

Bachelor of Science (Maths, Electronics, Computer Science)

Course Outcomes

Semester-I

Course Code	Course	Credits	Course Outcome	
ELS1	English (First Language)	4	CO1	Appreciate the different genres of literature: prose, poetry and essay
			CO2	Gain competence in speaking skills by practicing conversations and involving in communication activities like asking and seeking for opinions, clarifications, getting attention, and agreeing and disagreeing with opinions
			CO3	Figure out the etymological origins of English words by learning Greek and Latin roots, prefixes and suffixes and learn to spell correctly.
			CO4	Distinguish the subtle differences in meaning and articulation in homonyms, homographs & homophones
			CO5	Learn the different types of nouns, pronouns, adjectives and articles
			CO6	Learn and practice skills such as Creativity, Interpersonal Skills, Motivation and Self-analysis
	Second Language-Hindi	4	CO1	अपनी स्वयं की बनाई हुई दुनिया से बाहर निकल कर सीखने और समझने का प्रयत्न करें
			CO2	लेखन कला की उत्कृष्टता के लिए सरल और जटिल शब्दों का भंडारण करना
			CO3	सहपाठियों को शामिल करते हुए, दूसरों के अनुभवों को सुनकर आत्मसात करें
			CO4	शब्दों और विचारों के बीच संबंधों को समझने की समझ
			CO5	अपनी साहित्यिक शैली को पुष्ट करें
			CO6	छात्र सबसे अलग अपनी पहचान बनाने का प्रयास करें
			CO1	Read, write and try to understand the language.

Second Language-Arabic	4	CO2	Speak the language to some extent on the basis of the lesson AL HIWAAR.
		CO3	Construct meaningful sentences with appropriate words.
		CO4	Get enriched with an insight into the reality of life and this world, through the verses of SURAHS.
		CO5	Get inspired through the verses of SURAH AT THEEN and become good human beings by having love and compassion for others.
		CO6	The chapters of Grammar help to learn 'Parts of Speech' in Arabic.
Second Language-Sanskrit	4	CO1	पुरातन भारतीय संस्कृतिः , चारित्रिक , इतिहासादि विषयानाम् परिणत ज्ञानं प्राप्नोति ।
		CO2	शब्दस्य पूर्व स्वरूपं , तत् समीचीन अर्थज्ञानम् ।
		CO3	द्विपद सम्मेलनं विघटयतुमपि अवगन्तुं शक्नुवन्ति ।
		CO4	पञ्चतन्त्रस्य पूर्वापरविश्लेषणाज्ञानम् आगमिष्यन्ति ।
Second Language-French	4	CO1	You will be able to understand the basic grammatical structure of the French language (differences in pronouns, gendered nouns & adjectives, gendered articles)
		CO2	You will be able to understand the basic syntactic structure of the French language (subject + verb + determinant + object), you will learn the tentative placement of adjectives and the mobility of adverbs.
		CO3	You will be able to make basic conversation and write a dialogue in French regarding your daily life (classroom, friends, family, home, city, country of residence, language, age, activities, basic physical and emotional qualities)
		CO4	You will be able to use a bilingual dictionary to find new nouns independently and write sentences using same/similar grammatical/syntactic structures learnt in class
		CO5	You will be able to ask and answer basic questions by providing short reasons for your choices

			CO6	You will be able to carry out a formal and informal basic conversation in French (written & oral)
			CO7	You will be able to read texts related to daily life aloud in French and understand them
			CO8	You will be able to listen to conversations related to daily life in French and comprehend them
AECC1	Environmental Studies	2	CO1	Demonstrate a general understanding of the breadth and interdisciplinary nature of environmental issues.
			CO2	Be well-prepared for meaningful careers and post-graduate education in fields related to environmental science and beyond.
			CO3	Formulate an action plan for sustainable alternatives that integrate science, humanist, and social perspectives.
			CO4	Apply systems concepts and methodologies to analyse and understand interactions between social and environmental processes.
			CO5	To cultivate compassion, curiosity, collaboration, and hope.
			CO6	Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems.
DSC I	Electronics	4T+1P	CO1	The students will be able to identify & use various Electrical measuring Devices and explore them in designing basic electric circuits.
			CO2	The students will be aware of various electric safety rules used while working in electric circuits & equipment and identify requirements of Electric Machine for domestic and industrial purpose
			CO3	The students will be able to apply Thevenin and Norton theorems to analyze and design for maximum power transfer and apply the concept of linearity and the associated technique of superposition to circuits and networks.
			CO4	The students will be able to understand waveforms, signals, transient, and steady-state responses of RLC circuits and develop the ability to apply circuit analysis to DC and AC circuits
			CO5	The students will be able to find the response of RL, RC, RLC circuits

