v_{5.1} Bachelor of Software Engineering (BSENG)—Student's Perspective

	1A	1B	2A	2B	3A	3B	4A	4B
1	SE1 Intro to OO & SE CSC110	SE2 OO Design&Methods CSC160	SE3 Architecture&Methods SENG221 (new)	SE4 Systems Programming SENG265	SE5 Requirements&Specific SENG321 (new)	SENG371 (new)	SE7 Embedded systems SENG421 (new)	SE8 SWQuality Engineering SENG471 (new)
	CSC	CSC	SENG SENG	SENG	SENG	SENG SENG	SENG SENG	SENG SENG
2	MECHSYS Mechanical systems MECH141	ELECSYS Electrical systems ELEC199	CAS CompArch&Assem CSC230	ALG1 Algos & data structs CSC 225	DD Digital Design CSC355	AFL Foundations CSC 320	Elective	CAPB Design Project SENG499 (new)
	MECH	ELEC	CSC	CSC	CSC/CENG/ELEC	CSC	CSC/CENG/ELEC	SENG
3	LA Linear algebra MATH133 MATH	WE Web engineering SENG130 (new) SENG	PS Probability/Statistics STAT 260 MATH	HCI Human-comp interacti SENG310 SENG	OSDC Operating systems CSC360	DB Databases CSC370 CSC	NET Networks CSC450/CENG460 CSC/CENG/ELEC	RT Real-time systems CENG455/CSC460 CSC/CENG/ELEC
4	CALC1 Calculus 1 MATH100	CALC2 Calculus 2 MATH101	SYSDYN System Dynamics ELEC255 (new)	SAS Signals and Systems ELEC265 (new)	CTRL Control Systems ELEC361 (new)	SEC Security Engineering SENG372 (new)	Elective	Elective
	MATH	MATH	ELEC	ELEC		SENG	CSC/CENG/ELEC	CSC/CENG/ELEC
5	PHY Basic Science Phys126 (new)	CHE Basic Science CHEM150	DS1 Discrete math&logic MATH122	DS2 Discrete math&logic MATH222	BSC5 Basic Science BIOC102	BSC6 Basic Science EOS110	Elective	Elective
	SCIENCE	SCIENCE	MATH	MATH	SCIENCE	SCIENCE	CSC/CENG/ELEC	CSC/CENG/ELEC
6		ENGL English ENGL115 ENGL	TECHWRT Technical writing ENGR240 ENGR	BUS1 Economics & Entrpren ENGR281 (new) BUS	BUS2 Planning & Manageme COM241 (new) BUS	CST5 Elective	FE Free Elective Any faculty MISC	SOCIAL Social&prof issues SENG401 (new) SENG

Legend SENG Core ENG Core BScience Elective	MATH Core CSC Core CStudies
Required	Elective
Black type	Blue type
For prerequisite s	structure
Refer to prerequi	site sheet

