


**Government Of Karnataka**  
**Department of Collegiate and Technical Education**  
**GOVERNMENT COLLEGE (AUTONOMOUS), KALABURAGI**  
**Details of Course OutCome and Specific Course OutCome**

**Department of KANNADA**

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>MA KANNADA</b>	<b>PG KAN</b>			
<b>FIRST SEMESTER -</b>	<b>CCT-1.1</b>	ಹಳಗನ್ನಡ ಸಾಹಿತ್ಯ	Clasic knowledge	Clasic knowledge
	<b>CCT- 1.2</b>	ಭಾರತೀಯ ಕಾವ್ಯಮೀಮಾಂಸೆ	Clasic knowledge	Clasic knowledge
	<b>CCT- 1.3</b>	ಕರ್ನಾಟಕ ಸಂಸ್ಕೃತಿ ಮತ್ತು ಶಾಸನ ಶಾಸ್ತ್ರ	Culture	Heritage knowledge
	<b>DSE -1.1</b>	ಹಳಗನ್ನಡ ಸಾಹಿತ್ಯ ರೂಪ (ಅಥವಾ) ಹಳಗನ್ನಡ ವಿಶೇಷ ಕವಿ	Poetic knowledge	Poetic knowledge
	<b>DSE -1.2</b>	ವಚನ ಸಾಹಿತ್ಯ (ಅಥವಾ) ಕೀರ್ತನ ಸಾಹಿತ್ಯ	Thoughts	Medival Kannada Thoughts
<b>II SEMESTER -</b>	<b>CCT -2.1</b>	ನಡುಗನ್ನಡ ಸಾಹಿತ್ಯ	Thoughts	Medival Kannada Thoughts

	CCT -2.2	ಪಾಶ್ಚಾತ್ಯ ಕಾವ್ಯಮೀಮಾಂಸೆ	Clasic knowledge	Clasic knowledge
	CCT -2.3	ಹಸ್ತಪ್ರತಿ ಮತ್ತು ಗ್ರಂಥಸಂಪಾದನಾ ಶಾಸ್ತ್ರ	Clasic knowledge	Clasic knowledge
	DSE -2.1	ನಡುಗನ್ನಡ ಸಾಹಿತ್ಯ ರೂಪ (ಅಥವಾ) ನಡುಗನ್ನಡ ವಿಶೇಷ ಕವಿ	Poetic knowledge	Poetic knowledge
	GE -2.1	ಕನ್ನಡ ಸಾಹಿತ್ಯ	Literature	Kannada Literature knowledge
III SEMESTER	CCT- 3.1	ಆಧುನಿಕ ಕನ್ನಡ ಸಾಹಿತ್ಯ	Modern Literature	Modern Kan Literature
	CCT- 3.2	ಹಳಗನ್ನಡ ವ್ಯಾಕರಣ	Clasic knowledge	Clasic knowledge
	CCT -3.3	ಕನ್ನಡ ರಂಗಭೂಮಿ	Drama	Theatre knowledge
	DSE - 3.1	ವೈಚಾರಿಕ ಸಾಹಿತ್ಯ (ಅಥವಾ) ಅನುವಾದ ಸಾಹಿತ್ಯ	Rational litreture	Rational litreture
	GE -3.1	ಜನಪದ ಸಾಹಿತ್ಯ	Folk literature	Folk literature
IV SEMESTER	CCT -4.1	ಸಾಹಿತ್ಯ ವಿಮರ್ಶೆ	Criticism	Literary criticism
	CCT-4.2	ಭಂದಸ್ಸು ಮತ್ತು ಭಾಷಾವಿಜ್ಞಾನ	Clasic knowledge	Clasic knowledge
	CCT-4.3	ಕನ್ನಡ ಸಂಶೋಧನ ಅಧ್ಯಯನ	Research	Research
	CCP-4.1	ಸಂಪ್ರಬಂಧ ರಚನೆ (ಯೋಜನೆ)	Desertation	Writing Skill

	DSE-4.1	ಹೈದ್ರಾಬಾದ್ ಕರ್ನಾಟಕ ಸಾಹಿತ್ಯ (ಅಥವಾ) ದಲಿತ ಬಂಡಾಯ ಸಾಹಿತ್ಯ	Dalit & Bandaya litreture	Movement literature
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## DEPARTMENT OF ENGLISH

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
UG English	BAA001,	BA I Basic English	CO1. Students will master the art of persuasive speech and writing.  CO2.They will also master the art of listening,reading and analyzing.  CO3.They will develop critical thinking skills.	SCO1.Understanding concepts, expressing concepts through writing, demonstrating conceptual and textual understanding in tests and exams. SCO2.Students learn to have interactive discussions in groups. SCO3.They will start thinking critically and write with clarity.
	BAB001,	BA II Basic English		
	BAC001,	BA III Basic English		
	BAD001	BA IV Basic English		
	BSB001,BSC001,	B.Sc I & II Sem		
	BSD052,BSE152,	B.Sc III & IV Sem		
	BCA001,BCB001,	B.Com I & II Sem		

	BCC001, BCD001,	B.Com III & IV Sem	C4.They will be introduced to established principles of academic reading and writing.	SCO4.Discussion of question answer techniques.
	BAA037,BAB037	BA I & II Optional English		
	BAC037	BA III Optional English		
	BAD037	BA IV Optional English		

	BAD052,DSCT-5.2,DSET5.1	BA V & VI Optional English		<p>1.The optional course attributes to the students a working knowledge of how to read a literary text and enables them to use such knowledge to enhance and augment their professional job opportunities.</p> <p>2. The course introduce students to contemporary literary ideas and issues in an increasingly complex world.</p>
	BCC052 BCD052 BCE152	BA III,IV & V Sem SEC		
	SEC-ENGLISH, DSE2(A),SECT4	B.Sc III & IV Sem SEC		<p><b>SEC: 1.It enhances language proficiency by providing adequate exposure to reading and writing skills.</b></p> <p><b>2. It orients the learners towards functional aspects of language and increases the range of lexical</b></p>
	, GE- ENGLISH,GE2	B.Sc V SEC		
	BCC052, , BCD052, BCE152	B.Com III,IV & V Sem SEC		

				resource through a variety of exercises.
<b>PG English</b>	ENA001	British Literature I	<b>Co1.Develop in students the ability and confidence to process,understand and examine different kinds of texts-verbal and written-that they encounter in everyday life.</b>  <b>CO2.Enable students to identify and understand social contexts and ethical frameworks in the texts they encounter.</b>	The course allows the student a familiarity with literary texts through different genres and time period.
	ENA002	Indian Writing in English		<b>1.The students become aware of the social, political, economical and literary conditions through different writers of this genres.</b> <b>2.The reading and writing skills are enhanced.</b>
	ENA003	American Literature		American Literature can not only improve students' language training and literary quality, to develop their creative thinking and ability, but also can enhance students awareness of cross-cultural communication and cultural appreciation for humanistic Education provides an important platform.
	ENA021	New Literatures		To learn the language and literature of third world.


	ENA022	Lit.in Translation		<b>To study and understand the translation work to improve reading and writing skills.</b>
	ENA023	General Linguistics		<b>Students will acquire substantial understanding of how languages are structured, including the organization of phonological, morphological, syntactic and semantic systems.</b>
	ENA0024	English Lang.Proficiency		<b>English proficiency is a key factor for employment success and advancement and also for opening doors to economic opportunity.</b>
	ENB001	British Literature II		
	ENA002	Indian Writing in English-II		
	ENB003	American Literature II		
	ENB021	Critical Theory		<b>Students learn to identify the problems and analyses the elements/facts of a specific situation/problem. 2.Predict implications and consequences and</b>

				<b>construct well-reasoned solutions/conclusions.</b>
	ENB022	English Phonetics		<b>1. Students develop knowledge and awareness of English phonetics. 2. Students become familiar with- and are able to apply- technical terms for describing and analyzing English pronunciation and are able to read and produce phonemic transcriptions and transcriptions of intonation patterns.</b>
	ENB051	General English-I		<b>Students learn to master the art of persuasive speech and writing.</b>
	ENC0001	British Literature III		
	ENC002	Critical Theory I		
	ENC003	Commonwealth Lit.		<b>The clear link between cultural values and literary developments becomes the guiding principles as it takes us through the writing of major authors in key commonwealth countries across a broad spectrum of world literatures.</b>



	ENC021	English Language Teaching		<b>Developing different language skills and integrated grammar.</b>
	ENC022	Research Methodology		<b>The students are able to discuss different methodologies and techniques used in research work.</b>
	ENC051	General English II		
	END001	British Literature IV		
	END002	Critical Theory II		
	END003T	Project Work		<b>Identify, analyse and solve problems creatively through sustained critical investigation, integrate information from multiple sources , demonstrate an awareness and application of appropriate, personal, societal and professional ethical standards.</b>
	END003P	Project Work		
	END021	Post Colonial Literature		<b>1. Be able to critically evaluate arguments and assumptions about postcolonial literature, texts and modes of interpretation.</b>  <b>2. Be able to communicate arguments effectively and show a</b>

				degree of independent thinking in so doing.
	END022	Film Studies		Observe with knowledge and reflect upon the articulation of a film's content, form and structure.
	END023	Studies in Shakespeare		Become familiar with and learn to identify a range of literary techniques relevant to the study of a dramatic text, further develop their analytical writing skills.
	END024	Cultural Studies		Theory and practice are combined in order to instill in students a critical perspective, creative thinking and active participation.


  
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**DEPARTMENT OF HINDI****2018-19 to 2020-21**

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>MA I Sem</b>	<b>HN A001</b>	हिंदी साहित्य का इतिहास	विश्लेषणात्मक ज्ञान का निर्माण होगा, प्राचीन तथा मध्यकालीन परिस्थितियों की जानकारी मिलेगी	रचनात्मक लेखन की रूचि उत्पन्न होगी
<b>MA I Sem</b>	<b>HN A002</b>	भारतीय काव्य शास्त्र के सिद्धांत	भारतीय काव्य शास्त्रीय परंपरा का परिचय विस्तृत रूप में प्राप्त होगा	काव्य लिखने की प्रवृत्ति का विकास होगा
<b>MA I Sem</b>	<b>HN A003</b>	भक्ति साहित्य और आंदोलन	भक्ति आंदोलन की आवश्यकता और उसके कारणों को समझ सकेंगे	भारतीय ऐतिहासिक परंपरा के ज्ञान का विकास होगा
<b>MA I Sem</b>	<b>HN A021</b>	कवि विशेष का अध्ययन	कवि के व्यक्तित्व और कृतित्व से परिचित होंगे	काव्य लिखने की प्रवृत्ति का विकास होगा
<b>MA I Sem</b>	<b>HN A023</b>	जन संचार माध्यम	विश्व की जानकारी क्षण में प्राप्त करेंगे	यथार्थ स्थितियों का विश्लेषण करेंगे
<b>MA II Sem</b>	<b>HN B001</b>	आधुनिक हिंदी साहित्य का इतिहास	गद्य एवं पद्य के विकास क्रम को समझ सकेंगे	राष्ट्र प्रेम का विकास होगा
<b>MA II Sem</b>	<b>HN B002</b>	पाश्चात्य साहित्य शास्त्र	पाश्चात्य सिद्धांतों को विस्तार से समझ सकेंगे	चिंतन के नए आयामों से परिचित होंगे

MA II Sem	HN B003	हिंदी आधुनिक कविता	ऐतिहासिक और पौराणिक चरित्रों को समझ सकेंगे	आदर्श समाज निर्माण में सहायक होंगे
MA II Sem	HN B021	हिंदी नाटक विशेष का अध्ययन	नाटक के उद्भव और विकास की जानकारी प्राप्त करेंगे	रंग मंचन में रूचि निर्माण होगी
MA II Sem		हिंदी कहानिया	कहानिया हमेशा समाज का मार्गदर्शन कराती आरही है	नैतिक सन्देश देती है
MA III Sem	HN C001	हिंदी भाषा का इतिहास	हिंदी भाषा, उपभाषा, बोलियों से परिचित होंगे	भाषा के महत्त्व को समझेंगे
MA III Sem	HN C002	भाषा विज्ञान का अध्ययन	भाषा विज्ञान से भाषा की विशेषता, प्रमुख जानकारी प्राप्त होगी	भाषा की वैज्ञानिकता से परिचित होंगे
MA III Sem	HN C003	अनुसन्धान प्राविधि	नए नए विषयों की जानकारी प्राप्त होगी	अनुसन्धान क्षेत्र में रूचि निर्माण होगी
MA III Sem	HN C021	हिंदी महिला साहित्य	आधुनिक साहित्य की नए विचार धारा से अवगत होंगे	स्त्री विमर्श की चुनौतियां और संभावनाओं से परिचित होंगे
MA III Sem	HN C051	हिंदी कविता	प्रसिद्ध कवियों के काव्य से परिचित होंगे	‘मनोरंजन तथा आनंद को प्राप्त करेंगे
MA IV Sem	HN D001	अनुवाद सिद्धांत और प्रयोग	अनुवाद के सिद्धांतों को समझेंगे	अनुवाद करने में कुशल बनेंगे
MA IV Sem	HN D002	हिंदी पत्रकारिता	पत्रकारिता लोकतंत्र का स्तम्भ है, उसके महत्त्व को समझेंगे	समाज की यथार्थ स्थिति से अवगत होंगे

MA IV Sem	HN D003	परियोजना कार्य	शोध प्रवृत्ति की अभिरुचि उत्पन्न होगी	नये विषयों का उद्घाटन होगा
MA IV Sem	HN D021	हिंदी दलित साहित्य	दलित साहित्य के महत्त्व तथा उद्देश्य और विचारों को समझ पाएंगे	दलित साहित्य की दशा और दिशा को समझेंगे
MA IV Sem	HN D024	हिंदी कंप्यूटर और सॉफ्टवेयर	कम्प्यूटर के इतिहास को समझ सकेंगे	कम्प्यूटर की उपयोगिता से लाभान्वित होंगे


  
 सहायक प्रमुख  
 संस्कृत विभाग  
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**2018-19 to 2020-21**

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
MA I Sem	HN A001	हिंदी साहित्य का इतिहास	विश्लेषणात्मक ज्ञान का निर्माण होगा, प्राचीन तथा मध्यकालीन परिस्थितियों की जानकारी मिलेगी	रचनात्मक लेखन की रुचि उत्पन्न होगी
MA I Sem	HN A002	भारतीय काव्य शास्त्र के सिद्धांत	भारतीय काव्य शास्त्रीय परंपरा का परिचय विस्तृत रूप में प्राप्त होगा	काव्य लिखने की प्रवृत्ति का विकास होगा
MA I Sem	HN A003	भक्ति साहित्य और आंदोलन	भक्ति आंदोलन की आवश्यकता और उसके कारणों को समझ सकेंगे	भारतीय ऐतिहासिक परंपरा के ज्ञान का विकास होगा