			CO6	The students will be able to find the Time domain response from pole-zero plots and design the desired filters in the real time applications
			CO7	The students will be able to trace practically the wave forms of voltage, frequency, time period, amplitude for square, triangular, sine inputs
			CO8	The students will be able to draw various lissagous figures
DSC IA BS 101	Mathematics	4T+1P	CO1	Understand the basic concepts of the partial differential equations
			CO2	Apply Euler's method for homogenous function
			CO3	Apply total differentials for functions of several variables
			CO4	Apply maxima and minima for functions of two variables and Lagrange's method of multipliers.
			CO5	Apply numerical measure for the curvature of a curve at a particular point
			CO6	Apply envelopes for family of curves
			CO7	Determine the length of the curves in Cartesian and polar form.
			CO8	Understand the concept of partition and sum applies to the areas of volumes and surfaces of revolution
BS 501	Computer Science	4T+1P	CO1	Students will be able to recall concepts related to computer fundamentals and programming and write algorithm.
			CO2	They will be able to recognise a basic C program
			CO3	Students will be able to implement a program in C using decision making, looping structures
			CO4	Students will be able to implement a program in C using arrays and strings
			CO5	Students will be able to implement functions in C
			CO6	Students will be able to implement pointers in C
			CO7	Students will be able to implement programs using structures and file handling
			CO8	Students will be able to implement file handling programs
Course Code	Course	Credits	Course Outcome	

ELS2	English (First Language)	4	CO1	Appreciate genres like prose, poetry, drama and essay and critically evaluate their aesthetic, meaning and usage
			CO2	Enhance their word bank by learning vocabulary: Oxymoron, Hyperbole, Loan Words, Portmanteau Words, Simile and Metaphor
			CO3	Learn different types of verbs, tenses and adverbs
			CO4	Gain the essentials of writing skills through Paragraph writing, Sequencing, Descriptive and Argumentative Writing
			CO5	Gain and practice skills like Decision-making, Holistic Health, Conflict Resolution and Ethical Behaviour
			CO6	Learn the different figures of speech
	Second Language-Hindi	4	CO1	बोलने और लेखन कौशल का अधिक से अधिक प्रदर्शन
			CO2	शब्दों और विचारों के बीच संबंधों को समझने की समझ
			CO3	कौशल और प्रतिनिधित्व के साथ भाषा और व्याख्यानों के सिद्धांतों को समझें एवं उन्हें आत्मसात करने का प्रयत्न करें
			CO4	अपनी स्वयं की बनाई हुई दुनिया से बाहर निकल कर सीखने और समझने के दौरान सहपाठियों को शामिल करते हुए, दूसरों के अनुभवों को महसूस करते हुए, अपनी साहित्यिक शैली को पुष्ट करें
			CO5	मानव संबंधों के प्रति सहानुभूति और सराहना की भावना रखना
			CO6	छात्रों की कहानियों में दिलचस्पी का विकास करना
	Second Language-Arabic	4	CO1	Read, write and understand the language.
			CO2	Lead a dignified life of piety and virtue through the verses of SURAH AL QADR and SURAH AZ ZILZAL.
			CO3	Keep the importance of knowledge and education in mind, by studying lesson, the 7th Nizam Mir Osman Ali Khan.
			CO4	Inculcate values that help in their overall development.
			CO5	Learn to distinguish between phrases and sentences and construct meaningful sentences with suitable words and phrases.