SENG	11
CSC	7
CSC/CENG/EI	8
CENG/ELEC	4
MECH	1
MATH	6
SCIENCE	4
MISC CST	5
ENGR	1
Total	47

Engineering

Electives

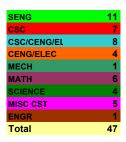
CAPA Design Project SENG499 (new) SENG	ARCH Software architecture SENG422 SENG	CBSE Software components SENG454 (new) SENG	FTC Fault-tolerant computir CSC454 CSC	CC Compiler construction CSC435	SP Software Process SENG472 SENG	TOP Topics in SE SENG480 SENG
ALG2 Algos Analysis CSC326	ALG3 Analysis of Algos CSC425	CG Computer Graphics CSC405	MMS Multimedia systems SENG410/CSC461/EL CSC/CENG/ELEC	PL Prog. Languages	AOOD Advanced OO Desigr SENG430 SENG	TOP Topics in CSC CSC485 CSC
IKM Info&knwldg mgml SENG315 (new)	NC Netcentric-computing SENG450 SENG	CON Concurrency CSC464 (new)	DC Distributed computing SENG462/CSC462 SENG	CSCW Collaborative worl SENG435 (new) SENG	MSD Management of SE SENG470 SENG	TOP Topics in CENG CENG496 CENG
DSP Digital Signal Processi ELEC310 ELEC	COM	WMC Wireless&Mobile Com ELEC441 (new)	Al	PATREC Pattern Recognitior ELEC485 ELEC	MIN Data mining SENG474 (new) SENG	TOP Topics in ELEC ECE496 ELEC
NA Numerical analysis CSC349A/CSC340	ORLP OR & Lin. Programmir CSC448A/CSC448B	ORSIM OR & Simulation CSC448A/CSC448B	CSA Systems & Architectur CENG450 CENG	MICRO Microprocessor System CENG355 CENG	ERGO Ergonomics SENG412 SENG	ROBOT Robotics ELEC426/MECH430 MECH/ECE

Most other CSC/CENG/ECE courses can be taken as electives The above courses are the core electives

vs.1 Bachelor of Software Engineering (BSENG)—Student's Perspective

	1A	1B	2A	2B	3A	3B	4A	4B
1	SE1 Intro to OO & SE CSC110	SE2 OO Design&Methods CSC160	SE3 Architecture&Methods SENG221 (new) SENG	SE4 Systems Programming SENG265 SENG		SE6 Software evolution SENG371 (new) SENG	SE7 Embedded systems SENG421 (new) SENG	SE8 SWQuality Engineering SENG471 (new) SENG
2	MECHSYS Mechanical systems MECH141	ELECSYS Electrical systems ELEC199	CAS CompArch&Assem CSC230	ALG1 Algos & data structs CSC 225	DD Digital Design CSC355	AFL Foundations CSC 320	Elective	CAPB Design Project SENG499 (new)
3	MECH Linear algebra MATH133	WE Web engineering SENG130 (new) SENG	Probability/Statistics STAT 260 MATH	HCI Human-comp interaction SENG310 SENG	CSC/CENG/ELEC OSDC Operating systems CSC360 CSC	DB Databases CSC370 CSC	CSC/CENG/ELEC NET Networks CSC450/CENG460 CSC/CENG/ELEC	RT Real-time systems CENG455/CSC460 CSC/CENG/ELEC
					OTDI	0=0		Flaction
4	CALC1 Calculus 1 MATH100	CALC2 Calculus 2 MATH101	SYSDYN System Dynamics ELEC255 (new)	SAS Signals and Systems ELEC265 (new)	CTRL Control Systems ELEC361 (new)	SEC Security Engineering SENG372 (new)	Elective	Elective
•	Calculus 1 MATH100 MATH	Calculus 2 MATH101 MATH	System Dynamics ELEC255 (new) ELEC	Signals and Systems ELEC265 (new) ELEC	Control Systems ELEC361 (new) ELEC	Security Engineering SENG372 (new) SENG	CSC/CENG/ELEC	CSC/CENG/ELEC
4 5	Calculus 1 MATH100 MATH PHY Basic Science Phys126 (new)	Calculus 2 MATH101 MATH CHE Basic Science CHEM150	System Dynamics ELEC255 (new) ELEC DS1 Discrete math&logic MATH122	Signals and Systems ELEC265 (new) ELEC DS2 Discrete math&logic MATH222	Control Systems ELEC361 (new) ELEC BSC5 Basic Science BIOC102	Security Engineering SENG372 (new) SENG BSC6 Basic Science EOS110	CSC/CENG/ELEC Elective	CSC/CENG/ELEC Elective
5	Calculus 1 MATH100 MATH PHY Basic Science	Calculus 2 MATH101 MATH CHE Basic Science CHEM150 SCIENCE	System Dynamics ELEC255 (new) ELEC DS1 Discrete math&logic MATH122 MATH	Signals and Systems ELEC265 (new) ELEC DS2 Discrete math&logic MATH222 MATH	Control Systems ELEC361 (new) ELEC BSC5 Basic Science BIOC102 SCIENCE	Security Engineering SENG372 (new) SENG BSC6 Basic Science EOS110 SCIENCE	CSC/CENG/ELEC Elective CSC/CENG/ELEC	CSC/CENG/ELEC Elective CSC/CENG/ELEC
•	Calculus 1 MATH100 MATH PHY Basic Science Phys126 (new) SCIENCE	Calculus 2 MATH101 MATH CHE Basic Science CHEM150	System Dynamics ELEC255 (new) ELEC DS1 Discrete math&logic MATH122	Signals and Systems ELEC265 (new) ELEC DS2 Discrete math&logic MATH222 MATH BUS1	Control Systems ELEC361 (new) ELEC BSC5 Basic Science BIOC102	Security Engineering SENG372 (new) SENG BSC6 Basic Science EOS110 SCIENCE CST5	CSC/CENG/ELEC Elective	CSC/CENG/ELEC Elective