<b>MA I Sem</b>	<b>HN A021</b>	कवि विशेष का अध्ययन	कवि के व्यक्तित्व और कृतित्व से परिचित होंगे	काव्य लिखने की प्रवृत्ति का विकास होगा
<b>MA I Sem</b>	<b>HN A023</b>	जन संचार माध्यम	विश्व की जानकारी क्षण में प्राप्त करेंगे	यथार्थ स्थितियों का विश्लेषण करेंगे
<b>MA II Sem</b>	<b>HN B001</b>	आधुनिक हिंदी साहित्य का इतिहास	गद्य एवं पद्य के विकास क्रम को समझ सकेंगे	राष्ट्र प्रेम का विकास होगा
<b>MA II Sem</b>	<b>HN B002</b>	पाश्चात्य साहित्य शास्त्र	पाश्चात्य सिद्धांतों को विस्तार से समझ सकेंगे	चिंतन के नए आयामों से परिचित होंगे
<b>MA II Sem</b>	<b>HN B003</b>	<b>हिंदी आधुनिक कविता</b>	ऐतिहासिक और पौराणिक चरित्रों को समझ सकेंगे	आदर्श समाज निर्माण में सहायक होंगे
<b>MA II Sem</b>	<b>HN B021</b>	हिंदी नाटक विशेष का अध्ययन	नाटक के उद्भव और विकास की जानकारी प्राप्त करेंगे	रंग मंचन में रूचि निर्माण होगी
<b>MA II Sem</b>		हिंदी कहानियाँ	कहानियाँ हमेशा समाज का मार्गदर्शन कराती आ रही हैं	नैतिक संदेश देती हैं
<b>MA III Sem</b>	<b>HN C001</b>	हिंदी भाषा का इतिहास	हिंदी भाषा, उपभाषा, बोलियों से परिचित होंगे	भाषा के महत्त्व को समझेंगे
<b>MA III Sem</b>	<b>HN C002</b>	भाषा विज्ञान का अध्ययन	भाषा विज्ञान से भाषा की विशेषता, प्रमुख जानकारी प्राप्त होगी	भाषा की वैज्ञानिकता से परिचित होंगे
<b>MA III Sem</b>	<b>HN C003</b>	अनुसन्धान प्रविधि	नए नए विषयों की जानकारी प्राप्त होगी	अनुसन्धान क्षेत्र में रूचि निर्माण होगी

MA III Sem	HN C021	हिंदी महिला साहित्य	आधुनिक साहित्य की नए विचार धारा से अवगत होंगे	स्त्री विमर्श की चुनौतियाँ और संभावनाओं से परिचित होंगे
MA III Sem	HN C051	हिंदी कविता	प्रसिद्ध कवियों के काव्य से परिचित होंगे	‘मनोरंजन तथा आनंद को प्राप्त करेंगे
MA IV Sem	HN D001	अनुवाद सिद्धांत और प्रयोग	अनुवाद के सिद्धांतों को समझेंगे	अनुवाद करने में कुशल बनेंगे
MA IV Sem	HN D002	हिंदी पत्रकारिता	पत्रकारिता लोकतंत्र का स्तम्भ है, उसके महत्त्व को समझेंगे	समाज की यथार्थ स्थिति से अवगत होंगे
MA IV Sem	HN D003	परियोजना कार्य	शोध प्रवृत्ति की अभिरुचि उत्पन्न होगी	नये विषयों का उद्घाटन होगा
MA IV Sem	HN D021	हिंदी दलित साहित्य	दलित साहित्य के महत्त्व तथा उद्देश्य और विचारों को समझ पाएंगे	दलित साहित्य की दशा और दिशा को समझेंगे
MA IV Sem	HN D024	हिंदी कंप्यूटर और सॉफ्टवेयर	कम्प्यूटर के इतिहास को समझ सकेंगे	कम्प्यूटर की उपयोगिता से लाभान्वित होंगे

  
 सहायक प्रमुख  
 संस्कृति महाविद्यालय  
 कलकत्ता-700015


**2019-20**

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>BA I Sem</b>	<b>BA A003</b>	काव्य सनकलन, कहानी संग्रह, सामान्य निबंध	कविता के अंतर्भाव को, कथा साहित्य एवं निबंध के विविध विषयो की जानकारी मिलेगी	हिंदी साहित्य के अध्ययन से छात्रों में रचनात्मक लेखन की रुचि प्राप्त होगी
<b>BA II Sem</b>	<b>BA B003</b>	एकांकी संकलन, सम्प्रेषण स्किल, अनुवाद	एकांकी विधा से परिचित होंगे, भाषा कौशल्य तथा अनुवाद की क्षमता विकसीत होगा	साहित्य और भाषा में कुशलता प्राप्त होगी
<b>BA III Sem</b>	<b>BA C003</b>	लम्बी कविता, उपन्यास	कविता के अंतर्भाव को समझेंगे, उपन्यास के तत्वों के आधार पर आलोचनात्मक विषय को अर्जित करेंगे	जीवन का विशद चित्रण प्राप्त कर सकते हैं
<b>BA IV Sem</b>	<b>BA D003</b>	नाटक, निबंध	नाटक मंचन में रुचि निर्माण होगी, विषय की विस्तृत जानकारी मिलेगी	अभिनय क्षमता का विकास होगा
<b>BCOm I Sem</b>	<b>BC A003</b>	गद्य संकलन, उपन्यास वाणिज्य निबंध	अध्ययन प्रवृत्ति का विकास होगा	सामाजिक परिवेश की जानकारी प्राप्त होगी
<b>BCom II Sem</b>	<b>BC B003</b>	काव्य संकलन, सम्प्रेषण स्किल, अनुवाद	कविता के माध्यम से मनोरंजन प्राप्त होगा, भाषा कौशल्य और अनुवाद विषय की जानकारी प्राप्त होगी	साहित्य तथा भाषा में कुशलता प्राप्त होगी



<b>BCom III Sem</b>	<b>BC C003</b>	कहानी संकलन, सम्प्रेषण स्किल, भाव पल्लवन	कहानी रचने की क्षमता और भाषा कौशल्य एवं भाव को समझने का प्रयास करेंगे	समाज को समझने की क्षमता का विकास होगा
<b>BCom IV Sem</b>	<b>BC D003</b>	नाटक, रेखाचित्र	नाटक के मंचन से पाठकों पर विशेष प्रभाव पड़ता है	अभिनय का विकास होगा
<b>BSc I Sem</b>	<b>BS A003</b>	काव्य संकलन, एकांकी संकलन, सामान्य निबंध	मनोरंजन तथा एकांकी विषय का जानकारी प्राप्त होगी	साहित्य की आलोचना करने की क्षमता बढ़ेगी
<b>BSc II Sem</b>	<b>BS B003</b>	कहानी संग्रह, सम्प्रेषण स्किल, अनुवाद	समाज को नैतिकता का सन्देश प्राप्त होगा	ज्ञान विज्ञान की वृद्धि हो सकती है
<b>BSc III Sem</b>	<b>BS C003</b>	नाटक , उपन्यास	रंग मंचन से पाठकों पर विशेष प्रभाव तथा विषय का विस्तृत जानकारी प्राप्त होगी	अभिनय तथा विस्तृत विषय का ज्ञान प्राप्त होगा
<b>BSc IV Sem</b>	<b>BS D003</b>	लम्बी कविता, निबंध	मानवीय संवेदनाओं का परिष्कार करता है	मन में नवरस का भाव पैदा होती है
<b>BA IO Sem Opt</b>	<b>BA A038</b>	हिंदी साहित्य का इतिहास, महा काव्य	चरित्र निर्माण में साहित्य का विशेष योगदान होता है	व्यक्तित्व विकास में सहायक होता है
<b>BA II Sem Opt</b>	<b>BA B038</b>	हिंदी साहित्य का इतिहास, नाटक	साहित्य तथा नाटक का प्रयोग से दर्शकों में अभिरुचि निर्माण होती है	मानसिक आनंद मिलता है
<b>BA III Sem Opt</b>	<b>BA C038</b>	भारतीय काव्य शास्त्र, उपन्यास	आदि से लेकर आधुनिक तक काव्य रचनाकी पद्धति को दर्शाती है	काव्य लेखन की प्रतिभा बढ़ती है
<b>BA IV Sem Opt</b>	<b>BA D038</b>	पाश्चात्य काव्य शास्त्र, आत्म जीवनी	पाश्चात्य विचारधारा की जानकारी मिलती है	आलोचनात्मक गुणों का विकास होता है

<b>BA V Sem Opt</b>		हिंदी भाषा तथा भाषा विज्ञान का अध्ययन, हिंदी कथा साहित्य	भाषा की विशेषता का पहचान होती है	अंतराष्ट्रीय भाषा के रूप में हिंदी का विकास स्पष्ट होता है
<b>BA V Sm Opt</b>		अनुवाद सिद्धांत और अभ्यास का अध्ययन, अनुवाद प्रायोगिक अभ्यास	विविध भाषाओं का ज्ञान प्राप्त होता है	एक भाषा से दूसरी भाषा का जानकारी हासिल कर सकता है
<b>BA VI Sem Opt</b>		हिंदी व्याकरण – छंद और अलंकार का अध्ययन, निबंध विधा का अध्ययन	शुद्ध भाषा तथा विस्तृत विषय की जानकारी प्राप्त होती है	व्याकरण भाषा की शुद्धिकरण करता है
<b>BA VI Sem Opt</b>		हिंदी पत्रकारिता का अध्ययन, आत्म कथा विधा का अध्ययन	समाज में घटित घटनाओं को प्रस्तुत करता है	पत्रकारिता समाज का चौथा स्तम्भ माना जाता है
<b>BA III Sem</b>	<b>BA C053</b>	कविता संग्रह, सम्प्रेषण स्किल	भाषा कौशल्य की प्रतिभा बढ़ती है	एक दूसरे का सम्बन्ध को जोड़ने का प्रयास होता है
<b>BA IV Sem</b>	<b>BA D053</b>	कहानी संग्रह, सम्प्रेषण स्किल	विविध विषयों के जानकारी मिलेगी	एक स्थान से दूसरे स्थान की जानकारी प्राप्त कर सकते हैं


  
 सहायक कुलपति  
 संस्कृत विभाग, दिल्ली विश्वविद्यालय  
 कलकत्ता-700019

**2016-17 to 2018-19**

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>BA I Sem</b>	<b>BA A003</b>	काव्य संकलन, कहानी संग्रह, सामान्य निबंध	कविता के अंतर्भाव तथा कथासाहित्य एवं निबंध से विविध विषयों की जानकारी प्राप्त होगी	हिंदी साहित्य के अध्ययन से रचनात्मक लेखन की रुचि उत्पन्न होगी
<b>BA II Sem</b>	<b>B003</b>	एकांकी संकलन, सम्प्रेषण स्किल, अनुवाद	एकांकी विधा से परिचित होंगे, भाषा कौशल्य बढ़ेगा, अनुवाद की क्षमता विकसीत होगी,	साहित्य और भाषा में कुशलता प्राप्त होगी
<b>BA III Sem</b>	<b>BA C003</b>	लम्बी कविता का अध्ययन, उपन्यास विधा का अध्ययन	हिंदी कविता के अंतर्भाव को समझने की क्षमता बढ़ेगी। उपन्यास के तत्वों के आधार पर आलोचनात्मक क्षमता बढ़ेगी	जीवन विशद चित्रण प्राप्त कर सकते हैं
<b>BA IV Sem</b>	<b>BA D003</b>	नाटक विधा का अध्ययन, श्रेष्ठ निबंध	नाटक मंचन में रुचि निर्माण होगी, विषय की विस्तृत जानकारी प्राप्त करेंगे	अभिनय क्षमता का विकास होगा
<b>BCom I Sem</b>	<b>BC A003</b>	गद्दा संकलन, उपन्यास अध्ययन, वाणिज्य निबंध	अध्ययन प्रवृत्ति का विकास होगा	सामाजिक परिवेश की जानकारी प्राप्त होगी
<b>BCom II Sem</b>	<b>BC B003</b>	काव्य संकलन, सम्प्रेषण स्किल, अनुवाद	कविता के अंतर्भाव, भाषा कौशल्य और अनुवाद क्षमता बढ़ेगी	साहित्य और भाषा में कुशलता प्राप्त होगी
<b>BCom III Sem</b>	<b>BC C003</b>	कहानी विधा का अभ्यास, सम्प्रेषण स्किल	कहानी रचने की क्षमता प्राप्त कर सकते हैं। और भाषा कुशलता बढ़ेगी	समाज को समझने की क्षमता प्राप्त होगी

<b>BCom IV Sem</b>	<b>BC D003</b>	लम्बी कविता, निबंध विचार रचना	कविता पढ़कर स्वयं कविता रचने की क्षमता बढ़ेगी	साहित्य की आलोचना करने की क्षमता प्राप्त होगी
<b>BSc I Sem</b>	<b>BS A003</b>	काव्य संकलन, नाटक अध्ययन, सामान्य निबंध	नाटक मंचन में रूचि निर्माण होगी। काव्य रचने की क्षमता बढ़ेगी	साहित्य विमर्शात्मक दृष्टिकोण विकसित होगा
<b>BSc II Sem</b>	<b>BS B003</b>	काव्य संकलन, सम्प्रेषण स्किल, अनुवाद	कविता के अंतर्भाव, भाषा कौशल्य और अनुवाद करने की क्षमता बढ़ेगी	साहित्य और भाषा में कुशलता प्राप्त होगी
<b>BSc III Sem</b>	<b>BS C003</b>	लम्बी कवियता का अध्ययन, कहानी विधा का अभ्यास	हिंदी कविता के अंतर्भाव को समझने की क्षमता बढ़ेगी, कहानी रचने की क्षमता प्राप्त कर सकेंगे	साहित्य की आलोचना करने की क्षमता प्राप्त होगी
<b>BSc IV Sem</b>	<b>BS D003</b>	नाटक विधा का अध्ययन, निबंध	नाटक मंचन में रूचि निर्माण होगी। निबंध रचने की क्षमता प्राप्त होगी	विविध विषयों की जानकारी प्राप्त होगी
<b>BA I Sem Opt</b>	<b>BA A038</b>	हिंदी साहित्य का इतिहास, महा काव्य का अध्ययन	हिंदी साहित्य के इतिहास का ज्ञान निर्माण होगा, महा काव्य के तत्वों से परिचित होंगे	युगीन परिवेश की जानकारी मिलेगी
<b>BA II Sem Opt</b>	<b>BA B038</b>	हिंदी साहित्य का इतिहास, नाटक का अध्ययन	प्राचीन तथा मध्यकालीन परिस्थितियों की जानकारी मिलेगी अभिनय कौशल्य बढ़ेगा	साहित्यिक परिस्थितियों का ज्ञान प्राप्त होगा
<b>BA III Sem Opt</b>	<b>BA C038</b>	भारतीय काव्य शास्त्र का अभ्यास, श्रेष्ठ उपन्यास का अभ्यास	साहित्य के सैद्धांतिक अध्ययन की समझ निर्माण होगी	भारतीय काव्य शास्त्रीय चिंतन की विकास होगी
<b>BA IV Sem Opt</b>	<b>BA D038</b>	पाश्चात्य काव्य शास्त्र का अभ्यास, आधुनिक हिंदी काव्य का अध्ययन	पाश्चात्य काव्य शास्त्र की विश्लेषणात्मक विकास होगी	काव्य शास्त्रीय सिद्धांतों से अवगत होंगे
<b>BA V Sem Opt</b>	<b>GUG</b>	हिंदी भाषा तथा भाषा विज्ञान का अध्ययन, हिंदी कथा साहित्य	भाषा विज्ञान से सम्बंधित विषयों की जानकारी मिलेगी	भाषा की विशेषताओं को समझ सकेंगे