SLS2	Second Language-Sanskrit	CO6	Enhance their knowledge in History of Arabic Literature: Impact of the Holy Qur'an on Arabic Literature, Compilation of the Holy Qur'an and Poetry in Islamic Period.	
		4	CO1	पुरातन भारतीय संस्कृतिः , चारित्रक , इतिहासादि विषयानाम् परिणत ज्ञानं प्राप्नोति ।
			CO2	धातुनिर्माणे निष्णाताः अभवान् ।
			CO3	विग्रहवाक्यस्य आवश्यकथा अवगन्तुं शक्नुवन्ति ।
			CO4	द्विपद सम्मेलनं अपि अवगन्तुं शक्नुवन्ति ।
			CO5	पञ्चतन्त्रस्य पूर्वापरविश्लेषणाज्ञानम् आगमिष्यन्ति ।
			CO6	संस्कृते संभाषणा ज्ञानम् लभन्ते
	Second Language-French	4	CO1	You will be able to understand the basic grammatical structure of the French language (differences in pronouns, gendered nouns & adjectives, gendered articles)
			CO2	You will be able to understand the basic syntactic structure of the French language (subject + verb + determinant + object), you will learn the tentative placement of adjectives and the mobility of adverbs and one set of pronouns (pronoun of place).
			CO3	You will be able to use present tense, simple past and future tenses and immediate past and near future tenses in the correct context.
			CO4	You will be able to use a bilingual dictionary to find new nouns independently and write sentences using same/similar grammatical/syntactic structures learnt in class
			CO5	You will be able to ask and answer basic questions by providing short reasons for your choices
			CO6	You will be able to carry out a formal and informal basic conversation in French (written & oral)
			CO7	You will be able to read texts related to daily life aloud in French and understand them

			CO8	You will be able to listen to conversations related to daily life in French and comprehend them
AECC2	Basic Computer Skills	2	CO1	Will be able to exhibit proficiency in a core set of applications, viz., Microsoft Word, Excel and PowerPoint.
			CO2	Will be able to apply writing skills in preparing and presenting documents.
			CO3	Will be able to discuss key hardware terminology and hardware functionality.
			CO4	Will be able to demonstrate competency in using PC operating systems and using the Internet as a search tool.
			CO5	Will learn concept of computer networks and communication system.
			CO5	Will learn concept of computer networks and communication system.
DSC II	Electronics	4T+1P	CO1	Successful students would be able to explain the formation, forward and reverse biasing of PN junction diode
			CO2	Successful students will be able to plot the VI characteristics of all diodes
			CO3	Successful students will be able to explain the working of NPN and PNP transistors
			CO4	Successful students can plot input and output characteristics of CB, CE and CC transistor and also can draw a hybrid pi model using two port network representation
			CO5	Successful students will be able to explain the need of biasing a transistor
			CO6	Successful students will be able to explain the working and also difference between JFET and MOSFET
			CO7	Successful students will be able to plot the drain and output characteristics of JFET and MOSFET
			CO8	Successful students will be able to explain the working of SCR and UJT
			CO9	Successful students will be able to plot the characteristics of SCR and UJT
			CO1	Find the solution of differential equations of first order and first degree by exact, integrating and change of variables method

BS 201	Mathematics	4T+1P	CO2	Apply total differentiation for differential equations
			CO3	Solve the differential equations of first order but not first degree by Clairaut's and solvable for x or y
			CO4	Apply first order differential equations to solve real time applications.
			CO5	Solve the differential equations of higher order linear differential equations with constant coefficients
			CO6	Solve the differential equations of higher order non homogeneous linear differential equations with constant coefficients
			CO7	Solve the differential equations of higher order linear differential equations with non-constant coefficients.
			CO8	Solve the partial differential equations of the type linear equations by Lagrange's method
			BS 206	Computer Science
CO2	Make use of objects and classes for developing programs.			
CO3	Solve the real-world problems through practical based learning and implement the logic for the same			
CO4	Understand the concept of data abstraction and encapsulation			
CO5	Design & implement various forms of inheritance, String class, constructors, operator overloading, runtime polymorphism			
CO6	Analyse and handle possible errors during program execution			
CO7	Understand how to design and implement generic classes with C++ templates			
CO8	Demonstrate how to control errors with exception handling			
Semester-III				
Course Code	Course	Credits	Course Outcome	
			CO1	Critically appreciate and evaluate the various genres of literature: prose, poetry, short story and essay