Legend SENG Core ENG Core BScience Elective	MATH Core CSC Core CStudies
Required	Elective
Black type	Blue type
For prerequisite s	tructure
Refer to prerequis	site sheet



Engineering

Electives

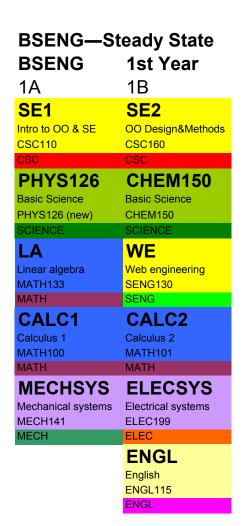
CAPA Design Project SENG499 (new) SENG	ARCH Software architecture SENG422 SENG		FTC Fault-tolerant computin CSC454	CC Compiler construction CSC435	SP Software Process SENG472 SENG	TOP Topics in SE SENG480 SENG
ALG2 Algos Analysis CSC326	ALG3 Analysis of Algos CSC425	CG Computer Graphics CSC405	MMS Multimedia systems SENG410/CSC461/EL CSC/CENG/ELEC	PL Prog. Languages CSC330	AOOD Advanced OO Design SENG430 SENG	TOP Topics in CSC CSC485
IKM Info&knwldg mgmt SENG315 (new) SENG	NC Netcentric-computing SENG450 SENG	CON Concurrency CSC464 (new)	DC	CSCW Collaborative work SENG454 (new) SENG	MSD Management of SD SENG470 SENG	TOP Topics in CENG CENG496 CENG
DSP Digital Signal Processin ELEC310 ELEC	COM Communications ELEC350	WMC Wireless&Mobile Comp ELEC441 (new)	CENG420	PATREC Pattern Recognition ELEC485 ELEC	MIN Data mining SENG474 (new) SENG	TOP Topics in ELEC ECE496 ELEC
NA Numerical analysis CSC349A/CSC340	ORLP OR & Lin. Programmin CSC448A/CSC448B	CSC448A/CSC448B	CSA Systems & Architectur CENG450 CENG	MICRO Microprocessor System CENG355 CENG	ERGO Ergonomics SENG412 SENG	ROBOT Robotics ELEC426/MECH430 MECH/ECE

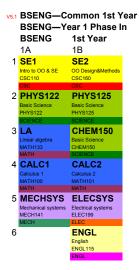
Most other CSC/CENG/ECE courses can be taken as elective The above courses are the core elective:

V5.1 BSENG 1st Year of Operations (Phase in)