<b>BA V Sem Opt</b>	<b>GUG</b>	अनुवाद सिद्धांत और अभ्यास का अध्ययन, अनुवाद प्रायोगिक अभ्यास	अनुवाद की क्षमता प्राप्त होगी	अनुवाद की माध्यम से एक से अधिक भाषाओं का ज्ञान मिलेगा
<b>BA VI Sem Opt</b>	<b>GUG</b>	हिंदी व्याकरण – छंद और अलंकार का अध्ययन, निबंध विधा का अध्ययन	शुद्ध भाषा से परिचित होंगे	भाषा ज्ञान का विकास होगा
<b>BA VI Sem Opt</b>	<b>GUG</b>	हिंदी पत्रकारिता का अध्ययन, आत्म कथा विधा का अध्ययन	पत्रकारिता के इतिहास का ज्ञान प्राप्त होगा	पत्रकारिता वैश्विक विषयों की जानकारी मिलेगी

  
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 बल्लभपुर-दिल्ली

## DEPARTMENT OF URDU


Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
<b>UG-ARTS 2016-17</b>	<b>BAA004</b>	<b>Naya Adabi Nisab wardaat</b>	<b>Development of Reading &amp; writing skills</b>	<b>Knowledge about Urdu Literature.  Achieve Moral Values</b>
<b>NON-CBCS</b>	<b>BAA039</b>	<b>Masnavi phoolBun ki Adabi ahmiyat, NIRMALA, kewde ka Bun</b>	<b>Achieve knowledge about masnavi.Novel And Deccani poetry.</b>	<b>Know the different types of urdu poetry Achieve social values.</b>
	<b>BSA004</b>	<b>Naqoosh e Adab,chand Hamaser.Essay writing</b>	<b>Knowledge about different writer poets</b>	<b>Know Urdu Sketches. Develop writing skills</b>
	<b>BCA004 BCB004</b>	<b>UrduAfsane,inshaiye,Drame karobari khat o kitabat</b>	<b>Understand different Form of urdu prose.</b>	<b>To Achieve business Techniques.</b>
	<b>BAB004</b>	<b>Naya Adabi Nisab ,UrduMedia Translation .</b>	<b>Develope Reading, writing &amp; Translation ability.</b>	<b>knowledge about Urdu Journalism &amp; computer.</b>
	<b>BAB039</b>	<b>Aangan, Deewan Ghalib Urdu Adab mein wasokht Nigari.</b>	<b>Knowledge about famous poet ghalib poetry,Novel,wasokht</b>	<b>Improve knowledge About Novel,Ghazal And Wasokht.</b>

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>UG-ARTS 2016-17 NON-CBCS</b>	<b>BAC004</b>	<b>B.A III ,IV Sem BASIC ( 3.4 4.2)  PROSE , Poetry and Short stories .</b>	<b>Provide knowledge of Urdu Prose ,Poetry and best Stories.</b>	<b>Develop ability of creative writing.</b>
	<b>BSC004</b>	<b>B.SC III ,IV SEM .BASIC ( 3.2)  Intekhab e urdu Naser and poetry.</b>	<b>Knowledge about 1920 urdu prose and poetry .</b>	<b>Knowledge about urdu poetry and Humorous Essays.</b>
	<b>BCC004</b>	<b>B.COM III SEM BASIC ( 3.2)  Collection of prose and poetry</b>	<b>Improve knowledge about urdu literature.</b>	<b>Knowledge about Techniques of BUSSINESS &amp; JOURNALISM.</b>
	<b>BAC039</b>	<b>B.A III SEM OPTIONAL  Linguistics and Poertry of Iqbal.</b>	<b>Knowledge about language and great Poet IQBAL best poetry.</b>	<b>Develop knowledge about urdu Linguistics and poetry of IQBAL.</b>
	<b>BCD004</b>	<b>B.COM IV SEM BASIC (4.2)  Collection of Prose ,Poetry and short stories.</b>	<b>Achieve knowledge about urdu prose ,Poetry and Afsana.</b>	<b>Know the different types of prose and best short Stories.</b>

	BAD039	B.A IV Sem Optional ( 4.4) Urdu Literature & Inshaiya.	Knowledge about Urdu literature & Inshaiya.	Know Urdu literature and form of prose INSHAIYA.
	BAE045	PAPER V (5.1) History of urdu literature & poetry.	Understand Literary work of urdu Poets.	Understand urdu progressive poetry.
	BAE046	Paper VI (5.2) Tanzo mizah and Poetry.	Develope Reading and writing skill.	knowledge about Urdu MORAL POETRY.
	BAF045	PAPER VII.(6.1)History of urdu literature and drama.  Paper VIII.(6.2)Tanqeed and Interview.	Knowledge about different form of prose.  Understand Critics and Art of Interview.	Improve knowledge about urdu Drama.  Provide knowledge techniques and form of interview.Employbility.
<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>UG-ARTS 2017-18 NON-CBCS</b>	BAA004	B.A I SEM. BASIC  NAYA ADABI NISAB, WARDAAT .( 1.2)	Development of Reading &writing skills	Knowledge about urdu literature .Develop Moral and social values.
	BAA039	B.A I SEM ,OPTIONAL  Masnavi phool Bun ki adabi Ahmiyat.Nirmala,kewde ka bun	Achieve knowledge about masnavi.Novel And Deccani poetry.	Know the different types of urdu poetry Achieve social values.




	BSA004	B.SC I,Basic Naqoosh e Adab, chand Hamaser.Essay writing	Knowledge about different writer poets	Know Urdu Sketches. Develop writing skills
	BCA004 BCB004	B.COM I ,II SEM.BASIC UrduAfsane,inshaiye,Drame karobari khat o kitabat . ,Essay writing	Understand different Form of urdu prose.	To Achieve business Techniques.
	BAB004	Naya Adabi Nisab UrduMedia Translation .	Develope Reading, writing &Translation ability.	knowledge about Urdu Journalism & urdu Software.
	BAB039	Aangan, Deewan Ghalib Urdu Adab mein wasokht Nigari.	Knowledge about famous poet ghalib poetry,Novel,wasokht	Improve knowledge About Novel,Ghazal And Wasokht.


  
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 ಕಲಬುರಗಿ-೫೮೬೧೦೨

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
<b>UG-ARTS 2017-18 NON-CBCS</b>	BAC004 BAD004	Mutaliya e Adab. (prose & Poetry.)	Development of Reading & writing skills	Knowledge about Urdu Literature.  Achieve Moral Values
	BAC039	ZAUQ E ADAB.  AAHANG,BAANG E DARA Mazamine pitras .	Achieve knowledge about afsana , best poetry of IQBAL.	Know the Great urdu poetry and Humorous Essays
	BSC004 BSD004	GULISTAN E ADAB  URDU AUR AWAMI IBBLAGH .	Knowledge about different writer poets AND JOURNALISM	Know Urdu T.V script Nigari. develop writing skills .
	BCC004 BCD004	IRFAN E ADAB . (PROSE & POETRY )	Understand different form of prose and poetry.	Knowledge about best urdu prose and poetry.
	BAD039	ZOUQ E ADAB.  BEWA,ANARKALI,INTEKHAB NAZEER AKBERABADI.	Develope Reading, writing ability. Achieve moral values.	knowledge about Urdu Novel,Drama and poetry.

	BAE045 BAEO46 BAF045 BAF046	History of urdu literature & poetry. (5.1) Inshaiya and Poetry. (5.2 )  (6.1)History of urdu literature and Drama.(6.2)TANQEED AND INTERVIEWS.	Knowledge about urdu Poets and his poetry.  Knowledge about urdu literature. Criticism ,interview.	Improve knowledge About Inshaiya and great poetry of Hali.  Knowledge about urdu Drama,Techniques of Interview.
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Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
<b>UG-ARTS 2018-19 CBCS</b>	<b>BAA004</b>	<b>TAFHEEM – ADAB , MOULVI NAZEER AHMED KI KAHANI KUTCH UNKI KUTCH MERI ZABANI.</b>	<b>Development of Reading &amp; writing  Skills, knowledge about khaka nigari .</b>	<b>Knowledge about urdu Literature &amp;  Deccani poetry .  Achieve moral &amp; social values .</b>
	<b>BAB004</b>	<b>KEWDE KA BUN .</b>		
	<b>BAA039</b>	<b>DASTAN SUBRAS  NOVEL MIRAT UL UROOS.  INTEKHAB E NAZEER AKBERABADI.</b>	<b>Achieve knowledge about Dastan, Novel And nazeer poetry.</b>	<b>Achieve knowledge of urdu Classical literature. Girls Education,</b>
	<b>BSA004</b>	<b>INTEKHAB E ADAB, PART I  CHACHA CHAKKAN.</b>	<b>Knowledge about different writers &amp; poets.  Know urdu khaka Nigari.</b>	<b>Know Urdu humorous Essays. Develop writing skills.</b>
	<b>BSB004</b>	<b>INTEKHAB E ADAB  AADMI NAMA</b>		
	<b>BCA004</b>	<b>ADABI NAMONEY  URDU KE DUS MUKHTASER AFSANE.</b>	<b>Develop Reading writing skills. knowledge about journalism.</b>	<b>To Achieve business Techniques.</b>
	<b>BCB004</b>	<b>ADABI NAMONEY</b>		

		SAHAFAT O TI JARAT		
	BAB039	URDU KE TERA AFSANE DRAMA ANARKALI, INTEKHAB AKBER ILLAHABADI .	Develope Reading, writing & Translation ability.	knowledge about Urdu Journalism & Bussiness techniq
2018-19 NON-CBCS	BAC004 BAD004	B.A III & IV SEM(NON-CBCS) MUTALIYA E ADAB	Develop Reading writing skills.	Knowledge about urdu literature.
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Course Code	Course Name	Course Out Come	Specific Course Out come	
<b>UG-ARTS 2018-19 NON -CBCS</b>	<b>BACO39</b>	<b>Aahang,Baang e Dara.  Pitras ke mazamine  (B.A III SEM –NON-CBCS)</b>	<b>Achieve knowledge about  Afsana,best poetry of Iqbal .</b>	<b>Know the great Urdu poetry and humorous Essays.</b>
	<b>BSC004  BSD004</b>	<b>GULISTAN E ADAB, Urdu aur awami iblagh.  Sahafat .</b>	<b>Knowledge about urdu writers poets &amp; journalism.</b>	<b>Know urdu Sahafat and urdu Television script Nigari.</b>
	<b>BCC004  BCD004</b>	<b>IRFAN E ADAB  IRFAN E ADAB</b>	<b>Under stand the different Form of prose and poetry.</b>	<b>Knowledge about best urdu prose and poetry. provide inspiration.</b>
	<b>BAD039</b>	<b>Novel,drama and poetry.  Bewa,intekhab e kalam Nazeer Akberabadi.</b>	<b>Knowledge about urdu drama,Novel and Poetry.</b>	<b>Achieve social ,moral and cultural values.</b>
	<b>BAE045  BAE046</b>	<b>(5.1)History of urdu Literature and poetry.  5.2)Inshaiya and poetry.</b>	<b>Knowledge about urdu poets and his poetry.  Know inshaiya and poetry</b>	<b>Knowledge about progressive poetry.  Great poetry of Hali .</b>

	BAF045	6.1)History of urdu poetry & Drama.	Knowledge about urdu prose writer and his work	Knowledge about Urdu Drama.
	BAF046	6.2)Tanqeed and Interviews.	Achieve new thoughts and Ideas.	Knowledge about Techniques of Interview.
UG-ARTS 2019- UG –ARTS 2019 -20  CBCS	BAA004	TAFHEEM – ADAB , MOULVI NAZEER AHMED KI KAHANI KUTCH UNKI KUTCH MERI ZABANI.	Development of Reading &writing  Skills,knowledge about khaka Nigari AND SULEMAN KHATEEB POETRY ..	Knowledge about urdu Literature &  Deccani poetry .  Achieve moral & social values .
	BAB004	KEWDE KA BUN .		
	BAA039	DASTAN SUBRAS  NOVEL MIRAT UL UROOS.  INTEKHAB E NAZEER AKBERABADI.	Achieve knowledge about Dastan,Novel And Nazeer poetry.	Achieve knowledge of urdu Classical literature. Girls Education,
	BSA004	INTEKHAB E ADAB, PART I  CHACHA CHAKKAN.	Knowledge about different writers & poets.	Know Urdu humorous Essays.


	<b>BSB004</b>	<b>INTEKHAB E ADAB AADMI NAMA</b>	<b>Know urdu khaka Nigari.</b>	<b>Develop writing skills.</b>
	<b>BCA004 BCB004</b>	<b>ADABI NAMONEY URDU KE DUS MUKHTASER AFSANE. ADABI NAMONEY SAHAFAT O TI JARAT</b>	<b>Develop Reading writing skills.knowledge about journalism.</b>	<b>To Achieve business Techniques.</b>
	<b>BAB039</b>	<b>URDU KE TERA AFSANE DRAMA ANARKALI, INTEKHAB AKBER ILLAHABADI .</b>	<b>Develope Reading, writing ability.</b>	<b>KNOWLEDGE ABOUT URDU DRAMA &amp; POETRY OF AKBER.</b>
	<b>BAC004 BAD004</b>	<b>B.A III -AECC MIRATUL ADAB</b>	<b>Develop Reading writing skills.</b>	<b>Knowledge about urdu literature.</b>
	<b>BACO39</b>	<b>B.A III SEM .DSC ,HINDUSTANI LISANIYAT. SAHER UL BAYAN . HOUSING SOCIETY. NOVELET .</b>	<b>Achieve knowledge about best URDU MASNAVI OF MEER HASSAN &amp; NOVELET.</b>	<b>KNOW GRADUAL DEVELOPMENT OF URDU LANGUAGE. ACHIEVE NEW THOUGHTS .</b>



	<b>BSC004</b>  <b>BSD004</b>	<b>INTEKHAB E ADAB, PART II .</b>  <b>PREMCHAND KE NUMAINDA AFSANE.</b>  <b>BSC IV. AECC- Intekhab adab FIRDOUS E BAREEN . NOVEL ,</b>	<b>Knowledge about urdu writers poets</b>  <b>Know urdu HISTORICAL Novel .</b>	<b>Know urdu AFSANA. and PREME CHAND AFSANA NIGARI .Develop Reading and writing skill.</b>
	<b>BCC004</b>  <b>BCD004</b>	<b>MEYAR E ADAB</b>  <b>KHIYABAN AADAB. DRAMA AGRA BAZAR</b> <b>B.COM IV .Meyar e adab</b>  <b>NIRMALA NOVEL.</b>	<b>Under stand the different Form of prose and poetry.</b>	<b>Knowledge about best urdu NOVEL &amp; DRAMA. ACHIEVE SOCIAL ,CULTURAL VALUES. .</b>
	<b>BAA 039</b>	<b>TAREEKH ADAB URDU ,QAMAT O QEEMAT,MARSIYA ANEES.</b>	<b>Knowledge about urdu KHAKA AND MARSIYA.</b>	<b>KNOWLEDGE ABOUT URDU LITERATURE. ANEES MARSIYA NIGARI.</b>
	<b>BAE049</b>  <b>BAE050</b>	<b>5.1CREITICS,RHETORIC,LETTERS</b>  <b>5.2 SPECIAL STUDY OF GHALIB</b>	<b>ACHIEVE KNOWLEDGE ABOUT CRITICSM</b>	<b>DEVELOP WRITING ABILITY.CRITICAL THINKING.</b>

