | 4 |
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| **GEP Courses (General Education)**<br>To see which courses satisfy each GEP category, review these GEP lists.<br>http://catalog.ncsu.edu/undergraduate/gep-category-requirements/ | | | |
| ENG 101 – Academic Writing and Research<br>(or FLE 101) | ENG 111 & ENG 112 or ENG 113 | | 4 |
| Humanities Electives<br>*Students need to have two courses from two different subject areas | Multiple- use list above | | 6 |
| Social Science Elective | Multiple- use list above | | 3 |
| HES* 100 level<br>*May be taken S/U | Multiple- use list above | | 1 |
| HES* 100 or 200 level<br>*May be taken S/U | Multiple- use list above | | 1 |
| US Diversity, Equity and Inclusion Elective | Multiple- use list above | | 3 |
| Interdisciplinary Perspective Electives (2 hours) | Multiple- use list above | | 2 |

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| Global Knowledge – one course from general education requirements or free electives must focus on Global Knowledge<br>*co-requisite- can double count toward 3 hours of humanities, social science, or interdisciplinary perspective | Multiple- use list above | | 0 |
| World Language Proficiency– typically satisfied through 2 levels of the same language in high school with at least a C | | | 0 |
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| **Minimum Total Credit Hours in Degree Required for Graduation** | | | **120 Hours** |