Excel Engineering College

(Autonomous)

Department of Computer Science and Engineering

1.1.1 Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which are reflected in Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the various Programmes offered by the Institution:

Classification / Mapping of Course with their societal needs

Course code and name	Local needs	Regional Needs	National Needs	Global Needs
B.E CSE Regulation 2020 (Autonomous)				
20MA103	Mathematics – I for Computing Sciences		✓	✓
20CS101	Computer Hardware and Networking	✓	✓	✓
20PH101	Physics for Computing Sciences		✓	✓
20CS102	Problem Solving using Python	✓	✓	✓
20CS103	Computer Practices Laboratory		✓	✓
20ENE01	Communicative English	✓	✓	✓
20MC101	Induction Programme		✓	✓
20MA203	Mathematics – II for ComputingSciences		✓	✓
20CS202	Programming and Data Structures		✓	✓
20CH201	Chemistry for Computing Sciences		✓	✓
20ME203	Engineering Graphics	✓	✓	✓
20CS202	Programming and Data Structures		✓	✓
20ENE02	Advanced Communicative English	✓	✓	✓
20MC202	Interpersonal Skills	✓	✓	✓
20ENE03	Hindi	✓	✓	✓
20ENE04	French	✓	✓	✓
20ENE05	German	✓	✓	✓
20MA303	Discrete Mathematics and GraphTheory		✓	✓
20CS301	Design and Analysis of Algorithms		✓	✓
20CS302	Object Oriented Programming	✓	✓	✓
20CS303	Computer Architecture andOrganization		✓	✓
20EC306	Digital Logics and Microprocessor		✓	✓
20CS304	Operating Systems	✓	✓	✓
20CS305	Object Oriented ProgrammingLaboratory	✓	✓	✓
20MC301	Environmental Sciences		✓	✓
20MA403	Probability and Statistical Methods		✓	✓
20CS401	Formal Language and AutomataTheory		✓	✓
20CS402	Software Engineering		✓	✓
20CS403	Data Communication andComputer	✓	✓	✓

	Networks			
20CS404	Database Management Systems	✓	✓	✓
20CS405	Computer Graphics andMultimedia		✓	✓
20CS406	Data Communication and Computer Networks Laboratory		✓	✓
20MC401	Soft Skills		✓	✓
B.E CSE Regulation 2017 (Anna University)				
MA8551	Algebra and Number Theory		✓	✓
CS8591	Computer Networks	✓	✓	✓
EC8691	Microprocessors and Microcontrollers		✓	✓
CS8501	Theory of Computation		✓	✓
CS8592	Object Oriented Analysisand Design	✓	✓	✓
EC8681	Microprocessors and Microcontrollers Laboratory		✓	✓
CS8582	Object Oriented Analysis and Design Laboratory	✓	✓	✓
CS8581	Networks Laboratory		✓	✓
CS8651	Internet Programming		✓	✓
CS8691	Artificial Intelligence	✓	✓	✓
CS8601	Mobile Computing		✓	✓
CS8602	Compiler Design		✓	✓
CS8603	Distributed Systems		✓	✓
CS8661	Internet ProgrammingLaboratory		✓	✓
CS8662	Mobile Application Development Laboratory	✓	✓	✓
CS8611	Mini Project		✓	✓
HS8581	Professional Communication		✓	✓
MG8591	Principles of Management		✓	✓
CS8792	Cryptography and Network Security		✓	✓
CS8791	Cloud Computing		✓	✓
IT8761	Security Laboratory		✓	✓
CS8811	Project Work		✓	✓

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List of Open Elective				
OCE551	Air Pollution and ControlEngineering	✓	✓	✓
OMD551	Basic of BiomedicalInstrumentation		✓	✓
OBT552	Basics of Bioinformatics		✓	✓
OBM551	Bio Chemistry		✓	✓
OTL552	Digital Audio Engineering		✓	✓
OME551	Energy Conservation andManagement		✓	✓
OBT553	Fundamentals of Nutrition		✓	✓
OCE552	Geographic InformationSystem		✓	✓
OPY551	Herbal Technology		✓	✓
OMD552	Hospital Waste Management	✓	✓	✓
OCH551	Industrial Nanotechnology		✓	✓
OBT551	Introduction to Bioenergy andBiofuels		✓	✓
OME553	Industrial Safety Engineering	✓	✓	✓
OEI551	Logic and Distributed ControlSystems		✓	✓
OBM552	Medical Physics		✓	✓
OML552	Microscopy		✓	✓
OBT554	Principles of Food Preservation		✓	✓
OMF551	Product Design and Development		✓	✓
OAN551	Sensors and Transducers		✓	✓
OTL551	Space Time WirelessCommunication	✓	✓	✓

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OEC552	Soft Computing		✓	✓
OTL553	Telecommunication NetworkManagement		✓	✓
OMD553	Telehealth Technology		✓	✓
OTL554	Wavelets and its Applications		✓	✓
OIM551	World Class Manufacturing		✓	✓
OAI751	Agricultural Finance, Bankingand Co-operation		✓	✓
OEE751	Basic Circuit Theory		✓	✓
OBM751	Basics of Human Anatomyand Physiology		✓	✓
OGI751	Climate Change and its Impact		✓	✓
OPY751	Clinical Trials		✓	✓
OEC751	Electronic Devices		✓	✓
OML752	Electronic Materials		✓	✓
OCH752	Energy Technology		✓	✓
OCE751	Environmental and SocialImpact Assessment		✓	✓
OGI752	Fundamentals of Planetary Remote Sensing		✓	✓
OEN751	Green Building Design		✓	✓
OBM752	Hospital Management	✓	✓	✓
OEE752	Introduction to RenewableEnergy Systems		✓	✓
OBT753	Introduction of Cell Biology		✓	✓
OMF751	Lean Six Sigma		✓	✓
OAN751	Low Cost Automation		✓	✓