		.	<p><b>,MAKTOOB NIGARI.</b></p> <p><b>KNOWLEDGE ABOUT GREAT URDU POET GHALIB AND HIS POETRY .</b></p>	<p><b>APRECIATE THE ART. HELP IN COMPETATIVE EXAMINATION.</b></p> <p><b>PROVIDE INSPIRATION.</b></p>
	<p><b>BAF045</b></p> <p><b>BAF046</b></p>	<p><b>6.1)TARRAQUI PASAND MOVEMENT IN URDU.ESSAYS &amp; POETRY.</b></p> <p><b>6.2)SPECIAL STUDY OF FAIZ .</b></p>	<p><b>Knowledge about urdu progressive writers and his work .Achieve new thoughts and Ideas.</b></p>	<p><b>knowledge about urdu tarraqui pasand movement. NEW WAY OF THINKING.</b></p>
<p><b>UG-ARTS 2020-21</b></p> <p><b>CBCS</b></p>	<p><b>BAA004</b></p> <p><b>BAB004</b></p>	<p><b>TAFHEEM – ADAB , MOULVI NAZEER AHMED KI KAHANI KUTCH UNKI KUTCH MERI ZABANI.</b></p> <p><b>KEWDE KA BUN .</b></p>	<p><b>Development of Reading &amp;writing</b></p> <p><b>Skills,knowledge about khaka Nigari .</b></p>	<p><b>Knowledge about urdu Literature &amp; Deccani poetry .</b></p> <p><b>Achieve moral &amp; social values .</b></p>

	<b>BAA039</b>	<b>DASTAN SUBRAS NOVEL MIRAT UL UROOS. INTEKHAB E NAZEER AKBERABADI.</b>	<b>Achieve knowledge about Dastan,Novel And Nazeer poetry.</b>	<b>Achieve knowledge of urdu Classical literature. Girls Education,</b>
	<b>BSA004  BSB004 BSB004</b>	<b>INTEKHAB E ADAB, PART I CHACHA CHAKKAN.  INTEKHAB E ADAB –PART - I AADMI NAMA .</b>	<b>Knowledge about different writers &amp; poets.  Know urdu khaka Nigari.</b>	<b>Know Urdu humorous Essays. Develop writing skills. KNOW MUJTABA HUSSAIN KHAKA NIGARI .</b>
	<b>BCA004  BCB004</b>	<b>ADABI NAMONEY  URDU KE DUS MUKHTASER AFSANE. ADABI NAMONEY SAHAFAT O TI JARAT</b>	<b>Develop Reading writing skills.knowledge about journalism.</b>	<b>COMMUNICATION OF URDU LANGUAGE.  SOCIAL INTERACTION .TO ACHIEVE BUSSINESS TECHNIQUES.</b>

	BAB039	URDU KE TERA AFSANE DRAMA ANARKALI, INTEKHAB AKBER ILLAHABADI .	Develope Reading, writing ability.	KNOWLEDGE ABOUT URDU AFSANA ,AND DRAMA.   ಪ್ರಾಂಶುಪಾಲರು ಸರಕಾರಿ ಮಹಾವಿದ್ಯಾಲಯ ಕಲಬುರಗಿ-587105
UG-ARTS  2020-21	BAC004	B.A III SEM AECC  CBCS  MIRAT UL ADAB	Knowledge about different types of prose and poetry.	Know Urdu Inshaiya. Develop writing skills
	BAC039	Hindustani Lisaniyat  Masnavi Saher ul Bayan  Housing Society.(Novelet)	Know gradual development of urdu Language.	Knowledge about linguistics Urdu Masnavi & Novelet.
	BSC004	Intekhab e Adab -Part II  Premechand ke Numainda Afsane.	Develop literary writing skills.	knowledge about urdu prose,poeetry and short stories. Social &moral values.

	<b>BCC004</b>	<b>MEYAR E ADAB</b> <b>KHAYABAN E ADAB</b> <b>AAGRA BAZAR (Drama)</b>	<b>Development of</b> <b>Reading and</b> <b>writing skills.</b>	<b>Improve</b> <b>knowledge of urdu</b> <b>Drama. Achieve</b> <b>cultural values.</b>
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<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
	<b>BAD004</b>	<b>TANVEER E ADAB</b>	<p>Development of Reading And writing skills</p> <p>Knowledge about urdu Drama parda e gaflat. (womens Education.)</p>	<p>Knowledge about Urdu Literatur</p> <p>Achieve Cultural &amp; Moral Values .</p>
	<b>BAD039</b>	<b>HISTORY OF URDU LITERATURE QAAMAT O QEEMAT , MARSIYA E ANEES.</b>	<p>Achieve knowledge about Urdu poetry ,Khaka and Marsiya.</p>	<p>Know the different types of urdu prose and poetry. Achieve moral values.</p>
	<b>BSD004</b>	<b>INTEKHAB E ADAB part II</b>  <b>NOVEL FIRDOUS E BAREEN</b>	<p>Knowledge about different writers poets and classical Novel .</p>	<p>Know Art of Urdu Novel. Develop writing skills</p>
	<b>BCD004</b>	<b>MEYAR E ADAB</b>	<p>Understand different Form of prose,poe try and Premchand Novel NIRMALA</p>	<p>To Achieve knowledge of Novel. (Gender discrimination) .</p>

		<b>KHAYABAN E ADAB</b>  <b>NOVEL NIRMALA</b>		
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<b>UG-ARTS 2020-21 CBCS</b>	<b>BAE049</b>	<b>5.1 CRITICIS, RHETORIC, LETTERS AND POETRY</b>	<b>Develop critical thinking, writing skills.</b>	<b>Knowledge about Urdu critics and Maktoob Nigari.</b>
	<b>BAE050</b>	<b>5.2 SPECIAL STUDY OF GALIB</b>	<b>Knowledge about Urdu famous poet Ghalib and his poetry.</b>	<b>Provide inspiration Help in competitive examination.</b>
	<b>BAF045</b>	<b>6.1 TARRAQUI PASAND MOVEMENT IN URDU, ESSAYS &amp; POETRY</b>	<b>Develop new way of thinking,expression of ideas.</b>	<b>Knowing progressive writers –achieve new thoughts and ideas .</b>
	<b>BAF046</b>	<b>6.2 special study of Faiz Ahmed Faiz.</b>	<b>Knowing revolutionary poetry.</b>	<b>Knowledge about Faiz famous poetry. Appreciate the Art.</b>

	<b>B154 – B.A,B.SC.B.COM III Semester.  SEC</b>	<b>PREME CHAND SHAKHSIYAT AUR FUN</b>	<b>Knowing best short stories of Prem chand.</b>	<b>Help in cometative examination- Achieve, social and moral values</b>
	<b>B154- B.A.B.SC ,B.COM IV sem  SEC</b>	<b>SPECIAL STUDY OF MEER TAQUI MEER</b>	<b>Knowledge about Ghazal and Masnavi of Meer.</b>	<b>Appreciate the Art- employability.</b>
	<b>B154-B.A ,B.SC.B.COM V Semester .  SEC</b>	<b>ROOMANI NASER NIGAR (SPECIAL STUDY OF YALDARAM &amp; NIYAZ)</b>	<b>Knowledge about classical literature.Understand Inshaiya and Romani Afsana.</b>	<b>Improve Artistic value.  DEVELOP LITERARY WRITING SKILLS.</b>
	<b>B154 B.A ,B .SC B.COM VI Sem  SEC</b>	<b>YAADGAR E HALI &amp; POETRY OF JOSH .</b>	<b>Provide inspiration - knowledge about famous writer and poet HALI.</b>	<b>Knowledge about Hali and poet Josh LIFE &amp; literary work.</b>

  
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## DEPARTMENT OF HISTORY


Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
<b>UG-HISTORY</b>	SEM 1	Ancient Indian History	To know the Ancient Culture	To become an Archaeologist
<b>NON CBCS</b>	SEM 2	Ancient Indian History	To know the Ancient Monuments	To become tourist guides
	SEM 3	Medieval Indian History	To know the Medieval Numismatics	To become an Archivist
	SEM 4	Medieval Indian History	To know the medieval Art & Architecture	To become an Architecture
	SEM 5.1	Modern Indian History	To know the Modern Admin under British	Civil Service
	SEM 5.2A	History of Modern karnataka	To know the Medieval Culture of Karnataka	Competitive Exams
	SEM 5.2B	History of Modern Europe	To know the Medieval Europe and the World	Civil Service
	SEM 6.1	Modern Indian History	To know the Modern Admin under British	Civil Service

	SEM 6.2A	History of Modern karnataka	To know the Medieval Culture of Karnataka	Competitive Exams
	SEM 6.2B	History of Modern Europe	To know the Medieval Europe and the World	Civil Service
<b>UG- HISTORY</b>	<b>CBCS</b>			
<b>SEM-I</b>	DSCT-1.1	Ancient Indian History beginning to Kushans	To know the Ancient Culture	To become an Archaeologist
<b>SEM-II</b>	DSCT 2.1	Ancient Indian History Guptas to 1206AD	To know the Ancient Monuments	Epigraphists
<b>SEM-III</b>	DSCT 3.1	Medieval Indian History	To know the Medieval Culture	Archivists
<b>SEM-III</b>	SECT-1	Concept of History & ancient Indian History	To know the Ancient Epigraphy	Competitive Exams
<b>SEM-IV</b>	DSCT 4.1	Medieval India History AD 1526-1707	To know the Medieval Monuments	Tourists
<b>SEM-IV</b>	SECT-2	Medieval Indian History	To know the Medieval Languages	Tourists
<b>SEM-V</b>	DSET 5.1A	History of Karnataka From Begaining to 1336AD	To know the Culture of Karnataka	Competitive Exams
<b>SEM-V</b>	DSET-5.1B	Modern European History 1780-1871AD	To know the Medieval Europe and the World	Civil Service

<b>SEM-V</b>	SECT 3	Modern Indian History from 1707-1850AD	To know the Modern Admin under British	Civil Service
<b>SEM-V</b>	GET-1	Concept of History & ancient Indian History	To know the Ancient Culture and Language	Ethics
<b>SEM-VI</b>	DSET-6.1A	History of Karnataka from Vijayanagar to 1956AD	To know the Medieval Culture of Karnataka	Competitive Exams
<b>SEM-VI</b>	DSET-6.1B	Modern European History 1871-1990 AD	To know the Modern world	Civil Servants
<b>SEM-VI</b>	SECT 4	Modern Indian History 1850-1950 AD	Techniques of Modern Movements	Competitive Exams
<b>SEM-VI</b>	GET2	Indian History from 1947 to 1977	To know the Modern Admin under British	Competitive Exams
<b>M.A, History</b>		<b>First Semester</b>		
<b>CBCS 2016 onwards</b>	<b>H.C:1.1</b>	Research Methodology-I	To know the Methodology of History	Research Assistant
	<b>H.C:1.2</b>	History of-India-I (From Earliest times to Kushanas)	To know the Ancient Culture	Archaeologists
	<b>H.C:1.3</b>	History and Culture of Bahamans(1347-1527)	To know the Culture of Karnataka	Archivists

	<b>S.C:1.1</b>	History of South India up to 1336 A.D	To know the Culture of South India	Become Civil Servants
	<b>S.C: 1.2</b>	Principles and Methods of Archaeology	Understanding the Archaeology	Archaeologists and Archivists
	<b>S.C: 1.3</b>	History and Culture of Adil Shahis	To understand about the Adilshahis	Tourists and Archivists
	<b>S.C:1.4</b>	Socio-Religious Reform Movements of India From 6th Century BCE	To know the Religious Culture and Personalities of India	Ethics and Moral Lessons
		<b>Second Semester</b>		
	<b>H.C:2.1</b>	Research Methodology-II	To know the Methodology of History	Research Assistant
	<b>H.C. 2.2</b>	Ancient Indian History and Culture (From Gupta to 1206 A.D.)	To know the Ancient Culture	Archaeologists
	<b>H.C:2.3</b>	History of Karnataka From 1336-1799 A.D.	To know the Culture of Karnataka	Archivists
	<b>S.C: 2.1</b>	History of Modern Europe Since 1789 A.D)	To know the Modern Europe and the World	Politics of the contemporary world
	<b>S.C: 2.2</b>	Freedom Movement in Karnataka(1824-1942 A.D)	To know the modern Struggles, mass movements in karnataka	To become Civil Servants

	<b>O.E:2.1</b>	History of Modern World Since 1914 A.D.	To know the Modern Europe and the World	Politics of the contemporary world
		<b>Third Semester</b>		
	<b>H.C: 3.1</b>	Historiography-Western	To know the Life and Achievements of the world Historians	Understand the Historical Thought
	<b>H.C: 3.2</b>	History of Medieval Indian Polity and Culture (1206-1761 A.D)	To know the Medieval Culture	Civics
	<b>H.C:3.3</b>	Indian National Movement (1857-1958 A.D.)	To know the Modern techniques of British rule	Become Civil Servants
	<b>S.C: 3.1</b>	History of Vijayanagara Empire(1336-1565 A.D.)		
	<b>S.C: 3.2</b>	History of United States of America	To know the Modern World with New Continent	Politics of the contemporary USA as new power
	<b>O.E: 3.1</b>	Intellectual History of India	To know the Religious Culture and Personalities of India	Subaltern Studies
		<b>Fourth Semester</b>		
	<b>H.C: 4.1</b>	Historiography -India		

	<b>H.C: 4.2</b>	History of Modern India (1757-1951 A.D)	To know the Modern Admin under British rule	To become Civil Servants
	<b>H.C: 4.3</b>	History of Modern Karnataka (From 1673 to 1956 A.D)		
	<b>S.C: 4.1</b>	History of Religions in Karnataka	To know the Religious movements in karnataka	Understanding the Religions of karnataka .
	<b>S.C: 4.2</b>	Indian Archaeology	Understanding the Archaeology	Archaeologists and Archivists
	<b>S.C: 4.3</b>	Indian Renaissance and Reformation	To know the Religious Culture and Personalities of India	Ethics and Moral Lessons
	<b>S.C: 4.4</b>	History of China and Japan Since 1839 A.D.	To know the Modern Asia its dominant countries	Total Knowledge of Asian Countries
<b>M.A, History</b>		<b>First Semester</b>		 ಪ್ರಾಂಶುಪಾಲರು ಸರಕಾರಿ ಮಹಾವಿದ್ಯಾಲಯ ಕಲಬುರಗಿ-585105
<b>CBCS</b>				
<b>2018 onwards</b>	<b>C.C.T.1.1</b>	Research Methodology-1	To know the Methodology of History	Research Assistant


	<b>C.C.T.1.2</b>	History of Ancient India and Culture (From Earliest times to Mauryans)	To know the Ancient Culture	Archaeologists
	<b>C.C.T.1.3</b>	History and Culture of Bahamans(1347-1527)	To know the Culture of Karnataka	Archivists
	<b>D.S.E 1.1</b>	Political History of Medieval India (From 1206-1707)	To know the Medieval Indian Polity and Admin	Idea of Administration
		<b>OR</b>		Tourists
	<b>D.S.E 1.1</b>	Socio-Religious reform Movements in India	To know the Religious Culture and Personalities of India	Ethics and Moral Lessons
	<b>D.S.E 1.2</b>	History and Culture of South India(From Earliest to 14 <sup>th</sup> Century AD)	To know the Culture of South India	Become Civil Servants
		<b>OR</b>		Tourists
	<b>D.S.E 1.2</b>	Ancient Indian Polity	To know the Medieval Indian Polity and Admin	Political Ethics
		<b>Second Semester</b>		Archaeologists
	<b>C.C.T 2.1</b>	Research Methodology-2	To understand the Eligibility and duties of a researcher	Research and Tourist Guides

