## Addendum F: Software Engineering (BSSE)

Satisfaction of the following CLC courses is assumed upon entry into the Software Engineering program at MSOE. Any course requirement that is not met must be satisfied at MSOE or with approved transfer credit.

| CLC Course Number | CLC Course Name | Equivalent MSOE Course Number |
|---|---|---|
| **Communication & General Education** | | |
| ENG 121 | English Composition 1 | COM 1001 |
| ENG 126 | Scientific & Technical Communication | COM 2001 |
| SOC 121 (suggested) | Introduction to Sociology - See appendix for more options | SOC 1001 |
| ECO 222 (suggested) | Principles of Microeconomics See appendix for more options | BUS 2221 |
| PHI 125 (suggested) | Intro to Ethics - See appendix for more options | HUM 0103 |
| **Mathematics & Natural Science** | | |
| MTH 145 | Calculus & Analytic Geometry I | MTH 1110 |
| MTH 146 | Calculus & Analytic Geometry II | MTH 1120 |
| MTH 246 | Calculus & Analytic Geometry III | MTH 2130 |
| MTH 227 | Differential Equations | MTH 2140 |
| CHM 121 | General Chemistry I | CHM 1010 |
| PHY 123 | Physics for Science & Engineering I | PHY 1110 |
| PHY 124 | Physics for Science & Engineering II | PHY 1120 |
| **Software Engineering Courses** | | |
| CSC 128 **AND** CSC 148 | Computer Science I **AND** Computer Science II | CSC 1110 |
| CSC 248 | Data Structures | CSC 2212 |
| MTH 225 | Linear Algebra | MTH 2340 |
| MTH 244 | Discrete Mathematics | MTH 2310 |

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## ADDITIONAL BSSE TRANSFER COURSES AVAILABLE THROUGH CLC

| CLC Course Number | CLC Course Name | Equivalent MSOE Course Number |
|---|---|---|
| **Communication & General Education** | | |
| CMM 121 | Fundamentals of Speech | COM 3001 |

## Addendum F: Software Engineering (BSSE)

Courses remaining in the Software Engineering program (BSSE) at MSOE, assuming successful completion of all courses listed on the preceding page.

| MSOE Course Number | MSOE Course Name | Semester Credits |
|---|---|---|
| **Communication & General Education** | | |
| COM 3001 | Professional Presentations | 3 |
| **Mathematics & Natural Science** | | |
| MTH 2480 | Probability & Statistics | 3 |
| **BSSE Program** | | |
| IDS 2020 | Career Development | 0 |
| BUS 2411 | Building Inclusive Teams | 3 |
| CYB 2001 | Introduction to Cybersecurity Principles | 3 |
| CSC 1120 | Data Structures & Graphic Interfaces | 4 |
| SWE 2410 | Software Design | 3 |
| SWE 2512 | Web Applications & Networking | 4 |
| SWE 2712 | Software Tools & Process | 3 |
| CSC 3320 | Databases | 3 |
| SWE 2721 | Introduction to Software Verification | 3 |
| SWE 3411 | Software Requirements & Arch. | 4 |
| SWE 3710 | Software Development Lab I | 3 |
| SWE 3720 | Software Development Lab II | 3 |
| SWE 4511 | DevSecOps | 4 |
| CSC 3210 | Operating Systems | 3 |
| CSC 3310 | Algorithms & Advanced Data Structures | 3 |
| UXD 1001 | Human-Centered Design | 3 |
| SWE 4901 | Software Engineering Capstone I | 3 |
| SWE 4902 | Software Engineering Capstone II | 3 |
| Elective | Program-Lower | 3 |
| Elective | Program-Upper | 3 |
| **Total** | | **67** |

## APPENDIX: GENERAL EDUCATION HUMANITIES & SOCIAL SCIENCE EQUIVALENCIES

MSOE requires courses that fulfill Common Learning Outcome (CLO) categories.
The following four CLO categories can be satisfied with CLC courses:

- Exhibit Curiosity CLO
- Embrace Diversity CLO
- Demonstrate Ethical Understanding
- Choice CLO – Choose one course from the table below

*Note: Each course counts towards only one CLO and the same course cannot fulfill multiple CLO categories.*

| CLO | CLC Courses | Equivalent MSOE Courses |
|---|---|---|
| Exhibit Curiosity | ANT 121 Intro to Anthropology | ANT 1001 Cultural Anthropology |
| | ANT 221 Cultural Anthropology | ANT 1001 Cultural Anthropology |
| | ART 121 Intro to Art | AHT 2001 Western Art History |
| | ART 240 History of Art I | HUM 0106 AHT EL |
| | ART 241 History of Art II | HUM 0106 AHT EL |
| | ECO 221 Principles of Macro | BUS 2222 Macroeconomics |
| | ECO 222 Principles of Micro | BUS 2221 Microeconomics |
| | ENG 128 Linguistics & Society | PSY 2010 Understanding Hum. Lang. |
| | ENG 243 Introduction to Fiction | LIT 2010 Literary Genres |
| | HST 121 Western Civ to 1500 | HUM 0106 HIST EL |
| | HST 122 Western Civ 1500 to Present | HUM 0106 HIST EL |
| | HST 126 Non-Western World | HUM 0106 HIST EL |
| | HST 142 World History from 1500 | HUM 0106 HIST EL |
| | HST 221 US History to 1876 | HST 1013 US History I |
| | HST 222 US History 1876-Present | HST 1014 US History II |
| | HUM 123 Intro to Film | FNA 4010 Film & Media Studies |
| | HUM 222 Film & Society | FNA 4010 Film & Media Studies |
| | PSY 121 Intro to Psychology | PSY 1001 Foundations of Psychology |
| | PSY 122 Industrial/Org Psychology | PSY 2003 Organizational Psychology |
| | PSY 220 Lifespan Psychology | PSY 3003 Developmental Psychology |
| | PSY 222 Child Growth & Develop. | SSC 0106 PSY EL |
| | PSY 223 Abnormal Psychology | PSY 3002 Psych. Disorders |
| | SOC 121 Introduction to Sociology | SOC 1001 Foundations of Sociology |
| | SPA 121 Beginning Conver. Span I | SPN 1001 Elementary Spanish |
| | SPA 122 Beginning Conver. Span II | SPN 1001 Elementary Spanish |
| Embrace Diversity | ANT 121 Introduction to Anthro. | ANT 1001 Cultural Anthropology |
| | ANT 221 Cultural Anthropology | ANT 1001 Cultural Anthropology |
| | PHI 123 Philosophy of Religion | PHL 3209 Philosophy of Religion |
| | PSY 223 Abnormal Psychology | PSY 3002 Psych. Disorders |
| | SOC 121 Introduction to Sociology | SOC 1001 Foundations of Sociology |
| | SPA 121 Beginning Conver. Span I | SPN 1001 Elementary Spanish |
| | SPA 122 Beginning Conver. Span II | SPN 1001 Elementary Spanish |
| | SPA 224 Spanish Civilization II | SPN 4980 Topics in Spanish |
| Ethical Understanding | PHI 125 Intro to Ethics | HUM 0103 Demonstrate Ethical |