Number (old)	Title	Course Area
601.350 (600.340)	Genomic Data Science (formerly Intro to Genomic Research)	Applications
601.365 (600.365)	Knowledge Discovery from Text	Applications
601.414/614 (600.344/444)	Computer Networks	Systems
601.315/415/615 (600.315/415)	Databases (formerly Database Systems)	Software
601.317/417/617 (600.337/437)	Distributed Systems	Systems
601.318/418/618 (600.318/418)	Operating Systems	Systems
601.413/613	Software Defined Networks	Systems
601.419/619	Cloud Computing	Systems
601.320/420/620 (600.320/420)	Parallel Programming/Parallel Computing for Data Science	[Software <= F20] Systems >= S21
601.421/621 (600.321/421)	Object-Oriented Software Engineering	Software
601.422/622	Software Testing & Debugging	Software
601.424/624	Reliable Software Systems	Systems
601.425/625	Software System Design	Software
601.426/626 (600.426)	Principles of Programming Languages	Theory
601.427/627	Principles of Programming Languages II	Theory
601.328/428/628 (600.328/428)	Compilers and Interpreters	Software
601.329/429/629	Functional Programming in Software Engineering	Software
601.430/630 (600.470)	Combinatorics and Graph Theory in CS	Theory
601.433/633 (600.363/463)	Intro Algorithms/Algorithms I	Theory
601.434/634 (600.464/664)	Randomized & Big Data Algorithms	Theory
601.435/635 (600.469/669)	Approximation Algorithms	Theory
601.436/636 (600.473)	Algorithmic Game Theory	Theory
601.437/637	Federated Learning & Analytics	Reasoning
601.340/440/640	Web Security	[Software <= F20] Systems >= S21
601.441/641 (600.451)	Blockchains & Cryptocurrencies	Theory
601.442/642 (600.442)	Modern Cryptography	Theory
601.443/643 (600.443)	Security & Privacy	Software
650.624 (601.444)	Network Security	[Software <= S21] Systems >= S22
601.445/645 (600.454)	Practical Cryptographic Systems	Software
601.446/646	Sketching & Indexing for Sequences	Theory
601.447/647 (600.439/639)	Computational Genomics: Sequences	Applications
601.448/648 (600.438/638)	Computational Genomics: Data Analysis	Applications
601.449/649	Computational Genomics: Applied Comparative Genomics	Applications
601.451/651	Introduction to Computational Immunogenomics	Applications
601.452	Computational Biomedical Research	
601.453/653	Applications of Augmented Reality	Applications
601.454/654 (600.484/684)	[Medical] Augmented Reality	Applications
601.455/655 (600.445/645)	Computer Integrated Surgery I	Applications
601.456/656 (600.446/646)	Computer Integrated Surgery II	Applications
601.457/657 (600.357/457)	Computer Graphics	Applications
580.458	Computing the Transcriptome	Applications
601.459/659 (600.459/659)	Computational Geometry	Theory
601.461/661 (600.361/461/661)	Computer Vision	Applications
601.462/662	Introduction to Spatial Computing	Applications
601.463/663 (600.336/436/636)	Algorithms for Sensor-Based Robotics	Applications
601.464/664 (600.335/435)	Artificial Intelligence	Reasoning