	<b>C.C.T 2.2</b>	History and Culture of Ancient India(From Gupta to 1206)	To know the Ancient Culture	Become Civil Servants
	<b>D.S.E 2.1</b>	History of Modern Europe(From 1789 to 1856 A.D)	To know the Modern Europe and the World	Politics of the contemporary world
		<b>OR</b>		
	<b>D.S.E 2.1</b>	Cultural History of Medieval India(From 1206 to 1707A.D)	To know the Medieval Culture	Civics
	<b>D.S.E 2.2</b>	Intellectual History of India	To know the Religious Culture and Personalities of India	Subaltern Studies
		<b>OR</b>		
	<b>D.S.E 2.2</b>	Principles and Methods of Archaeology	Understanding the Archaeology	Archaeologists and Archivists
	<b>G.E 2.1</b>	Indian National Movement(1857 to 1956 A.D)	To know the Modern techniques of British rule	Become Civil Servants
		<b>Third Semester</b>		
	<b>C.C.T 3.1</b>	Historiography-Western and Indian	To know the Life and Achievements of the world Historians	Understand the Historical Thought
	<b>C.C.T 3.2</b>	Indian National Movement(1857-1935)	To know the Modern Admin under British rule	To become Civil Servants



	<b>D.S.E 3.1</b>	Freedom Movement in Karnataka(1824-1942)A.D	To know the modern Struggles, mass movements in karnataka	To become Civil Servants
		<b>OR</b>		
	<b>D.S.E 3.1</b>	History and Culture of South India (From Earliest times to 973 A.D)	To know the Culture of South India	Become Civil Servants and Tourists.
	<b>D.S.E 3.2</b>	Political History of Karnataka(1336 A.D- 1600A.D)	To know the Medieval Karnatakan Polity and Admin	Political Ethics
		<b>OR</b>		
	<b>D.S.E 3.2</b>	History of United States of America	To know the Modern World with New Continent	Politics of the contemporary USA as new power
	<b>G.E 3.1</b>	History of Dalit Movement in India	Understanding the Subaltern world	Subaltern Studies
		<b>Fourth Semester</b>		
	<b>C.C.T 4.1</b>	Indian National Movement(1935-1956)	To know the modern Struggles & mass movements of India	Competitive Exams
	<b>C.C.T 4.2</b>	Freedom Movement in Karnataka(1942-1956)	To know the modern Struggles, mass movements in karnataka	Understanding the Modern karnataka History

	<b>C.C.P 4.1</b>	Project Report	Preparing Researchers	Research Assistants
	<b>D.S.E 4.1</b>	History and Culture of South India(973 to 1565A.D)	To know the Culture of South India	Tourist Guides
		<b>OR</b>		
	<b>D.S.E 4.1</b>	Cultural History of Karnataka(1336 to 1600A.D)	To know the medieval karnataka and its Culture	To become Civil Servants
	<b>D.S.E 4.2</b>	History of Modern Europe (Since 1914)	To know the Modern World	Total Knowledge of Erope
		<b>OR</b>		
	<b>D.S.E 4.2</b>	History of China and Japan(Since 1839)	To know the Modern Asia its dominant countries	Total Knowledge of Asian Countries

  
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## DEPARTMENT OF ECONOMICS

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
<b>MA Economics</b>	H.C 1.1 & 2.1	HC1.1 Micro economic analysis -I & II	This subject will enhance the knowledge of Market forces and hence it helps the student to understand the market situation.	personally, helps to become entrepreneur.
	H.C 1.2 &2.2	HC1.1 Macro economic analysis -I & II	It helps the student to understand and comprehend macro-economic issues and policies it also helps to understand the theoretical models that explains the behavior and determination of equilibrium of income output and employment.	It helps to get employment in the planning department and banking sector.
	H.C 1.3	H.C.1.3Economics of Growth and Development	It helps the students to understand various growth models. And the	It helps to understand the various issues of development this helps

			student analyses the applications of growth models in the determination of employment in the developed and emerging economies	the student to get employment in the Panchayat Raj institutions and other local Governments.
	S.C.1.1	SC1.1 Indian economy and policy	This paper enables the student to understand various dimensions of Indian economy and enable them to analyses the policy issues and requirements.	this paper helps the student to become responsible citizen as how to contribute to the nation.
	S.C. 1.2	SC1.2 Managerial economics	This paper helps the student to understand various dimensions of managerial economics and analyses the policy issues and requirements	This paper also helps the student to understand the art of managing material, men, and money efficiently this makes him a successful entrepreneur
	S.C.1.3	SC1.3 Demography	This enables the students to understand various demographic theories and he will come to know the composition and	This paper definitely helps the students to improve the quality of life

			dynamics of population across the world.	
	H.C 2.3	H.C 2.3 Quantitative Techniques	This Paper enables the students to understand the basic quantitative Techniques and it trains them to apply these techniques to economic problems. This enables them to understand mathematical and Statistical tools and analyses them and apply to the economic issues.	Students gets ample opportunities in the research institutions of state and Centre.
	S.C. 2.1	S.C.2.1 Industrial Economics	This paper helps the students equip with nature and scope of industrial economics and understand the industrial policies and role in the nation development. It also helps to the students to understand market concentrations and industrial combinations in addition to sources of	This knowledge will help the students to get the employment in the industrial sectors and also himself can become successful entrepreneur.

			industrial finance in India.	
	O.E 2.1	O.E.2.1 Indian Economy	<p>This paper is studied by other than economic students for example students of commerce political science, sociology, History etc. This paper gives them an overview of structure of Indian economy in general. They also study impact of economic reforms on various sectors of economy. They also study the various programs and policies strategies undertaken by the govt. of India to address the economic evils.</p>	<p>This makes the student to be good citizen of India and get the skill of giving solutions to the economic problems.</p>
	O.E.3.2	O.E.3.2 Karnataka Economy	<p>This paper also studied by students of other departments. This paper introduces the student to understand Karnataka economy and learn different aspects of state economy. This</p>	<p>This paper makes the students to understand the growth and position of his own home state and it helps him to get through the competitive examinations</p>

			also helps the non-economic students to learn basics about agriculture and industrial development, state finances and regional imbalances.	conducted by various state and Centre departments.
	H.C 3.1 & 4.1	H.C.3.1 Public economics-I & II	It enables the students to understand the significance of public finance and it provides the students comprehensive understanding o public revenue, public expenditure, public debt, etc. Totally students understand the various issues related to public economics.	This helps the students to avail the opportunities in the tax department and local bodies, mainly it helps the student to clear the competitive examinations,
	H.C.3.2 & 4.2	H.C.3.2 International Economics-I & II	This enables the student to understand theories of international trade and analyses the various aspects to trade policies	This paper gives an overall picture of the Indian trade across the world. He can become import export expert and become successful entrepreneur.


	H.C.3.3	H.C.3.3 Research methods and Computer applications	This enables the students to understand the significance of the research methods and basic tools. It also provides the student the comprehensive understanding on various research techniques and data analysis. Students acquaint the various issues related to application of research techniques and hence student can become a good researcher and find jobs in the research in states. Computer knowledge will encourage him to start an independent job.	Students acquaint the various issues related to application of research techniques and hence student can become a good researcher and find jobs in the research in states. Computer knowledge will encourage him to start an independent job.
	S.C.3.1	H.C.3.1 Environmental Economics	This paper makes the student to understand the causes and consequences of	This knowledge gives him an ample opportunity in the pollution control board,



			environmental problems and also it enables the students to appreciate the significs of sustainable development. It also helps him understand the tools for environmental valuation and impact assessment.	forest department, agriculture, department, industrial department, etc.
	H.C.4.3	H.C.4.3 Project Work	Project work help the students to understand the ground reality of the socio-economic aspects of the respondents. They come to how to collect primary and secondary data. They learn how to review the literature and identify problem. the teaching, training and research institutions.	Specifically, student get skill in preparing research design, data collection and analysis and write final report. This helps him to become a researcher and gets an ample opportunity in
	CCT.4.2	CCT 4.2 Economic Thought	This course is to introduce the students to the evaluation of	It helps him to become a very good analyzer of a thought process and

			<p>economic ideas and expose them to ideas of prominent economists. This makes the students to understand the history of economic thought and its changes in the years.</p>	<p>come to know the ideas of various traditional to modern economics.</p>
	DSE 4.2 (A)	DSE 4.2 Agricultural Economics	<p>This makes the students to understand basic issues of agriculture and provides a through outlook over agriculture and its role in development of an economy. This helps the student to become practical farmer</p>	<p>Now a days a qualified generation should enter into agriculture to make use of valuable natural resources and which is better explained by this paper.</p>
	GE.3.1(B)	G.E.3.1(B) Rural Economics	<p>This makes the students to understand the basics of rural development, features of rural economy, problems and programs of rural development as India lives in rural area this makes the student to understand the basics of poverty, unemployment and</p>	<p>Student can start NGO to overcome from rural problems.</p>

			various policies adopted by the government this helps him to start a NGO to solve the problems of rural area.	
	DSE 4.2 (B)	DSE 4.2(B) Economics of Infrastructure	This paper aims to enable the student to understand the significance of infrastructure development in the growth process and also helps him to understand various issues related to infrastructure. This paper also enables students to understand policies of the government towards the development of infrastructure in the country.	Here student can become an entrepreneur in the power, transport and communications, education, health, housing etc.,

  
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## DEPARTMENT OF POLITICAL SCIENCE

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
<b>2018 -19</b>				
B.A. I		Introduction to Political Theory	To understand the importance of concepts in Political Science	Political Analyst
		Indian Constitution	To understand the importance of concepts in Political Science	Management level positions in government or institutions
B.A.II		Indian Government and Politics	Acquire domain knowledge	Management level positions in government or institutions
B.A. III		DSCT-3 Comparative Government and Politics	Contemplate about national and international issues involving States having different political ideologies and historical contexts	Political Analyst

		SECT-I Gandhian Political Thought	To familiarize the students with the basic ideas thoughts and theories in Political Science	Academician
B.A. IV		DSCT-IV Introduction to International Relations	To help them to understand the emergence and growth of modern States and give them an idea of their functioning and relate them to the political relatives	Journalist
		SECT-2 Human Rights and Gender	Acquire domain knowledge	Academician
B.A. V		DSE-1A: Themes in Comparative Political Theory	To help them to understand and make distinction among Political Theory, Political Philosophy and help them to understand the importance of these	Political Analyst
		DSCE-1B: Indian Political Thought	To understand the importance of concepts in Political Science	Academician
		SECT-3: Indian Administration	To understand the importance of concepts in Political Science	Management level positions in government or institutions
		GE-I: Legislative Support	Acquire domain knowledge	Journalist

		DSE-1(A): Rural Development Administration	Study and analyze political contexts from critical and constructive prospective	Management level positions in government or institutions
		SECT-3: Rural Development Programmes & Policies in India	Acquire domain knowledge	Political Analyst
B.A. VI		DSE-I.A : Administration and Public Policy: Concepts & Theories	To help them to understand the emergence and growth of modern States and give them an idea of their functioning and relate them to the political relatives	Political Analyst
		DSE-2B: Local Governments in India	Acquire domain knowledge	Management level positions in government or institutions
		SECT-4: Understanding Globalization	Have better understanding of the working of various political institutions including decentralized institutions state legislatures and parliament and relate this functioning to the greater cause of nation building as a responsible citizen.	Journalist

		GE-II: Public Opinion & Research Methodology	Assess how global national and regional development affect polity and society	Academician
		DSE-2(A): Decentralisation of Administration	Study and analyze political contexts from critical and constructive prospective	Academician
		SECT-4: Rural Development Performance and Policies in Karnataka	Assess how global national and regional development affect polity and society	Management level positions in government or institutions
M.A. I		CCT1.1: Ancient and Mediaeval Western Political Thought	Prepare students for a variety of careers or graduate and professional degree programs in fields such as law, government, education, politics, policy, and business	Political Analyst
		CCT1.2: Contemporary Political Theory	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		CCT1.3: Public Administration-Theories and Concepts	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		DSE1.1 Contemporary Political Analysis	Understanding of government institutions, electoral processes, and policies in a variety of	Journalist


			countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	
		DSE1.2: Theories of International Relations	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	Journalist
M.A.II		CCT2.1 Western Political Thought	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		CCT2.2 Indian Administration	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		CCT2.3 Issues in Contemporary Indian Politics	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions



		DSET2.1 International and Regional Organisations	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		GET2.1 Major Issues in Indian Polity	Prepare students for a variety of careers or graduate and professional degree programs in fields such as law, government, education, politics, policy, and business	Political Analyst
M.A.III		CCT3.1 Ancient and Mediaeval Indian Political Thought	Prepare students for a variety of careers or graduate and professional degree programs in fields such as law, government, education, politics, policy, and business	Political Analyst
		CCT3.2 Socio-Political Movements in India	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	Journalist

		CCT3.3 Public Policy	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		DSET3.1 Global Politics: Issue and Debates	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		GET3.1 Human Rights-Theory and Practice	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
M.A.IV		CCT4.1 Modern Indian Political Thinkers	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		CCT4.2 Research Methods in Political Science & Computer	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		CCP4.1* Political Sociology	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician

		DSET4.1 Foreign Policy of India	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	Journalist
		DSET4.2 Project work	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	Journalist

  
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Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
<b>2019 -20</b>				
B.A. I		Introduction to Political Theory	To understand the importance of concepts in Political Science	Political Analyst
		Indian Constitution	To understand the importance of concepts in Political Science	Management level positions in government or institutions
B.A.II		Indian Government and Politics	Acquire domain knowledge	Management level positions in government or institutions
B.A. III		DSCT-3 Comparative Government and Politics	Contemplate about national and international issues involving States having different political ideologies and historical contexts	Political Analyst
		SECT-I Gandhian Political Thought	To familiarize the students with the basic ideas thoughts and theories in Political Science	Academician
		DSCT-IV Introduction to International Relations	To help them to understand the emergence and growth of modern States and give them an idea of	Journalist

B.A. IV			their functioning and relate them to the political relatives	
		SECT-2 Human Rights and Gender	Acquire domain knowledge	Academician
B.A. V		DSE-1A: Themes in Comparative Political Theory	To help them to understand and make distinction among Political Theory, Political Philosophy and help them to understand the importance of these	Political Analyst
		DSCE-1B: Indian Political Thought	To understand the importance of concepts in Political Science	Academician
		SECT-3: Indian Administration	To understand the importance of concepts in Political Science	Management level positions in government or institutions
		GE-I: Legislative Support	Acquire domain knowledge	Journalist
		DSE-1(A): Rural Development Administration	Study and analyze political contexts from critical and constructive prospective	Management level positions in government or institutions
		SECT-3: Rural Development Programmes & Policies in India	Acquire domain knowledge	Political Analyst