ELS3	English (First Language)	3	CO2	Articulate with greater display of Speaking and Writing skills through inputs in Vocabulary and Grammar
			CO3	Enhance their proficiency through inputs in Grammar like prepositions, voice, connectives
			CO4	Learn and use synonyms and antonyms, phrasal verbs, idioms, technical and
			CO5	media vocabulary, and the differences between the British and American variations of
			CO6	Develop better writing skills and become adept in organizing one's thoughts and ideas into essays
			CO6	Develop better writing skills and become adept in organizing one's thoughts and ideas into essays
	Second Language-Hindi	3	CO1	पूरे सत्र को ध्यान से निभाएँ और संयम बनाए रखें
			CO2	छात्रों के संदेह के स्पष्टीकरण के लिए प्रशिक्षक सुलभ रहें
			CO3	मानव संबंधों के प्रति सहानुभूति और सराहना की भावना रखना
			CO4	सीखने और समझने के दौरान सहपाठियों को शामिल करते हुए, दूसरों के अनुभवों को महसूस करते हुए, अपनी साहित्यिक शैली को पुष्ट करें
			CO5	बोलने और लेखन कौशल का अधिक से अधिक प्रदर्शन
			CO6	छात्र सबसे अलग अपनी पहचान बनाने का प्रयास करें
	Second Language-Arabic	3	CO1	Improve the skills of reading, writing, understanding and speaking the language with the help of new vocabulary.
			CO2	Do a comprehensive study of the lessons, The Holy Qur'an and The Holy Hadith.
			CO3	Become good human beings, through the teachings of The Holy Qur'an and Holy Hadith
			CO4	Study the various forms of Present / Future Tense Verbs and to use them at appropriate situations.

SLS3	Second Language-Sanskrit	3	CO5	Gain knowledge in grammar by studying the changes happening in Present / Future Tense Verbs when certain particles HUROOF NASIBAH / HUROOF JAZIMAH precede them.
			CO6	Enhance your knowledge in the Pre-Islamic Arabic literature.
			CO1	शब्दस्य पूर्व स्वरूपं , तत् समीचीन अर्थज्ञानम् ।
			CO2	परियोजनादि विजये स्वतन्त्रेण प्रदर्शनार्थं स्वशक्तिः प्राप्नोतिः
			CO3	साहित्य इतिहास श्रवणे स्वजीवित लक्ष्यं पुरयति
			CO4	विक्रममहाराज तदेव नवरत्नकवीनाम् विश्लेषणाद्यायनम् भवति ।
	Second Language-French	3	CO5	चारित्रिक काव्य महत्यज्ञानम् प्राप्नुवन्ति
			CO6	व्यवहारिक संस्कृत भाषायां लेखन अनुवाक निर्माणं आगच्छति।
			CO1	You will be able to understand and narrate situations from the past in their chronological order
			CO2	You will be able able to understand, speak & write about health, ecology, job opportunities
			CO3	You will be able to speak about the characteristics and traits of a person/ association
			CO4	You will be able to express the cause and consequence of certain actions and be able to call for action
SEC1	Professional Skills	2	CO1	Develop a planned approach towards career and life
			CO2	Gain ability to match skills and interests with a chosen career path
			CO3	Develop interview skills and professional etiquette
SEC2	Python 1	2	CO1	Students will be able to write programs to implement basic Python programs
			CO2	Students will be able to write programs to implement Python programs using decision structures and looping structures
			CO3	Students will be able to write programs to implement user defined functions, file handling
			CO4	Students will be able to write programs to implement file handling in Python

DSC - III	Electronics	4T+1P	CO5	Students will be able to write programs to implement exception handling
			CO1	The students will be able to draw and understand the use of diodes in half wave and full wave bridge rectifiers.
			CO2	The students will be able to calculate the peak value of the output voltage of half wave and full wave rectifiers given the rms input voltage
			CO3	The students will be able to know the principle of operation and working of Transformers and UPS
			CO4	The students will be able to test and troubleshoot the Industrial electronic circuits and components
			CO5	The students will be able to learn about different types of feedback amplifiers, Design and analyse the cascaded RC coupled BJT amplifier
			CO6	The students will be able to calculate the voltage gain and to observe frequency response of RC Coupled amplifier
			CO7	The students will be able to analyse and design op-amp, oscillators, single chip oscillators
			CO8	The students will be able to demonstrate working of oscillator theory design and build a Colpitts oscillator.
BS 301	Mathematics	5	CO1	Understand the basic properties of field of real numbers
			CO2	Define boundedness (L.U.B and G.L.B) of a set with examples
			CO3	Describe Monotone, convergent and Cauchy sequences with graph
			CO4	Solve problems on sequence and series using theorems
			CO5	Compute problems on Limits of a function and continuity
			CO6	Analyse the basic properties of differentiation and theorems
			CO7	Evaluate indeterminate form using L'Hospital rule
			CO8	Explain the properties of Riemann integral
BS 306	Computer Science	4T+1P	CO1	Profound Knowledge on Data structures and its applications.
			CO2	Ability to describe and implement stack, queue and linked list operation
			CO3	Competency to apply algorithm and analyse its complexity
			CO4	Capability to elucidate and execute Searching and Sorting techniques.