OEC754	Medical Electronics		✓	✓
OEC756	MEMS and NEMS		✓	✓
OBT752	Microbiology		✓	✓
OCH751	Process Modeling andSimulation		✓	✓
OIE751	Robotics	✓	✓	✓
OEC753	Signals and Systems		✓	✓
OME752	Supply Chain Management	✓	✓	✓
OME753	Systems Engineering		✓	✓
OTL751	Telecommunication SystemModeling and Simulation		✓	✓
OCY751	Waste Water Treatment	✓	✓	✓
List of Professional Electives				
CS8075	Data Warehousing and Data Mining	✓	✓	✓
IT8076	Software Testing	✓	✓	✓
IT8072	Embedded Systems	✓	✓	✓
CS8072	Agile Methodologies		✓	✓
CS8077	Graph Theory and Applications-		✓	✓
IT8071	Digital Signal Processing		✓	✓
GE8075	Intellectual Property Rights		✓	✓
CS8091	Big Data Analytics	✓	✓	✓
CS8082	Machine Learning Techniques	✓	✓	✓
CS8092	Computer Graphics andMultimedia	✓	✓	✓

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IT8075	Software Project Management	✓	✓	✓
CS8081	Internet of Things	✓	✓	✓
IT8074	Service Oriented Architecture		✓	✓
GE8077	Total Quality Management		✓	✓
CS8083	Multi-core Architectures and Programming		✓	✓
CS8079	Human Computer Interaction	✓	✓	✓
CS8073	C# and .Net Programming		✓	✓
CS8088	Wireless Adhoc and SensorNetworks		✓	✓
CS8071	Advanced Topics on Databases		✓	✓
GE8072	Foundation Skills inIntegrated Product Development		✓	✓
GE8074	Human Rights		✓	✓
GE8071	Disaster Management	✓	✓	✓
EC8093	Digital Image Processing		✓	✓
CS8085	Social Network Analysis	✓	✓	✓
IT8073	Information Security		✓	✓
CS8087	Software Defined Networks		✓	✓
CS8074	Cyber Forensics	✓	✓	✓
CS8086	Soft Computing		✓	✓
GE8076	Professional Ethics inEngineering		✓	✓
CS8080	Information Retrieval Techniques		✓	✓
CS8078	Green Computing		✓	✓

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CS8076	GPU Architecture and Programming		✓	✓
CS8084	Natural Language Processing	✓	✓	✓
CS8001	Parallel Algorithms		✓	✓
IT8077	Speech Processing	✓	✓	✓
GE8073	Fundamentals of Nanoscience		✓	✓

	Prepared by	Reviewed by	Approved By
SIGN			
NAME	S. Praveen Kumar	E. Deepankumaran	Dr. T. Ravichandran

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Classification / Mapping of Course with their societal needs

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M.E CSE Regulation 2020				
20PMA103	Applied Probability and Statistics		✓	✓
20PCS101	Mobile and Pervasive Computing	✓	✓	✓
20PCS102	Applied Cryptography		✓	✓
20PCS103	Advanced Data Structures and Algorithms		✓	✓
20PCS104	Advanced Data Structures Laboratory		✓	✓
20PCS201	Advanced Operating Systems	✓	✓	✓
20PCS202	Internet of Things	✓	✓	✓
20PCS203	Cloud Computing	✓	✓	✓
20PCS204	Big Data Analytics		✓	✓
20PCS205	Data Analytics Laboratory		✓	✓
20PCS206	Technical Seminar and Internship		✓	✓
20PEE301	Research Methodology and Intellectual Property Rights	✓	✓	✓
20PCS301	Project Work Phase – I		✓	✓
20PCS401	Project Work Phase – II		✓	✓
List of Electives				
20PCSE01	Advanced Computer Architecture		✓	✓
20PCSE02	Advanced Database Technology	✓	✓	✓
20PCSE03	Advanced computer networks		✓	✓
20PCSE04	Real time systems	✓	✓	✓
20PCSE05	Open Source Systems		✓	✓

20PCSE11	Soft Computing		✓	✓
20PCSE12	Information Retrieval Techniques		✓	✓
20PCSE13	Wireless Sensor Networks	✓	✓	✓
20PCSE14	Parallel Programming Paradigms		✓	✓
20PCSE15	Compiler Optimization Techniques		✓	✓
20PCSE21	Software Architectures And Design		✓	✓
20PCSE22	Ethical Hacking	✓	✓	✓
20PCSE23	Network Security		✓	✓
20PCSE24	Intellectual Property Rights	✓	✓	✓
20PCSE25	Social Network Analysis		✓	✓
20PCSE31	Performance Analysis of Computer Systems		✓	✓
20PCSE32	Language Technologies		✓	✓
20PCSE33	Computer Vision		✓	✓
20PCSE34	Speech Processing and Synthesis		✓	✓
20PCSE35	Software Quality Assurance and Testing	✓	✓	✓
20PCSE41	Formal models of software Systems		✓	✓
20PCSE42	Embedded Software Development		✓	✓
20PCSE43	Machine Learning Techniques	✓	✓	✓
20PCSE44	Bio-inspired Computing		✓	✓
20PCSE45	High-speed networks		✓	✓

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20PCSE51	Data Visualization Techniques		✓	✓
20PCSE52	Reconfigurable Computing		✓	✓
20PCSE53	Mobile Application Development	✓	✓	✓
20PCSE54	Bio Informatics	✓	✓	✓
20PCSE55	Information Storage Management		✓	✓

	Prepared by	Reviewed by	Approved By
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