B.A. VI		DSE-I.A : Administration and Public Policy: Concepts & Theories	To help them to understand the emergence and growth of modern States and give them an idea of their functioning and relate them to the political relatives	Political Analyst
		DSE-2B: Local Governments in India	Acquire domain knowledge	Management level positions in government or institutions
		SECT-4: Understanding Globalization	Have better understanding of the working of various political institutions including decentralized institutions state legislatures and parliament and relate this functioning to the greater cause of nation building as a responsible citizen.	Journalist
		GE-II: Public Opinion & Research Methodology	Assess how global national and regional development affect polity and society	Academician
		DSE-2(A): Decentralisation of Administration	Study and analyze political contexts from critical and constructive prospective	Academician

		SECT-4: Rural Development Performance and Policies in Karnataka	Assess how global national and regional development affect polity and society	Management level positions in government or institutions
M.A. I		CCT1.1: Ancient and Mediaeval Western Political Thought	Prepare students for a variety of careers or graduate and professional degree programs in fields such as law, government, education, politics, policy, and business	Political Analyst
		CCT1.2: Contemporary Political Theory	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		CCT1.3: Public Administration-Theories and Concepts	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		DSE1.1 Contemporary Political Analysis	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	Journalist
		DSE1.2: Theories of International Relations	Understanding of government institutions, electoral processes,	Journalist


			and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	
M.A.II		CCT2.1 Western Political Thought	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		CCT2.2 Indian Administration	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		CCT2.3 Issues in Contemporary Indian Politics	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		DSET2.1 International and Regional Organisations	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		GET2.1 Major Issues in Indian Polity	Prepare students for a variety of careers or graduate and professional degree programs in fields such as law, government,	Political Analyst



			education, politics, policy, and business	
M.A.III		CCT3.1 Ancient and Mediaeval Indian Political Thought	Prepare students for a variety of careers or graduate and professional degree programs in fields such as law, government, education, politics, policy, and business	Political Analyst
		CCT3.2 Socio-Political Movements in India	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	Journalist
		CCT3.3 Public Policy	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		DSET3.1 Global Politics: Issue and Debates	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions

		GET3.1 Human Rights-Theory and Practice	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
M.A.IV		CCT4.1 Modern Indian Political Thinkers	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		CCT4.2 Research Methods in Political Science & Computer	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		CCP4.1* Political Sociology	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		DSET4.1 Foreign Policy of India	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	Journalist
		DSET4.2 Project work	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to	Journalist

			compare the effectiveness or impact of differing political arrangements across countries	
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Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
<b>2020 -21</b>				
B.A. I		Introduction to Political Theory	To understand the importance of concepts in Political Science	Political Analyst
		Indian Constitution	To understand the importance of concepts in Political Science	Management level positions in government or institutions
B.A.II		Indian Government and Politics	Acquire domain knowledge	Management level positions in government or institutions
		DSCT-3 Comparative Government and Politics	Contemplate about national and international issues involving States	Political Analyst

B.A. III			having different political ideologies and historical contexts	
		SECT-I Gandhian Political Thought	To familiarize the students with the basic ideas thoughts and theories in Political Science	Academician
B.A. IV		DSCT-IV Introduction to International Relations	To help them to understand the emergence and growth of modern States and give them an idea of their functioning and relate them to the political relatives	Journalist
		SECT-2 Human Rights and Gender	Acquire domain knowledge	Academician
B.A. V		DSE-1A: Themes in Comparative Political Theory	To help them to understand and make distinction among Political Theory, Political Philosophy and help them to understand the importance of these	Political Analyst
		DSCE-1B: Indian Political Thought	To understand the importance of concepts in Political Science	Academician
		SECT-3: Indian Administration	To understand the importance of concepts in Political Science	Management level positions in government or institutions

		GE-I: Legislative Support	Acquire domain knowledge	Journalist
		DSE-1(A): Rural Development Administration	Study and analyze political contexts from critical and constructive prospective	Management level positions in government or institutions
		SECT-3: Rural Development Programmes & Policies in India	Acquire domain knowledge	Political Analyst
B.A. VI		DSE-I.A : Administration and Public Policy: Concepts & Theories	To help them to understand the emergence and growth of modern States and give them an idea of their functioning and relate them to the political relatives	Political Analyst
		DSE-2B: Local Governments in India	Acquire domain knowledge	Management level positions in government or institutions
		SECT-4: Understanding Globalization	Have better understanding of the working of various political institutions including decentralized institutions state legislatures and parliament and relate this functioning to the greater cause of nation building as a responsible citizen.	Journalist

		GE-II: Public Opinion & Research Methodology	Assess how global national and regional development affect polity and society	Academician
		DSE-2(A): Decentralisation of Administration	Study and analyze political contexts from critical and constructive prospective	Academician
		SECT-4: Rural Development Performance and Policies in Karnataka	Assess how global national and regional development affect polity and society	Management level positions in government or institutions
M.A. I		CCT1.1: Ancient and Mediaeval Western Political Thought	Prepare students for a variety of careers or graduate and professional degree programs in fields such as law, government, education, politics, policy, and business	Political Analyst
		CCT1.2: Contemporary Political Theory	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		CCT1.3: Public Administration-Theories and Concepts	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		DSE1.1 Contemporary Political Analysis	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to	Journalist

			compare the effectiveness or impact of differing political arrangements across countries	
		DSE1.2: Theories of International Relations	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	Journalist
M.A.II		CCT2.1 Western Political Thought	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		CCT2.2 Indian Administration	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		CCT2.3 Issues in Contemporary Indian Politics	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions

		DSET2.1 International and Regional Organisations	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		GET2.1 Major Issues in Indian Polity	Prepare students for a variety of careers or graduate and professional degree programs in fields such as law, government, education, politics, policy, and business	Political Analyst
M.A.III		CCT3.1 Ancient and Mediaeval Indian Political Thought	Prepare students for a variety of careers or graduate and professional degree programs in fields such as law, government, education, politics, policy, and business	Political Analyst
		CCT3.2 Socio-Political Movements in India	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	Journalist
		CCT3.3 Public Policy	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions



		DSET3.1 Global Politics: Issue and Debates	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		GET3.1 Human Rights-Theory and Practice	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
M.A.IV		CCT4.1 Modern Indian Political Thinkers	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		CCT4.2 Research Methods in Political Science & Computer	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		CCP4.1* Political Sociology	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		DSET4.1 Foreign Policy of India	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact	Journalist

			of differing political arrangements across countries	
		DSET4.2 Project work	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	Journalist

  
 PRINCIPAL  
 GOVT. COLLEGE  
 GULBARGA

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
2021 -22				

B.A. I		Introduction to Political Theory	To understand the importance of concepts in Political Science	Political Analyst
		Indian Constitution	To understand the importance of concepts in Political Science	Management level positions in government or institutions
B.A.II		Indian Government and Politics	Acquire domain knowledge	Management level positions in government or institutions
B.A. III		DSCT-3 Comparative Government and Politics	Contemplate about national and international issues involving States having different political ideologies and historical contexts	Political Analyst
		SECT-I Gandhian Political Thought	To familiarize the students with the basic ideas thoughts and theories in Political Science	Academician
B.A. IV		DSCT-IV Introduction to International Relations	To help them to understand the emergence and growth of modern States and give them an idea of their functioning and relate them to the political relatives	Journalist
		SECT-2 Human Rights and Gender	Acquire domain knowledge	Academician

B.A. V		DSE-1A: Themes in Comparative Political Theory	To help them to understand and make distinction among Political Theory, Political Philosophy and help them to understand the importance of these	Political Analyst
		DSCE-1B: Indian Political Thought	To understand the importance of concepts in Political Science	Academician
		SECT-3: Indian Administration	To understand the importance of concepts in Political Science	Management level positions in government or institutions
		GE-I: Legislative Support	Acquire domain knowledge	Journalist
		DSE-1(A): Rural Development Administration	Study and analyze political contexts from critical and constructive prospective	Management level positions in government or institutions
		SECT-3: Rural Development Programmes & Policies in India	Acquire domain knowledge	Political Analyst
		DSE-I.A : Administration and Public Policy: Concepts & Theories	To help them to understand the emergence and growth of modern States and give them an idea of their functioning and relate them to the political relatives	Political Analyst

B.A. VI		DSE-2B: Local Governments in India	Acquire domain knowledge	Management level positions in government or institutions
		SECT-4: Understanding Globalization	Have better understanding of the working of various political institutions including decentralized institutions state legislatures and parliament and relate this functioning to the greater cause of nation building as a responsible citizen.	Journalist
		GE-II: Public Opinion & Research Methodology	Assess how global national and regional development affect polity and society	Academician
		DSE-2(A): Decentralisation of Administration	Study and analyze political contexts from critical and constructive prospective	Academician
		SECT-4: Rural Development Performance and Policies in Karnataka	Assess how global national and regional development affect polity and society	Management level positions in government or institutions
		CCT1.1: Ancient and Mediaeval Western Political Thought	Prepare students for a variety of careers or graduate and professional degree programs in	Political Analyst

M.A. I			fields such as law, government, education, politics, policy, and business	
		CCT1.2: Contemporary Political Theory	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		CCT1.3: Public Administration-Theories and Concepts	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		DSE1.1 Contemporary Political Analysis	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	Journalist
		DSE1.2: Theories of International Relations	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	Journalist

M.A.II		CCT2.1 Western Political Thought	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		CCT2.2 Indian Administration	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		CCT2.3 Issues in Contemporary Indian Politics	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		DSET2.1 International and Regional Organisations	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		GET2.1 Major Issues in Indian Polity	Prepare students for a variety of careers or graduate and professional degree programs in fields such as law, government, education, politics, policy, and business	Political Analyst

M.A.III		CCT3.1 Ancient and Mediaeval Indian Political Thought	Prepare students for a variety of careers or graduate and professional degree programs in fields such as law, government, education, politics, policy, and business	Political Analyst
		CCT3.2 Socio-Political Movements in India	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	Journalist
		CCT3.3 Public Policy	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		DSET3.1 Global Politics: Issue and Debates	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		GET3.1 Human Rights-Theory and Practice	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician



M.A.IV		CCT4.1 Modern Indian Political Thinkers	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		CCT4.2 Research Methods in Political Science & Computer	Offer students the analytical and research skills needed to understand and explain politics, government, and international relations.	Management level positions in government or institutions
		CCP4.1* Political Sociology	Gain the knowledge of Political Institutions, Political Culture, Political Ideologies	Academician
		DSET4.1 Foreign Policy of India	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries	Journalist
		DSET4.2 Project work	Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing	Journalist

			political arrangements across countries	
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## DEPARTMENT OF SOCIOLOGY

**2016-17**


Program Name	Course Code	Course Name	Course Outcome	Specific Course Outcome
UG		1.1 Fundamentals of Sociology & Social Thought	Students will come to know about the fundamentals of Sociology	Students will come to know about the Social life
		2.1 Social Institutions & Social Thoughts	Students will become aware of importance of Social Institutions in Social life	Students will come to know about the factors responsible for changes in modern Social life
		3.1 Indian Society and Social thoughts – I	1. Students will get knowledge of	Students will aware of the

			major religions of Indian Society. 2. Students will come to know about the unique features of Indian Society	Constitutional Provisions for SC/ST and OBC
		<b>4.1 Indian Society &amp; Social thoughts – II</b>	Students will come to know about the role of major Social Institutions for Indian Society	Students will know the theoretical perspective of Indian Society
		<b>5.1 Indian Social problems–I</b>	Students will get knowledge of basic problems of Indian Society	Students will get an ability to solve these problems

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Outcome</b>	<b>Specific Course Outcome</b>
UG		<b>5.2 Sociology of Rural Development in India</b>	Students will come to know about the	Students will come to know about the Social life

			fundamentals of Sociology	
		<b>5.3 Social Demography</b>	Students will get knowledge of Rural Social Institutions, major Rural problems of Indian Society.	Students will become aware of developmental programs introduced by Govt for Rural development
		<b>6.1 Indian Social problems – I</b>	Students will come to know about the importance of the family and its effect on the aged people of the society	Students will get the information regarding different types of pollution and how to overcome it.
		<b>6.2 Urban Sociology</b>	Students will come to know about the distinction between Rural and Urban community and importance of Urban life in Modern Society.	Students will get knowledge about the housing policies and programs of the Governments and other major issues relating to Urban Society.

		<b>6.3 Women Studies in India</b>	Students will come to know about the status of women in ancient medieval and modern times	Students will get knowledge about the role of State and NGOs for the empowerment of women
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### 2017-18

Program Name	Course Code	Course Name	Course Outcome	Specific Course Outcome
UG		<b>1.1 Fundamentals of Sociology &amp; Social Thought</b>	Students will come to know about the fundamentals of Sociology	Students will come to know about the Social life
		<b>2.1 Social Institutions &amp; Social Thoughts</b>	Students will become aware of importance of	Students will come to know about the factors responsible

			Social Institutions in Social life	for changes in modern Social life
		<b>3.1 Indian Society and Social thoughts – I</b>	1. Students will get knowledge of major religions of Indian Society. 2. Students will come to know about the unique features of Indian Society	Students will aware of the Constitutional Provisions for SC/ST and OBC
		<b>4.1 Indian Society &amp; Social thoughts – II</b>	Students will come to know about the role of major Social Institutions for Indian Society	Students will know the theoretical perspective of Indian Society
		<b>5.1 Indian Social problems–I</b>	Students will get knowledge of basic problems of Indian Society	Students will get an ability to solve these problems

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Outcome</b>	<b>Specific Course Outcome</b>
UG		<b>5.2 Sociology of Rural Development in India</b>	Students will come to know about the fundamentals of Sociology	Students will come to know about the Social life
		<b>5.3 Social Demography</b>	Students will get knowledge of Rural Social Institutions, major Rural problems of Indian Society.	Students will become aware of developmental programs introduced by Govt for Rural development
		<b>6.1 Indian Social problems – I</b>	Students will come to know about the importance of the family and its effect on the aged people of the society	Students will get the information regarding different types of pollution and how to overcome it.
		<b>6.2 Urban Sociology</b>	Students will come to know about the distinction between Rural and Urban community and importance of Urban	Students will get knowledge about the housing policies and programs of the Governments and

			life in Modern Society.	other major issues relating to Urban Society.
		<b>6.3 Women Studies in India</b>	Students will come to know about the status of women in ancient medieval and modern times	Students will get knowledge about the role of State and NGOs for the empowerment of women

  
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**2018-19**

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Outcome</b>	<b>Specific Course Outcome</b>
UG		<b>B.A. I Semester DSCIA : Introduction to Sociology</b>	Students will be aware with the basic concept of Sociology	After understanding the concept, it will help them to inculcate values of ethical human being and good citizen




		<b>B.A. II Semester DSCIA : Fundamentals of Sociology</b>	Students will get knowledge of various types of social processes, social control, social stratification and mobility	Students will become aware of the changes taking place in Indian society
		<b>B.A. III Semester DSCIA : Social Research Methods</b>	Students will understand social reality with the help of research methods	Students will use the tools and techniques as instruments to meet the goal of research
		<b>B.A. III Semester SECT-1 : Society in India</b>	Students will gain a better understanding of their origin and situation	Students will understand the changes in modern marriage, family, kinship, caste and class etc.
		<b>B.A. IV Semester DSCT IV : Foundations Of Sociological Thoughts</b>	Students will get exposed to the social thoughts of Western and Indian thinkers	The knowledge of Social thoughts will provide insight to the students to have a critical understanding of Indian society.