			CO5	Potential to understand and implement Tree and Graphs concepts.
			CO6	Confidence to exhibit the acquired concepts in terms of seminar, group discussion
Semester-IV				
Course Code	Course	Credits	Course Outcome	
ELS4	English (First Language)	3	CO1	Gain knowledge of other literatures: the African American, British and Indian
			CO2	Appreciate literatures, their historical, cultural and sociological aspects and evaluate their impact
			CO3	Gain knowledge in vocabulary through practice in commonly confused words, Indianisms, one-word substitutes and common errors
			CO4	Learn the skill of report writing
			CO5	Learn to welcome change in life and not confine oneself with old ideas.
			CO6	Discuss and debate on social evils like "discrimination" and understanding "unity in diversity".
	Second Language-Hindi	3	CO1	अध्ययन की सुविधा की दृष्टि से बोधपरक विषय, भाषा तथा शैलीगत सरलता का विशेष रूप से ध्यान रखना
			CO2	भाषाओं को सुनने, सीखने और बोलने के साथ-साथ, अपनी खुद की भाषा की ओर भी एक नया दृष्टिकोण विकसित करना
			CO3	छात्र सबसे अलग अपनी पहचान बनाने का प्रयास करें
			CO4	अपनी स्वयं की बनाई हुई दुनिया से बाहर निकलें
			CO5	कौशल और प्रतिनिधित्व के साथ भाषा और व्याख्यानों के सिद्धांतों को समझें एवं उन्हें आत्मसात करने का प्रयत्न करें
			CO6	शब्दों और विचारों के बीच संबंधों को समझने की समझ
			CO1	Improve the skills of reading, writing, understanding and speaking the language by using new words and phrases.

SLS4	Second Language-Arabic	3	CO2	Become good human beings by studying the lessons in prose, SEERAH AR RASOOL and ZIKR ASH'HAR SAHABIYAT AR RASOOL-SAWS.	
			CO3	Learn to lead a dignified and respectful life even in an unfavourable environment.	
			CO4	Enhance your knowledge in Arabic grammar by studying the subject and predicate thoroughly..	
			CO5	Enrich your vocabulary by studying new words, synonyms, antonyms, singular and plural.	
			CO6	Enhance your knowledge in the History of Arabic Literature by studying the poetry and poets of Abbasid period.	
			CO1	पुरातन भारतीय संस्कृतिः , चारित्रिक , इतिहासादि विषयानाम् परिणत ज्ञानं प्राप्नोति ।	
	Second Language-Sanskrit	3	CO2	विवेकानन्दादि महनीयानाम् चरितं ज्ञातुम् शक्नुवन्ति ।	
			CO3	परियोजनादि विजये स्वतन्त्रेण प्रदर्शनार्थं स्वशक्तिः प्राप्नोतिः	
			CO4	कृदन्तरूपाणि उपयुक्त्वा वाक्यनिर्माणे कौशल्यं भविष्यन्ति ।	
			CO5	व्यवहारिक संस्कृत भाषायां लेखन अनुवाक निर्माणं आगच्छति।	
			CO6	विश्वमानव सौभ्रातृत्वं , वसुधैव कुटुम्बक निर्माणे स्वकर्तव्यं संपूर्णं करोति।	
			CO1	पुरातन भारतीय संस्कृतिः , चारित्रिक , इतिहासादि विषयानाम् परिणत ज्ञानं प्राप्नोति ।	
	Second Language-French	3	CO1	You will be able to use vocabulary related to shopping and banking in French	
			CO2	You will be able to understand, speak & write about a theft	
			CO3	You will be able to describe daily objects (their shape, colour, form and material) and compare them	
			CO4	You will be able to use vocabulary related to media (computer, television, newspaper) in French	
				CO1	Understand the importance of value in individual social and national life.

