

Software Engineering: Railway Specialization 2026-2027

Year	Course	Course	Course	Course	Course	Course
1-1	ENGR 1015U Introduction to Engineering	ENGR 1050U Engineering Communications and Technology Impacts (Credit restrictions: COMM 1050U/ SOCI 1470U)	MATH 1010U Calculus I	MATH 1850U Linear Algebra for Engineers	PHY 1010U Physics I	
1-2	CHEM 1800U Chemistry for Engineers (Credit restrictions: CHEM 1010U/CHEM 1020U/CHEM 1110U)	ENGR 1025U Engineering Design (ENGR 1015U, ENGR 1050U)	ENGR 1200U Introduction to Programming for Engineers	MATH 1020U Calculus II (MATH 1010U)	PHY 1020U Physics II (PHY 1010U)	
2-1	ELEE 2110U Discrete Mathematics for Engineers (MATH 1020U, MATH 1850U)	ELEE 2200U Electrical Engineering Fundamentals (MATH 1020U, MATH 1850U, PHY 1020U)	SOFE 2710U Object Oriented Programming and Design (ENGR 1200U)	SOFE 2800U Web Programming (ENGR 1200U)	SOFE 2850U Natural Foundations for Information Technology (ENGR 1015U)	Liberal Studies Elective
2-2	SOFE 2250U Digital Systems and Computer Architecture (ELEE 2110U, SOFE 2710U)	SOFE 2715U Data Structures (SOFE 2710U)	SOFE 2720U Principles of Software and Requirements Engineering (SOFE 2710U, SOFE 2800U)	STAT 2800U Statistics and Probability for Engineers (MATH 1020U)	Science Elective	
3-1	ENGR 3011U Introduction to Railway Systems	SOFE 3650U Software Design and Architectures (SOFE 2720U)	SOFE 3700U Data Management Systems (SOFE 2715U, SOFE 2720U)	SOFE 3720U Introduction to Artificial Intelligence (SOFE 2715U)	SOFE 3770U Design and Analysis of Algorithms (ELEE 2110U, SOFE 2715U)	Liberal Studies Elective
3-2	ENGR 3360U Engineering Economics	SOFE 3290U Software Quality and Project Management (SOFE 3650U, SOFE 3700U)	SOFE 3620U Machine Learning and Data Mining (SOFE 3720U)	SOFE 3850U Computer Networks (54 credit hours)	SOFE 3950U Operating Systems (SOFE 2250U)	
4-1	ENGR 4022U Railway Safety and Signalling (ENGR 3011U)	ENGR 4111U Capstone Systems Design I (Successful completion of all program-respective courses in years one through three)	SOFE 4590U Embedded Systems (SOFE 3950U)	SOFE 4790U Distributed Systems (SOFE 3770U, SOFE 3850U, SOFE 3950U)	SOFE 4850U User Interface and Experience Design (SOFE 3650U)	
4-2	ENGR 4033U Railway Rolling Stock (ENGR 3011U)	ENGR 4044U Railway Systems Operation and Maintenance (ENGR 3011U)	ENGR 4222U Capstone Systems Design II (ENGR 4111U)	ENGR 4760U Ethics, Law and Professionalism for Engineers	SOFE 4840U Software and Computer Security (SOFE 3850U, SOFE 4790U)	