UG		<b>B.A. IV Semester SECT 2 : Culture and Society in India</b>	Students will come to know about the significance of Indian Culture	Students will gain knowledge about different cultures, formal and informal and will get insight into different social problems.
		<b>B.A. V Semester DSE I A :Rural &amp; Urban Society in India</b>	Students will gain knowledge of Rural & Urban societies, their differences, problems	Students will come to know about the Govt. policies & programs made for the development of Rural & Urban societies.
		<b>B.A. V Semester DSE I B : Population &amp; Society</b>	Student will understand the origin and development of population studies as science, theories of population, trends in World population growth as well as in India	Students will become aware of population education, population policy in India, family planning and family welfare programs in India.
		<b>B.A. V Semester SECT 3 : Sociology of Minorities</b>	Students will become aware of various Minorities, their	Students will gain knowledge of various Constitutional

			socio-cultural values, identity, educational, economical & political contributions etc.	provisions for Minorities.
		<b>B.A. V Semester GE I : Social problems in India</b>	Students will analyze the casual factors and consequences of various social problems prevailed in Indian Society.	Students may enalve a critical out look towards the problems of Indian society and they can come out with realistic solutions to their problems.
		<b>B.A. VI Semester DSE II A : Sociology of Social movements</b>	Students will understand the concepts of movements witnessed by the Indian Society.	Student will develop the qualities of good leadership
		<b>B.A. VI Semester DSE II B :Indian Society issues and problems</b>	Students will get an insight into various issues concerns to Indian society.	Students will be able to resolve the problems and will become aware of the Constitutional

				measure taken for these problems.
		<b>B.A. VI Semester SECT 4 : Sociology of Rural Development in India</b>	Students will become aware of the three tier system i.e. Panchayat Raj, Rural Economy & rural social institutions.	Students will gain knowledge of Governmental and non-Governmental agencies working for the development of rural areas.
		<b>B.A. VI Semester GE II A : Sociology of Ageing</b>	Students will become aware of studying sociology of ageing & will come to know about the specific changes in modern families.	Students will understand the problems of the elderly and become aware of the policy and programs made for elderly people.

  
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**2019-20**

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Outcome</b>	<b>Specific Course Outcome</b>
UG		<b>B.A. I Semester DSCIA : Introduction to Sociology</b>	Students will be aware with the basic concept of Sociology	After understanding the concept, it will help them to inculcate values of ethical human being and good citizen
		<b>B.A. II Semester DSCIA : Fundamentals of Sociology</b>	Students will get knowledge of various types of social processes, social control, social stratification and mobility	Students will become aware of the changes taking place in Indian society
		<b>B.A. III Semester DSCIA : Social Research Methods</b>	Students will understand social reality with the help of research methods	Students will use the tools and techniques as instruments to

				meet the goal of research
		<b>B.A. III Semester SECT-1 : Society in India</b>	Students will gain a better understanding of their origin and situation	Students will understand the changes in modern marriage, family, kinship, caste and class etc.
		<b>B.A. IV Semester DSCT IV : Foundations Of Sociological Thoughts</b>	Students will get exposed to the social thoughts of Western and Indian thinkers	The knowledge of Social thoughts will provide insight to the students to have a critical understanding of Indian society.


UG		<b>B.A. IV Semester SECT 2 : Culture and Society in India</b>	Students will come to know about the significance of Indian Culture	Students will gain knowledge about different cultures, formal and informal and will get insight into different social problems.
		<b>B.A. V Semester DSE I A :Rural &amp; Urban Society in India</b>	Students will gain knowledge of Rural &	Students will come to know about the Govt. policies & programs made for the

			Urban societies, their differences, problems	development of Rural & Urban societies.
		<b>B.A. V Semester DSE I B : Population &amp; Society</b>	Student will understand the origin and development of population studies as science, theories of population, trends in World population growth as well as in India	Students will become aware of population education, population policy in India, family planning and family welfare programs in India.
		<b>B.A. V Semester SECT 3 : Sociology of Minorities</b>	Students will become aware of various Minorities, their socio-cultural values, identity, educational, economical & political contributions etc.	Students will gain knowledge of various Constitutional provisions for Minorities.
		<b>B.A. V Semester GE I : Social problems in India</b>	Students will analyze the casual factors and consequences of various social	Students may enalve a critical out look towards the problems of Indian society and they can come out with

			problems prevailed in Indian Society.	realistic solutions to their problems.
		<b>B.A. VI Semester DSE II A : Sociology of Social movements</b>	Students will understand the concepts of movements witnessed by the Indian Society.	Student will develop the qualities of good leadership
		<b>B.A. VI Semester DSE II B :Indian Society issues and problems</b>	Students will get an insight into various issues concerns to Indian society.	Students will be able to resolve the problems and will become aware of the Constitutional measure taken for these problems.
		<b>B.A. VI Semester SECT 4 : Sociology of Rural Development in India</b>	Students will become aware of the three tier system i.e. Panchayat Raj, Rural Economy & rural social institutions.	Students will gain knowledge of Governmental and non-Governmental agencies working for the development of rural areas.
		<b>B.A. VI Semester GE II A : Sociology of</b>	Students will become aware of studying	Students will understand the problems of the



		<b>Ageing</b>	sociology of ageing & will come to know about the specific changes in modern families.	elderly and become aware of the policy and programs made for elderly people.
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**2020-21**

Program Name	Course Code	Course Name	Course Outcome	Specific Course Outcome
UG		<b>B.A. I Semester DSCIA : Introduction to Sociology</b>	Students will be aware with the basic concept of Sociology	After understanding the concept, it will help them to inculcate values of ethical human being and good citizen
		<b>B.A. II Semester DSCIA : Fundamentals of Sociology</b>	Students will get knowledge of various types of social processes, social	Students will become aware of the changes taking place in Indian society

			control, social stratification and mobility	
		<b>B.A. III Semester DSCIA : Social Research Methods</b>	Students will understand social reality with the help of research methods	Students will use the tools and techniques as instruments to meet the goal of research
		<b>B.A. III Semester SECT-1 : Society in India</b>	Students will gain a better understanding of their origin and situation	Students will understand the changes in modern marriage, family, kinship, caste and class etc.
		<b>B.A. IV Semester DSCT IV : Foundations Of Sociological Thoughts</b>	Students will get exposed to the social thoughts of Western and Indian thinkers	The knowledge of Social thoughts will provide insight to the students to have a critical understanding of Indian society.

UG		<b>B.A. IV Semester SECT 2 : Culture and Society in India</b>	Students will come to know about the significance of Indian Culture	Students will gain knowledge about different cultures, formal and informal
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				and will get insight into different social problems.
		<b>B.A. V Semester DSE I A :Rural &amp; Urban Society in India</b>	Students will gain knowledge of Rural & Urban societies, their differences, problems	Students will come to know about the Govt. policies & programs made for the development of Rural & Urban societies.
		<b>B.A. V Semester DSE I B : Population &amp; Society</b>	Student will understand the origin and development of population studies as science, theories of population, trends in World population growth as well as in India	Students will become aware of population education, population policy in India, family planning and family welfare programs in India.
		<b>B.A. V Semester SECT 3 : Sociology of Minorities</b>	Students will become aware of various Minorities, their socio-cultural values, identity, educational, economical &	Students will gain knowledge of various Constitutional provisions for Minorities.

			political contributions etc.	
		<b>B.A. V Semester GE I : Social problems in India</b>	Students will analyze the casual factors and consequences of various social problems prevailed in Indian Society.	Students may enalve a critical out look towards the problems of Indian society and they can come out with realistic solutions to their problems.
		<b>B.A. VI Semester DSE II A : Sociology of Social movements</b>	Students will understand the concepts of movements witnessed by the Indian Society.	Student will develop the qualities of good leadership
		<b>B.A. VI Semester DSE II B :Indian Society issues and problems</b>	Students will get an insight into various issues concerns to Indian society.	Students will be able to resolve the problems and will become aware of the Constitutional measure taken for these problems.

		<b>B.A. VI Semester SECT 4 : Sociology of Rural Development in India</b>	Students will become aware of the three tier system i.e. Panchayat Raj, Rural Economy & rural social institutions.	Students will gain knowledge of Governmental and non-Governmental agencies working for the development of rural areas.
		<b>B.A. VI Semester GE II A : Sociology of Ageing</b>	Students will become aware of studying sociology of ageing & will come to know about the specific changes in modern families.	Students will understand the problems of the elderly and become aware of the policy and programs made for elderly people.

  
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**2016-17**

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Outcome</b>	<b>Specific Course Outcome</b>
PG		<b>1.1 HC–Classical Sociology - I</b>	Students will come to know about foundations of Sociological thoughts	Students will get knowledge about the principles of social life through Sociological Theories.
		<b>1.2 HC– Methods of Social Research</b>	Students will get knowledge of research strategies, various types of research tools, techniques of data collection, processing, report writing	The learned methods of research will help the students to take up research projects and for doing Ph.D
		<b>1.3 HC – Social Structure</b>	Students will come to know about the formulation of Social structure of Society	Students will come to know about the different types of Social Structures.

		<b>1.4 SC – Social Movement</b>	Students will understand Social Movements in a Sociological perspective and study examine origin and growth of various Social Movements.	Students will get the knowledge of the role of these Social Movements for bringing social transformation and change.
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		<b>1.5 SC – Sociology of Weaker Sections</b>	Students will get the knowledge about the weaker sections of Indian Society, their problems and challenges.	Students will become aware of the Constitutional Provisions of the Weaker Sections.
		<b>2.1 HC–Classical Sociology – II</b>	To know the contribution of thinkers to Classical Sociological Theory & their perceptions to the main social	To examine contemporary society and social issues through the application of

			structures, processes & existing contradictions.	Sociological perspective
		<b>2.2 HC – Social Change and mobility</b>	Students will come to know about the various approaches to study Social stratification, forms of social stratification and mobility.	Students will get the knowledge about the changes in the types of social stratification & how social mobility brings changes in the life of common man
		<b>2.3 HC – Sociology of Minorities</b>	Students will become aware of the present position and issues of Minority groups in India	Students get knowledge about the Constitutional safeguards and policies and programs initiated by the Govt. of India for the upliftment of minorities in India




		<b>2.4 SC – Social Statistics</b>	Students will understand the importance of Social Statistics in Sociological research. Understand the utility of statistical techniques for the analyses of data	The knowledge of Social Statistics will help students in employability in different departments.
		<b>2.6 SC – Open Elective Environment and Society</b>	Students will understand the relationship between human society and environment. It creates scientific knowledge towards nature, culture & environmental problems.	The knowledge of environmental degradation and sustainable development will create awareness among the students.
		<b>3.1 HC – Modern Sociological Theories</b>	Students will understand the development of Sociological Theory in post modern perspectives	Students will come to about the elements of Social System and their contributions of thinkers towards social system
		<b>3.2 HC – Rural Sociology</b>	Along with understanding rural	Students will analyze the rural social

			community, students will get knowledge about the Socio-Political and Socio-Economic conditions in Rural Society.	problems and role of Government and NGOs for the development of Rural Community and how Globalization has changed the villages
		<b>3.3 HC – Urban Sociology</b>	Students will get knowledge of Urban growth and urban living with special reference to India	It focuses on the processes of urbanization and industrialization. Students will become aware of Urban Social Institutions & Urban Social problems.
		<b>3.4 SC – Industrial Sociology</b>	Students will understand the different types of productive systems and Industrial Bureaucracy	It will make students understand issues between labour and management and how the labour welfare measures and implemented in industry.

		<b>3.6 Open Elective-Social problems &amp; policies</b>	Students will become aware of contemporary social problems facing by India.	Students will come to know about the policies & planning for development of Indian society in general & housing in particular.
		<b>4.1 HC – Modern Sociological Theories – 2</b>	Students will get knowledge of Modern Theories and development in the field of Sociology	It will help students to know recent trends in Sociological Theories and post-modernism.
		<b>4.2 HC – Sociology of Organization</b>	Students will become aware of the importance of organizations in students and in general social life	It inculcate in students leadership qualities and quality of being organized
		<b>4.3 HC – Project Work</b>	It will help the students to equip the knowledge about the field experience and also practical knowledge of the society.	Under the guidance of our faculty members students will be able to do research on certain topic and submit research projects.

				Which will help them in further research.
		<b>4.4 SC – Sociology of Profession</b>	Students will understand social history of profession and view different professions and their work cultures	Students will come to know about various professional issues
		<b>4.5 SC – Rural Society in India</b>	Students get an overview about the rural society.	Students will understand the impact of globalization on Indian Villages.

  
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## ARTMENT OF PSYCHOLOGY

2016-17

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>BA</b>	<b>BAA040T</b>  <b>BAA040P</b>	<b>General Psychology-I- CO1</b>	<b>Be able to describe the major concepts, language and major theories of the discipline to account for psychological phenomena</b>	<b>SCO1-They gain the overall theoretical concept</b>
<b>BA</b>	<b>BAB040T</b>  <b>BAB040P</b>	<b>General Psychology-II- CO2</b>	<b>Students will gain Basic knowledge about Psychology</b>	<b>SCO2-They learn the introspective method</b>
<b>BA</b>	<b>BACO40T</b>  <b>BACO40P</b>	<b>Psychological Research- CO3</b>	<b>Student will get the knowledge of Research</b>	<b>SCO3-They understand the methodology and design</b>

<b>BA</b>	<b>BACO55T</b>	<b>Lifespan development</b>	<b>Student will know the life span development</b>	<b>They understand the life span development</b>
<b>BA</b>	<b>BAD040T BADO40P</b>	<b>Developmental Psychology-I-CO4</b>	<b>Student will get the theoretical knowledge of Developmental Psychology</b>	<b>SCO4-They get the basics of developmental Psychology</b>
<b>BA</b>	<b>BAD040T BADO40P</b>	<b>Developmental Psychology-II-CO5</b>	<b>They are able to discriminate and understand the concept of infancy to older adult.</b>	<b>SCO5-They understand the theories Practical knowledge</b>
<b>BA</b>	<b>BAE048T</b>	<b>5.1. Counselling Psychology-CO6</b>	<b>They are able to identify the symptoms of client and they know theatrical and practical knowledge of therapy.</b>	<b>SCO6-They will get the overall concept of counselling and practical concept.</b>

<b>BA</b>	<b>BAO48</b>  <b>BA048P</b>	<b>5.2. Abnormal Psychology</b>	<b>They understand the basic concept of Abnormal psychology</b>	<b>SCo-6They know the symptoms of Abnormality</b>
<b>BA</b>	<b>BAF048T</b> <b>BAF048P</b>	<b>6.1. Social Psychology</b>	<b>They understand the social psychological concept of Psychology.</b>	<b>They know basic concept of Social Psychology.</b>

  
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 ಸರಕಾರಿ ಮಹಾವಿದ್ಯಾಲಯ  
 ಕಲಬುರಗಿ-587102

**2018-19 (CBCS)**

**Details of Course Outcome and Specific Course Outcome**


<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>BA</b>	<b>BAA040T</b>	<b>DSCT-1.General Psychology-I-CO1</b>	<b>Be able to describe the major concepts, language and major theories of the discipline to account for Psychological phenomena</b>	<b>SCO1-They gain the overall theoretical concept</b>
	<b>BAA040P</b>	<b>DSCP-1.Practical-I</b>		
<b>BA</b>	<b>BAB040T</b>	<b>DSCT.2.General DSCP.2.Psychology-II-CO2</b>	<b>Students will gain Basic knowledge about Psychology</b>	<b>SCO2-They learn the introspective method</b>
	<b>BAB040P</b>	<b>Practical-II</b>		
<b>BA</b>	<b>BACO40T</b>	<b>DSCT.3.Psychological Research-CO3</b>	<b>Student will get the knowledge of Research</b>	<b>SCO3-They understand the</b>