SEC 3	Universal Human Values	2	CO2	Learn from case studies of lives of great and successful people who followed and practised human values.
			CO3	Become a conscious practitioner of human values
			CO4	Realise their potential as human beings.
SEC 4	Python II	2	CO1	Students will be able to write programs to implement Python programs
			CO2	Students will be able to write programs to implement Python programs using data structures like lists, tuples
			CO3	Students will be able to write programs to implement recursion in Python programs
			CO4	Students will be able to write programs to implement inheritance in Python
DSC -IV	Electronics	4T+1P	CO1	Successful students will be able to define the significance and importance of Op Amps and also can derive the gain equations for the Inverting and Non-Inverting Opamp.
			CO2	Successful students will be able to explain the parameters and block diagram of opamp.
			CO3	Successful students will be able to construct a summing amplifier, voltage follower, comparator, and differential amplifier using Opamp
			CO4	Successful students will be able to get in-depth knowledge of applying the concepts in real-time applications and will be able to use OP Amp as Subtractor, Integrator, and Differentiator.
			CO5	Successful students will be able to use OP Amp to generate sine waveforms, square waveforms, and Triangular waveforms and also be able to design and explain series and shunt regulators using Opamp
			CO6	Successful Students would be able to derive second-order differential equations using Opamp
			CO7	Successful students will be able to describe basic communication systems and signal processing techniques.
			CO8	Successful students will be able to describe amplitude modulation and demodulation signals

BS 401	Mathematics	5	CO1	An exposure of well-defined operations and recognise the algebraic structures.
			CO2	Use the subgroup criterion to prove that various subsets are subgroups of some given group
			CO3	Decide whether a given group is cyclic, and given a finite cyclic group, find a generator for a subgroup of a given order
			CO4	Understand the notions of homomorphism and isomorphism in groups
			CO5	Understand the notion of normal subgroup and determine whether a given subgroup is normal
			CO6	Identifying the set of axioms that define the algebraic structure of a ring
			CO7	Understand the notion of ideal and determine whether a given subset of a ring is an ideal
			CO8	Identifying the properties that determine that a mapping between rings is a homomorphism.
BS 406	Computer Science	4T+1P	CO1	Understand a database system
			CO2	Understand relational model of the data
			CO3	Understand query languages for databases
			CO4	Understand the role of the database administrator.
			CO5	Competency for implementing a small Database system.
			CO6	Be proficient in SQL and PL/SQL
			CO7	Understand basic transaction processing concepts
			CO8	Understand different database recovery and security methods
Semester-V				
Course Code	Course	Credits	Course Outcome	
			CO1	Gain knowledge of other literatures: the African American, British and Indian
			CO2	Appreciate literatures, their historical, cultural and sociological aspects and evaluate their impact

ELS5	English (First Language)	3	CO3	Gain knowledge in vocabulary through practice in commonly confused words, Indianisms, one-word substitutes and common errors
			CO4	Learn the skill of report writing
			CO5	Learn to welcome change in life and not confine oneself with old ideas.
			CO6	Discuss and debate on social evils like "discrimination" and understanding "unity in diversity".
SLS5	Second Language-Hindi	3	CO1	छात्र-समूह चर्चाओं में भाग लेकर लाभांविता हों
			CO2	मानव संबंधों के प्रति सहानुभूति और सराहना की भावना रखना
			CO3	राष्ट्रभाषा हिंदी की राष्ट्र के समस्त राष्ट्रीय तत्वों को व्यक्त करने के साथ साथ समूचे राष्ट्र में भावनात्मक एकता कायम रखने में महत्वपूर्ण भूमिका
			CO4	व्याख्यानों के सिद्धांतों को समझें एवं उन्हें आत्मसात करने का प्रयत्न करें
			CO5	लेखन कला की उत्कृष्टता के लिए सरल और जटिल शब्दों का भंडारण करना
			CO6	बोलने और लेखन कौशल का अधिक से अधिक प्रदर्शन करना
	Second Language-Arabic	3	CO1	Improve the skills of reading, writing, understanding and speaking the language with the help of new words.
			CO2	Become a patriot by studying the lesson about the freedom fighters 'BATAL AL HURRIYYAH'.
			CO3	Treat every human with due respect.
			CO4	Learn that 'AL MUSAWAT AL INSANIYYAH' teaches Human Equality, which means that everyone should enjoy equal rights in social life without any discrimination.
			CO5	Learn the importance of education as the educated lead a dignified life in the society whereas the uneducated are exploited everywhere.
			CO6	Enhance your knowledge in the History of Arabic Literature by studying the development of prose during the Abbasid period.
			CO1	उपनिषदादि विषये अधुनिक आविष्करण स्थापने उपयुक्तः

