**Software Engineering (SE BD)**

QUICK FILTER

*Effective Program Year Fall 2016*

**SEMESTER 1**

| **COURSE DETAILS** | **CREDITS** |
| --- | --- |
| MATH 140 (GQ) - Calculus with Analytic Geometry I[Notes for: MATH 140 (GQ)](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24662) | 4 |
| CHEM 110 (GN) - Gen[Notes for: CHEM 110](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24665) | 3 |
| CHEM 111 (GN) - Experimental Chemistry I [Notes for: CHEM 111 (GN)](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24668) | 1 |
| ENGL 015 (GWS) - Rhetoric and Composition  or ENG 030 (GWS) - Honors Freshmen Composition | 3 |
| CMPSC 121 (GQ) - Introduction to Programming Techniques[Notes for: Natural Sciences](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24674) | 3 |
| PSU 007 - First-Year Seminar Behrend | 1 |
| Total credits | 15 |

**SEMESTER 2**

| **COURSE DETAILS** | **CREDITS** |
| --- | --- |
| MATH 141 (GQ) - Calculus with Analytic Geometry II[Notes for: MATH 141 (GQ)](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24681) | 4 |
| PHYS 211 (GN) - General Physics: Mechanics[Notes for: PHYS 211 (GN)](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24684) | 4 |
| CMPSC 122 - Intermediate Programming[Notes for: CMPSC 122](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24687) | 3 |
| MATH 220 (GQ) - Matrices[Notes for: MATH 220 (GQ)](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24690) | 2 |
| ECON 102 (GS) - Introductory Microeconomic Analysis and Policy[Notes for: ECON 102 (GS)](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24693)  or ECON 104 (GS) - Introductory Macroeconomic Analysis and Policy [Notes for: ECON 104 (GS)](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24695) | 3 |
| Total credits | 16 |

**SEMESTER 3**

| **COURSE DETAILS** | **CREDITS** |
| --- | --- |
| SWENG 311 - Object-Oriented Software Design and Construction[Notes for: SWENG 311](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24699) | 3 |
| MATH 250 - Ordinary Differential Equations | 3 |
| CAS 100 (GWS) - Effective Speech | 3 |
| PHYS 212 (GN) - General Physics: Electricity and Magnetism[Notes for: PHYS 212 (GN)](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24716) | 4 |
| Arts (GA)  or Humanities (GH)  or Social and Behavioral Science (GS) | 3 |
| Total credits | 16 |

**SEMESTER 4**

| **COURSE DETAILS** | **CREDITS** |
| --- | --- |
| CMPSC 360 - Discrete Mathematics for Computer Science[Notes for: CMPSC 360](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24725) | 3 |
| CMPEN 270 - Digital Design : Theory and Practice[Notes for: CMPEN 270](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#76535) | 4 |
| E E 210 - Circuits and Devices  or E E 211 - Electrical Circuits and Power Distribution | 3 |
| STAT 301 (GQ) - Statistical Analysis I[Notes for: STAT 301 (GQ)](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24739) | 3 |
| ENGL 202C (GWS) - Effective Writing: Technical Writing | 3 |
| Total credits | 16 |

**SEMESTER 5**

| **COURSE DETAILS** | **CREDITS** |
| --- | --- |
| CMPEN 351 - Microprocessors[Notes for: CMPEN 351](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24743) | 3 |
| SWENG 411 - Software Engineering[Notes for: SWENG 411](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24746) | 3 |
| CMPEN 441 - Operating Systems[Notes for: CMPEN 441](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24751) | 3 |
| CMPSC 431 - Database Management Systems[Notes for: CMPSC 431](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24754) | 3 |
| Technical Elective (300, 400-level)[Notes for: Technical Elective (300, 400-level)](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24757) | 3 |
| Health and Physical Activity (GHA) | 1.5 |
| Total credits | 16.5 |

**SEMESTER 6**

| **COURSE DETAILS** | **CREDITS** |
| --- | --- |
| SWENG 452 (GWS) - Embedded Real Time Systems[Notes for: SWENG 452 (GWS)](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24761) | 3 |
| SWENG 431 - Software Verification, Validation, and Testing[Notes for: SWENG 431](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24764) | 3 |
| CMPSC 465 - Data Structure and Algorithms[Notes for: CMPSC 465](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24771) | 3 |
| SWENG 421 - Software Architecture[Notes for: SWENG 421](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24780) | 3 |
| Arts (GA)  or Humanities (GH)  or Social and Behavioral Sciences (GS) | 3 |
| Total credits | 15 |

**SEMESTER 7**

| **COURSE DETAILS** | **CREDITS** |
| --- | --- |
| CMPEN 461 - Communications Network[Notes for: CMPEN 461](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24789) | 3 |
| CMPSC 461 - Programming Language Concepts[Notes for: CMPSC 461](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24792) | 3 |
| SWENG 480 - Software Engineering Design[Notes for: SWENG 480](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24795) | 3 |
| Technical Elective (300, 400-level)[Notes for: Technical Elective (300, 400-level)](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24798) | 3 |
| Arts (GA)  or Humanities (GH)  or Social and Behavioral Science (GS) | 3 |
| Health and Physical Activity (GHA) | 1.5 |
| Total credits | 16.5 |

**SEMESTER 8**

| **COURSE DETAILS** | **CREDITS** |
| --- | --- |
| MGMT 301 - Basic Management Concepts[Notes for: MGMT 301](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24805) | 3 |
| SWENG 481 - Software Engineering Project[Notes for: SWENG 481](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24808) | 3 |
| Technical Elective (300,400-level)[Notes for: Technical Elective (300, 400-level)](https://rap.psu.edu/software-engineering-se-bd?width=500&height=auto&inline=true#24813) | 3 |
| Arts (GA)  or Humanities (GH)  or Social and Behavioral Science (GS) | 3 |
| Arts (GA)  or Humanities (GH)  or Social and Behavioral Science (GS) | 3 |
| Total credits | 15 |