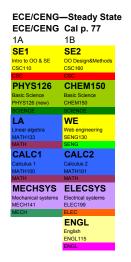
	1A	1B	2A	2B	3A	3B	4A	4B
1	SE1 Intro to OO & SE CSC110 CSC	SE2 OO Design&Methods CSC160 CSC	SE3 Architecture&Methods SENG221 (new) SENG	SE4 Systems Programming SENG265 (new) SENG	SE5 Requirements&Specific SENG321 (new) SENG	SENG471 (new)	SE7 Embedded systems SENG421 (new) SENG	SE8 SWQuality Engineering SENG471 (new) SENG
2	MECHSYS Mechanical systems MECH141 MECH	ELECSYS Electrical systems ELEC199 ELEC	CAS CompArch&Assem CSC230	ALG1 Algos & data structs CSC 225 CSC	DD Digital Design CSC355/CENG355 CSC/CENG	AFL Foundations CSC 320	Elective CSC/CENG/ELEC	CAPB Design Project SENG499 (new) SENG
3	Linear algebra MATH133 MATH	CHE Basic Science CHEM150 SCIENCE	PS Probability/Statistics STAT 260 MATH	HCI Human-comp interaction SENG310 SENG	OSDC	DB Databases CSC370 CSC	NET Networks CSC450/CENG460 CSC/CENG	RT Real-time systems CENG455/CSC460 CSC/CENG
4	CALC1 Calculus 1 MATH100	CALC2 Calculus 2 MATH101	SYSDYN System Dynamics ELEC255 (new)	SAS Signal Processing ELEC310	CTRL Control Systems ELEC361 (new)	SEC Security Engineering SENG 372 (new)	Elective	Elective
5	MATH PHY Basic Science Phys122 SCIENCE	MATH PHY Basic Science PHYS125 SCIENCE	CENG/ELEC DS1 Discrete math&logic MATH122 MATH	DS2 Discrete math&logic MATH222 MATH	BSC5 Basic Science BIOC102 SCIENCE	BSC6 Basic Science EOS110 SCIENCE	Elective CSC/CENG/ELEC	Elective CSC/CENG/ELEC
6		ENGL English ENGL115 ENGL	TECHWRT Technical writing ENGR240 ENGR	BUS1 Economics & Entrpren ENGR280 ENGR	BUS2	CST5	FE Free Elective Any faculty MISC	SOCIAL Social&prof issues SENG401 (new) SENG

V5 1 BSENG—Common 1st Year BSENG—Year 1 Phase In BSENG 1st Year 1B 1A 1 **SE1** SE₂ Intro to OO & SE OO Design&Methods CSC110 CSC160 2 **PHYS122 PHYS125 Basic Science Basic Science** PHYS122 PHYS125 CIENCE SCIENCE 3 **LA CHEM150** Basic Science Linear algebra MATH133 CHEM150 MATH SCIENCE 4 CALC1 CALC₂ Calculus 1 Calculus 2 MATH100 MATH101 MATH MATH 5 MECHSYS **ELECSYS** Mechanical systems Electrical systems MECH141 ELEC199 MECH ELEC **ENGL** 6 English ENGL115 **ENGL**