	Second Language-Sanskrit	3	CO2	शास्त्रकाराणाम् आलोचनात्मक, सादृश्यनात्मक अध्यानादि विषयज्ञानं आगमिष्यति।
			CO3	अलङ्काराणां परिचय ज्ञानम् प्राप्नुवन्ति।
			CO4	व्यवहारिक संस्कृत भाषायां लेखन अनुवाक निर्माणं आगच्छति।
			CO5	अन्ते भाषायां जीवनेऽपि कुशलत्वं, प्रतिनिधित्वं, वक्तृत्वं, स्थैर्यं आगमिष्यति।
	Second Language-French	3	CO1	You will be able to understand and narrate situations from the past in their chronological order
			CO2	You will be able able to understand, speak & write about health, ecology, job opportunities
			CO3	You will be able to speak about the characteristics and traits of a person/ association
			CO4	You will be able to express the cause and consequence of certain actions and be able to call for action
GE	GE – Basic Electronics	4	CO1	Able to learn about forward biased and reversed biased circuits
			CO2	The students will be able to draw and understand the use of diodes in half wave and full wave bridge rectifiers.
			CO3	Able to plot V-I Characteristics of diode and transmission
			CO4	Able to design combinational logic circuits and PLDs.
			CO5	The students will be able to plot the VI characteristics of all diodes and can design a p-n junction structure given required electrical performance and compare the experimental data to the theoretical curve of the diodes
			CO1	The students will be able to Distinguish different number systems and explains conversion of one number system to another.
			CO2	The students will be able to explain the concept of Boolean algebra, logical operators and logic gates and implements basic logic gates using universal gates

DSC V	Electronics	4T+1P	CO3	The students will be able to design circuits for simple Boolean expressions and Identify applications for combinational logic circuits and Develop truth tables for different combinational logic circuits
			CO4	The students will be able to Draw a Karnaugh Map for a 2-, 3-, 4-, or 5-variable logic function and Use a K-map to minimize and express it in either minimal SoP or PoS form 2-10
			CO5	The students will be able to Draw a circuit for a set-reset (“S-R”) latch and analyse its behaviour and compare the response of a latch and a flip-flop to the same set of stimuli
			CO6	The students will be able to analysis the different RAM and ROM architecture and interconnects and analysis about design and characterization technique
BS 501	Mathematics	5	CO1	Demonstrate understanding of the concepts of vector space and subspace.
			CO2	Demonstrate understanding of linear independence, span, and basis.
			CO3	Determine rank by reducing the matrix to Echelon and Normal forms.
			CO4	Determine eigenvalues and eigenvectors and solve eigenvalue problems
			CO5	Determine a modal matrix, and reducing a matrix to diagonal form
			CO6	Compute inner products on a real vector space and orthogonality in inner product spaces.
BS 505	Computer Science	4T+1P	CO1	Profound Knowledge on Core Java Programming and its applications
			CO2	Ability to describe and implement the object-oriented principles
			CO3	Competency for implementing core Java applications given
			CO4	Potential to understand and execute Advanced Java concepts
			CO5	Able to explain JDBC connectivity
			CO6	Confidence to exhibit the acquired concepts in terms of seminar, GD and programming challenges
Semester-VI				
Course Code	Course	Credits	Course Outcome	