601.465/665 (600.465)	Natural Language Processing	Applications
601.466/666 (600.466)	Information Retrieval and Web Agents	Applications
601.467/667	Introduction to Human Language Technology	Applications
601.468/668 (600.468)	Machine Translation	Applications
601.470/670	Artificial Agents	Reasoning
601.471/671	NLP: Self-Supervised Models	Reasoning
601.474/674	ML: Learning Theory	Theory
601.475/675 (600.475)	Machine Learning	Reasoning
601.476/676 (600.476/676)	Machine Learning: Data to Models (in Complex Domains)	Reasoning
601.477/677 (600.477/677)	Causal Inference	Reasoning
601.479/679 (600.479/679)	Machine Learning: Representation Learning	Reasoning
601.481/681	Machine Learning: Optimization	Reasoning
601.482/682	Machine Learning: Deep Learning	Reasoning
601.484/684	ML: Interpretable Machine Learning Design	Reasoning
AS.050.375/675 (601/600.485/685)	Probabilistic Models of the Visual Cortex	Applications
601.486/686	ML: Artificial Intelligence System Design and Development	Software
580.488/688 (601/600.488/688)	Foundations of Computational Biology and Bioinformatics II	Applications
601.490/690	Intro to Human-Computer Interaction	Software
601.491/691	Human-Robot Interaction	Applications
601.631 (600.471)	Theory of Computation	Theory
601.713	Future Networks	Systems
601.714 (600.644)	Advanced Computer Networks	Systems
601.717 (600.667)	Advanced Distributed Systems	Systems
601.718	Advanced Operating Systems	Systems
601.723 (600.624)	Advanced Topics in Data-Intensive Computing	Systems
601.730 (600.670)	Pseudorandomness and Combinatorial Constructions	Theory
601.740	Language-based Security	Systems
601.742	Advanced Topics in Secure and Censorship-Resistant Communications	Systems
601.742 (600.642)	Advanced Topics in Cryptography	Theory
601.743 (600.643)	Advanced Topics in Computer Security	Applications
601.745	Advanced Topics in Applied Cryptography	Theory
601.749 (600.649)	Computational Genomics: Applied Comparative Genomics	Applications
601.750 (600.640)	Frontiers of Sequencing Data Analysis	Applications
601.751 (600.641)	Advanced Topics in Genomic Data Analysis	Applications
601.760 (600.660)	FFT in Graphics & Vision	Applications
601.763	Advanced Topics in Robot Perception	Applications
601.764	Advanced NLP: Multilingual Methods	Applications
601.765 (600.665)	Machine Learning: Linguistic & Sequence Modeling	Reasoning
520.666 (601.766/600.666)	Information Extraction	Applications
601.767	Deep Learning for Automated Discourse	Applications
601.769 (600.625)	Event Semantics in Theory and Practice	Applications
601.771	Self-Supervised Statistical Models: Opportunities, Challenges and Risks	Reasoning
601.775 (600.675)	Machine Learning: Foundations (formerly Statistical Machine Learning)	Reasoning
601.778 (600.678)	Adv Topics in Causal Inference	Reasoning

601.779	Machine Learning: Advanced Topics	Reasoning
601.780 (600.692-was 675)	Unsupervised Learning: from Big Data to Low-Dimensional Representations (was Adv Topics in ML)	Reasoning
601.783 (600.683)	Vision as Bayesian Inference	Applications
601.787	Adv ML: Machine Learning for Trustworthy AI	Reasoning

These Engineering for Professionals courses have been approved for the CS program. Noted equivalencies in the course number column means you can't take both the EP course and our equivalent course for credit towards your degree program.

605.601	Foundations of Software Engineering	Software
605.611	Foundations of Computer Architecture	Systems
605.612 == 601.418/618	Operating Systems	Systems
605.620	Algorithms for Bioinformatics	Applications
605.621 == 601.433/633	Foundations of Algorithms	Theory
605.625 == 601.476/676	Probabilistic Graphical Models	Reasoning
605.635 == 601.419/619	Cloud Computing	Systems
605.641 == 601.415/615	Principles of Database Systems	Software
605.645 == 601.464/664	Artifical Intelligence	Reasoning
605.647	Neural Networks	Reasoning
605.649 == 601.475/675	Introduction to Machine Learning	Reasoning
605.704	Object-Oriented Analysis and Design	Software
605.724 == 601.436/636	Applied Game Theory	Theory
605.728	Quantum Computation	Theory
605.741	Large-Scale Database Systems	Systems
605.746	Advanced Machine Learning	Reasoning
605.751	Algorithms for Structural Bioinformatics	Applications
605.772 == 601.444/644	Network and Security Management	Software