Declare SENG130 and CSC212 equivalent

English ENGL115/135

/5.1	Software Engineering Degree program (SEDP)—New, changed, and existing courses							
	1A	1B	2A	2B	3A	3B	4A	4B
1	SE1 Intro to OO & SE CSC110	SE2 OO Design&Methods CSC160 CSC	SE3 Architecture&Methods SENG221 (new)	SE4 Systems Programming SENG265 SENG	SE5 Requirements&Specific SENG321 (new) SENG	SE6 Software evolution SENG371 (new)	SE7 Embedded systems SENG421 (new)	SE8 SWQuality Engineering SENG471 (new)
2	MECHSYS Mechanical systems MECH141	ELECSYS Electrical systems ELEC199	CAS CompArch&Assem CSC230	ALG1 Algos & data structs CSC 225	DD Digital Design CSC355	AFL Foundations CSC 320	Elective	CAPB Design Project SENG499 (new)
3	MECH LA Linear algebra MATH133	WE Web engineering SENG130 (new)	PS Probability/Statistics STAT 260	HCI Human-comp interaction SENG310	CSC360	DB Databases CSC370	CSC/CENG/ELEC NET Networks CSC450/CENG460	REAL-time systems CENG455/CSC460
4	CALC1 Calculus 1 MATH100	CALC2 Calculus 2 MATH101	MATH SYSDYN System Dynamics ELEC255 (new)	SAS Signals and Systems ELEC265 (new)	CTRL Control Systems ELEC361 (new)	SEC Security Engineering SENG372 (new)	Elective	Elective
	MATH	MATH	CENG/ELEC	CENG/ELEC	CENG/ELEC	SENG	CSC/CENG/ELEC	CSC/CENG/ELEC
5	PHY Basic Science Phys126 (new)	CHE Basic Science CHEM150	DS1 Discrete math&logic MATH122	DS2 Discrete math&logic MATH222	BSC5 Basic Science BIOC102	BSC6 Basic Science EOS110	Elective	Elective
	SCIENCE	SCIENCE	MATH	MATH	SCIENCE	SCIENCE	CSC/CENG/ELEC	CSC/CENG/ELEC
6		ENGL English ENGL115	TECHWRT Technical writing ENGR240	ENGR281 (new)	BUS2 Planning & Manageme COM241 (new)		FE Free Elective Any faculty	SOCIAL Social&prof issues SENG401 (new)
		FNGI	ENGR	BUS	BUS	MISC	MISC	SENG

22
7
46
76

SE	Software Engineering	LA	Linear algebra
CST	Complementary Studies (7 needed)	WE	Web engineering
BSC	Basic Science (6 needed)	MECHSYS	Mechancal systems
DS	Discrete Structures & Logic	ELECSYS	Electrical systems
ALG	Algorithms	BUS	Business
AFL	Automata and Formal Languages	DB	Data bases
CTRL	Automatic Control Engineering	OSNET	Operating systems & networks
SOCIAL	Social and Professional Issues	PS	Probability and statistics
SAS	Signal analysis & systems	HCI	Human-computer interaction
CAS	Computer architecture & assembler	CALC	Calculus
DD	Digital design	CAP	Capstone project

Engineering Electives

LIECTIVES						
CAPA Design Project SENG499 (new) SENG		CBSE Software components SENG454 (new) SENG	FTC Fault-tolerant computin CSC454 CSC	CC Compiler constructions CSC435	SP Software Process SENG472 SENG	TOP Topics in SE SENG480 SENG
ALG2 Algos Analysis CSC 326		CG Computer Graphics CSC405	MMS Multimedia systems SENG410/CSC461/EL CSC/CENG	Prog. Languages	AOOD Advanced OO Design SENG430 SENG	TOP Topics in CSC CSC485
IKM Info&knwldg mgmt SENG315 (new) SENG	NC Netcentric-computing SENG450	CON Concurrency CSC464 (new)	DC Distributed computing SENG462/CSC462	CSCW Collaborative work SENG435 (new)	MSD Management of SD SENG470	TOP Topics in CENG CENG496
DSP Digital Signal Procession ELEC310 CENG/ELEC	ELEC350	WMC Wireless&Mobile Comp ELEC441 (new) CENG/ELEC	AI Artificial Intelligence CENG420 CENG/ELEC	PATREC Pattern Recognition ELEC485 CENG/ELEC	MIN Data mining SENG474 (new) SENG	TOP Topics in ELEC ECE496 ELEC
NA Numerical analysis CSC349A/CSC340	ORLP OR & Lin. Programming CSC448A	ORSIM	CSA	MICRO Microprocessor System CENG355	ERGO	ROBOT Robotics ELEC426/MECH430 MECH/ECE

Existing SENG courses to be deleted

SENG424 Reliability (absorbed into security)

SENG Courses absorbed into SE3-8

 SENG265
 Introduction to SE

 SENG330
 OO Software Development

 SENG365
 Software Development I

 SENG420
 Software Evolution

 SENG440
 Embedded Systems

SENG465 Advanced Software Development