ELS6	English (First Language)	3	CO1	Read and interpret and analyze the implicit and explicit layers of meaning embedded in a poem.	
			CO2	Become more empathetic and question discrimination of gender that is prevailing in the society and promote gender equality	
			CO3	Understand the need for the English to be adapted to the local cultural contexts of India.	
			CO4	Improve language skills by learning types of sentences, use relative clauses and common errors in English	
			CO5	Learn and use, formal and informal vocabulary, one-word substitutes and appropriacy of language.	
			CO6	Develop better writing skills and be able to write reviews and CVs.	
	Second Language-Hindi	3	CO1	विचारों को एक भाषा से दूसरी भाषा में रूपान्तरित कर अनुवाद करने कि कला सीखना	
			CO2	भारत जैसे बहुभाषा-भाषी देश के शिक्षा-क्षेत्र में अनुवाद की भूमिका	
			CO3	समकालीन राजनीति के कारण अल्पसंख्यक वर्ग की छवि के रूप का चित्रण	
			CO4	छात्र सबसे अलग अपनी पहचान बनाने का प्रयास करें	
			CO5	शब्दों और विचारों के बीच संबंधों को समझने की समझ	
			CO6	कौशल और प्रतिनिधित्व के साथ भाषा और व्याख्यानों के सिद्धांतों को समझें	
	Second Language-Arabic		3	CO1	Enhance the skills of reading, writing, understanding and speaking comprehension
				CO2	Gain knowledge regarding the golden heritage of Telangana by studying the lesson 'AATHAR TELANGANA' .
				CO3	Study the struggle of freedom fighters and freedom movement of India and the importance of education through the lesson 'Sarojini Naidu' - the nightingale of India.

SLS6		CO4	Build up their proficiency in the language with a thorough study of prose and poetry.	
		CO5	Learn different types of sentences and their structure by using new vocabulary and phrases.	
		CO6	Be a good and kind hearted human being by possessing good manners and aim for higher positions in life.	
	Second Language-Sanskrit	3	CO1	उपनिषदादि विषये अधुनिक आविष्करण स्थापने उपयुक्तः।
			CO2	महाकवीनाम् आलोचनात्मक, सादृश्यनात्मक अध्यानादि विषयज्ञानं आगमिष्यति।
			CO3	अलङ्काराणां प्रयोगे पाण्डित्यम् लभ्यन्ते ।
			CO4	व्यवहारिक संस्कृत भाषायां लेखन अनुवाक निर्माणं आगच्छति।
			CO5	अन्ते भाषायां जीवनेऽपि कुशलत्वं , प्रतिनिधित्वं, वक्तृत्वं, स्थैर्यं आगमिष्यति।
	Second Language-French	3	CO1	You will be able to understand and narrate situations from the past in their chronological order by using two different past tenses
			CO2	You will be able able to understand, speak & write about France and Francophonie
			CO3	You will be able to get tourist information
			CO4	You will be able to express yourself in simple colloquial French
			CO1	Successful students will be able to explain the difference between microprocessor and microcontroller and can be able to explain and draw the block diagram of 8051
			CO2	Successful students will be able to explain architecture and pin configuration of 8051
CO3			Successful students will be able to write assembly language programs in 8051 for various embedded system applications	
CO4			Successful students will be able to explain the instruction set and addressing modes of 8051	

DSE II	Electronics	4T+1P	CO5	Successful students will be able to implement timers and counters in programming
			CO6	Successful students will be able to demonstrate how to interface various devices like LED, LCD, Keyboard, ADC, DAC, and Serial communication to 8051
			CO7	Successful students will be able to draw and explain the Special function register: PCON, TCON, SCON, SBUF, TMOD, PSW
			CO8	Successful students will be able to explain various interrupts of 8051 and can draw IP and IE registers
			CO9	Successful students will be able to interface 8051 to Stepper motor and temperature sensor
			CO10	Successful students will be able to explain i/o ports and memory organization of 8051
DSC 6A BS 601	Mathematics	5	CO1	Solve the algebraic and transcendental equations using bisection method, method of false position and Newton-Raphson method.
			CO2	Familiar with calculation of errors in numerical method by Muller's method
			CO3	Evaluate the functional value by using Lagrange interpolation for unequal intervals.
			CO4	Apply Hermite and cubic spline interpolation to define polynomial on sub-intervals.
			CO5	Evaluate differentiation using difference table.
			CO6	Familiar with numerical solution of ordinary differential equations.
			CO1	Discover the meaning of some key terms used by web designers, such as elements, attributes, tags, and markup
			CO2	Create link between pages and to other sites, add images, animations, audio, and video to the web site
			CO3	Learn when and how to use tables

BS 606	Computer Science	4T+1P	CO4	Learn how to collect information from a visitor to a web site using a form and form elements Use CSS rules and Place CSS rules within your document and how to link to an external CSS document Use
			CO5	Properties and values to control presentation of different elements within your document
			CO6	They will be able to use JavaScript libraries in their own pages
			CO7	Students will be introduced to basics of XML
			CO8	They will be able to use DOM
			CO9	Students will be introduced to Ajax