	<b>BACO40P</b>	<b>DSCP.3.Practical-III</b>		<b>methodology and design</b>
<b>BA</b>		<b>SECT-I. Basics of Psychology</b>	<b>Understand the basics of Human Psychology</b>	<b>They know behavioral pattern of individual</b>
<b>BA</b>	<b>BAD040T</b>  <b>BADO40P</b>	<b>DSCT-4Developmental Psychology-I-CO4</b>  <b>DSCP-4-Practical-4</b>	<b>Student will get the theoretical knowledge of Developmental Psychology</b>	<b>SCO4-They get the basics of developmental Psychology.</b>  <b>They understand the research orientation.</b>
<b>BA</b>		<b>SECT-4.Psychology of individual differences</b>	<b>To understand the individual differences</b>	<b>Through the Theory and practical they understand differences in their behavior</b>
<b>BA</b>	<b>BAD055T</b>	<b>DSCT-5.Developmental Psychology-II-CO5</b>	<b>They are able to discriminate and understand the</b>	<b>SCO5-They understand the</b>

	<b>BADO55P</b>	<b>DSEP.5.-Practical</b>	<b>concept of infancy to older adult.</b>	<b>theories Practical knowledge</b>
<b>BA</b>	<b>BAE161</b>	<b>SECT-III.Social Psychology</b>	<b>They understand the basics of social psychological concept of Social Psychology</b>	<b>They know attitudes and stereotype in individuals.</b>
<b>BA</b>		<b>GET-1. Educational Psychology</b>	<b>They understand the educational concept. They will know the</b>	<b>They will get the learning theories.</b>
<b>BA</b>	<b>BAA040T</b>	<b>DSET-6. Counselling Psychology-CO6 DSEP-Fieldwork and Project work.</b>	<b>They are able to identify the symptoms of client and they know theatrical and practical knowledge of therapy.</b>	<b>SCO6-They will get the overall concept of counselling and practical concept.</b>

<b>BA</b>		<b>SECT-4.Introduction to Personality</b>	<b>Student will know the Personality characteristics and behavioral patterns.</b>	<b>They understand the Theories of Personality</b>
<b>BA</b>		<b>GET.2.-Health Psychology</b>	<b>Student will get knowledge about stress and mental health</b>	<b>They understand how to reduce stress and how to improve the Mental health</b>

  
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## DEPARTMENT OF PHYSICAL EDUCATION

**2020-21**

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>BA</b>	I	Principles of Physical Education	<p>1. To develop and understanding and appreciation of importance of importance of Physical Education 2).Develop philosophical and scientific perspective of physical education.</p> <p>3)To understand and leadership social values of physical education.</p>	<p>Student will develop practical, Theoretical in Physical Education. They also acquire range of general skills, to communicate with society effectively and learn independent</p>
<b>BA</b>	II	Yoga Education	<p>1.Importanice of 2.Yoga</p> <p>3.Yoga and Health</p> <p>4.Role of yoga in enhancing sports performance.5.Effect of Asana</p>	<p>To enable the student to have good health,</p> <p>To integrate moral value, to practice mental hygiene. It helps students to join as yoga instructor.</p>
<b>BA</b>	III	History of Physical eduration	<p>1,To develop knowledge about history of P.E. and sports.</p>	<p>Its develop motor ability like strength , speed and co-</p>

			<p>2. Ability to identify sources of professional organizations.</p> <p>3. To understand prevailing types competitions and sports awards</p>	<p>ordination as they are important aspects for good performance in different games sports</p>
<b>11.BA</b>	IV	Officiating and Coaching	<p>1.To acquire the knowledge of yoga Education.</p> <p>2.To gain the theoretical experience of various asanas of yoga. 3. To make the students to understand about the Importance of research in yoga</p>	<p>A coach philosophy might be based on the coach belief in the social , emotional, moral and character building outcomes of players. Officiating provide leadership and guidance to participate and conducted and fair manner.</p>
<b>BA</b>	V	Organization in Physical Education	<p>1. Understand the concept and basic principles school management institutional planning and resource management.</p> <p>2. Understand and identify factors conducive to the</p>	<p>Physical education central exist to assist teachers, parents and others who work with youngster to guide them in the processes of becoming</p>

		or	<p>effective management of school.</p> <p>3. Activities and Physical Education Programme and facilities.</p>	<p>physically active and healthy for a life time.</p>
		Recreation in Physical Education	<p>1.Need and importance of recreation in Physical Education.</p> <p>2. Scope of recreation in Physical Education</p> <p>3.Values of recreation in Physical Education.</p> <p>Pramotion of P E</p>	<p>Student wills develop competency in many movement activity.</p> <p>They will achieve maintain health enhancing level of physical fitness. They will also understand the relationship between history, culture and games</p>

BA	VI	<p>Methods of Physical Education</p> <p>or</p>	<p>To develop awareness of teaching methods and science f teaching.</p> <p>To make the best use of instructional aides of all kinds.</p> <p>To develop unit plan and innovative lesson plan for developing concepts and acquisition of subject specific skills.</p>	<p>Students will demonstrate knowledge of physiological and sociological concept, principal and strategies that apply physical activity and sports. Student will demonstrate to skill safely engage in physical activity.</p>
		First Aid, Health, and Safety Education	<p>1. Develop health awareness, right attitude and habits for healthy living in personal family and community life.</p>	<p>This helps to employs learn to before conscious of safety in work place leading to a reduced number of accident and injury but</p>

			<p>2. Develop interest and ability to involve themselves and take responsibilities for implementing health and safety education activities in the school and community.</p> <p>3. Develop an awareness of nutrition health hazards, diseases and their prevention.</p>	for employers it has implications within all aspects of bossiness operation
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 GOVT. COLLEGE  
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**2019-20**


<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>BA</b>	I	Principles of Physical Education	1. To develop and understanding and appreciation of importance of importance of Physical Education 2).Develop philosophical and scientific perspective of physical education.  3)To understand and leadership social values of physical education.	Student will develop practical, Theoretical in Physical Education.  They also acquire range of general skills, to communicate with society effectively and learn independent
<b>BA</b>	II	Yoga Education	1.Importanice of 2.Yoga  3.Yoga and Health  4.Role of yoga in enhancing sports performance.5.Effect of Asana	To enable the student to have good health,  To integrate moral value, to practice mental hygiene. It helps students to join as yoga instructor.
<b>BA</b>	III	History of Physical eduration	1,To develop knowledge about history of P.E. and sports.	Its develop motor ability like strength , speed and co-

			<p>2. Ability to identify sources of professional organizations.</p> <p>3. To understand prevailing types competitions and sports awards</p>	<p>ordination as they are important aspects for good performance in different games sports</p>
<b>11.BA</b>	IV	Officiating and Coaching	<p>1.To acquire the knowledge of yoga Education.</p> <p>2.To gain the theoretical experience of various asanas of yoga. 3. To make the students to understand about the Importance of research in yoga</p>	<p>A coach philosophy might be based on the coach belief in the social , emotional, moral and character building outcomes of players. Officiating provide leadership and guidance to participate and conducted and fair manner.</p>
<b>BA</b>	V	Organization in Physical Education	<p>1. Understand the concept and basic principles school management institutional planning and resource management.</p> <p>2. Understand and identify factors conducive to the effective management of school.</p>	<p>Physical education central exist to assist teachers, parents and others who work with youngster to guide them in the processes of becoming physically active and healthy for a life time.</p>

		or	3. Activities and Physical Education Programme and facilities.	
		Recreation in Physical Education	<p>1. Need and importance of recreation in Physical Education.</p> <p>2. Scope of recreation in Physical Education</p> <p>3. Values of recreation in Physical Education.</p> <p>Promotion of P E</p>	<p>Student will develop competency in many movement activity.</p> <p>They will achieve maintain health enhancing level of physical fitness. They will also understand the relationship between history, culture and games</p>

BA	VI	Methods of Physical Education  or	<p>To develop awareness of teaching methods and science f teaching.</p> <p>To make the best use of instructional aides of all kinds.</p> <p>To develop unit plan and innovative lesson plan for developing concepts and acquisition of subject specific skills.</p>	Students will demonstrate knowledge of physiological and sociological concept, principal and strategies that apply physical activity and sports. Student will demonstrate to skill safely engage in physical activity.
		First Aid, Health, and Safety Education	1. Develop health awareness, right attitude and habits for healthy living in personal family and community life.	This helps to employs learn to before conscious of safety in work place leading to a reduced number of accident and injury

			<p>2. Develop interest and ability to involve themselves and take responsibilities for implementing health and safety education activities in the school and community.</p> <p>3. Develop an awareness of nutrition health hazards, diseases and their prevention.</p>	<p>but for employers it has implications within all aspects of bossiness operation</p>
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**2018-19**

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>BA</b>	DSC-I	Foundation of Physical Education	1. To develop and understanding and appreciation of importance of importance of Physical Education 2).Develop philosophical and scientific perspective of physical education.  3)To understand and leadership social values of physical education.	Student will develop practical, Theoretical in Physical Education.  They also acquire range of general skills, to communicate with society effectively and learn independent
<b>BA</b>	DSC-2	Yoga	1.Importanice of 2.Yoga  3.Yoga and Health  4.Role of yoga in enhancing sports performance.5.Effect of Asana	To enable the student to have good health,  To integrate moral value, to practice mental hygiene. It helps students to join as yoga instructor.
		History of Physical Education	1,To develop knowledge about history of P.E. and sports.	Areas of Employment After the completion of the Physical Education course a student can

	DSC-3.2		<p>2. Ability to identify sources of professional organizations.</p> <p>3. To understand prevailing types competitions and sports awards.</p>	<p>be assistant professor, director, high school and primary teacher, fitness trainer, physical therapist, human kinetics,</p> <p>Sports nutritionists, and even sports psychologists</p> <p>Army, Police , all central government jobs, bank sector ETC....</p>
<b>BA</b>	SEC-1	Basic Yoga	<p>1.To acquire the knowledge of yoga Education.</p> <p>2.To gain the theoretical experience of various asanas of yoga. 3. To make the students to understand</p>	

			about the Importance of research in yoga.	
<b>BA</b>	DSC-4.2	Organization in Physical Education	<p>1. Understand the concept and basic principles school management institutional planning and resource management.</p> <p>2. Understand and identify factors conducive to the effective management of school.</p>	Its develop motor ability like strength , speed and co-ordination as they are important aspects for good performance in different games sports



			3. Activities and Physical Education Programme and facilities.	
<b>BA</b>	SEC-2	Health Education	<p>1. Develop health awareness, right attitude and habits for healthy living in personal family and community life.</p> <p>2. Develop interest and ability to involve themselves and take responsibilities for implementing health and safety education activities in the school and community.</p> <p>3. Develop an awareness of nutrition health hazards, diseases and their prevention.</p>	<p><b>Areas of Employment</b> After the completion of the Physical Education course a student can be assistant professor, director, high school and primary teacher, fitness trainer, physical therapist, human kinetics,</p>

				<p>Sports nutritionists, and even sports psychologists</p> <p>Army, Police , all central government jobs, bank sector ETC....</p>
	SEC-3	Computer Application in Physical Education	<p>1.To acquire the knowledge of basic computer application.</p> <p>2. To gain the theoretical experience of various aspects of computer.</p> <p>3.To make the students to understand the importance and practical application of basic computer</p> <p>The range of application of computers in Physical education is wide from education software, activity designing and planning biomechanics video analysis,</p>	<p>Areas of Employment</p> <p>After the completion of the Physical Education course a student can be assistant professor, director, high school and primary teacher, fitness trainer, physical therapist, human kinetics,</p> <p>Sports nutritionists, and even sports psychologists</p> <p>Army, Police , all central government jobs, bank sector ETC....</p>


			performance comparing and time measurement and activity evaluation of best possible outcome	
	DSC-5.1	School Management and Environment  or	<p>1.To acquire the knowledge of school Management Environment studies in Physical Education.</p> <p>2. To gain the theoretical experience of various aspects of social management and environment.</p>	<p>Areas of Employment</p> <p>After the completion of the Physical Education course a student can be assistant professor, director, high school and primary teacher, fitness trainer, physical therapist, human kinetics,</p>

	DSC-5.2	Recreation in Physical Education	3. To make the students to understand about the various role of physical	Sports nutritionists, and even sports psychologists  Army, Police , all central government jobs, bank sector ETC....
			education teacher in social and environment of school.  1.Need and importance of recreation in Physical Education.  2. Scope of recreation in Physical Education  3.Values of recreation in Physical Education.	Areas of Employment After the completion of the Physical Education course a student can be assistant professor, director, high school and primary teacher, fitness trainer, physical therapist, human kinetics,  Sports nutritionists, and even sports psychologists  Army, Police , all central government jobs, bank sector ETC....

	SEC-6	Recreation in Physical Education	<p>1. Need and importance of recreation in Physical Education.</p> <p>2. Scope of recreation in Physical Education</p> <p>3. Values of recreation in Physical Education.</p> <p>Promotion of P E</p>	<p>Areas of Employment</p> <p>After the completion of the Physical Education course a student can be assistant professor, director, high school and primary teacher, fitness trainer, physical therapist, human kinetics,</p> <p>Sports nutritionists, and even sports psychologists</p> <p>Army, Police, all central government jobs, bank sector ETC....</p>
<b>11.BA</b>	DSC-6.1	Health First aid safety in Physical Education	<p>1. Develop health awareness, right attitude and habits for healthy living in personal family and community life.</p> <p>2. Develop interest and ability to involve themselves and take responsibilities for implementing health and</p>	<p>A coach philosophy might be based on the coach belief in the social, emotional, moral and character building outcomes of players. Officiating provide leadership and guidance to participate</p>

			<p>safety education activities in the school and community.</p> <p>3. Develop an awareness of nutrition health hazards, diseases and their prevention</p>	<p>and conducted and fair manner.</p>
<b>BA</b>		<p>or</p>	<p>1. Understand the concept and basic principles school management institutional planning and resource management.</p> <p>2. Understand and identify factors conducive to the effective management of school.</p> <p>3. Activities and Physical Education Programme and facilities.</p>	<p>Physical education central exist to assist teachers, parents and others who work with youngster to guide them in the processes of becoming physically active and healthy for a life time.</p>

		DSC-6.2 Methodology of Teaching	<p>1. To develop awareness of teaching methods and science of teaching.</p> <p>2.To make the best use of instructional AIDS of all kinds. 3.To develop unit plan and innovative lesson plan for developing concepts and acquisition ofsubject specific skills</p>	<p>Student will develop competency in many movement activity. They will achieve maintain health enhancing level of physical fitness. They will also understand the relationship between history, culture and games</p>
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 ಕಲಬುರಗಿ-585105

**2017-18**

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
BA	I	Principles of Physical Education	<p>1. To develop and understanding and appreciation of importance of importance of Physical Education 2).Develop philosophical and scientific perspective of physical education.</p>	<p>Student will develop practical, Theoretical in Physical Education. They also acquire range of general skills, to communicate with</p>


			3)To understand and leadership social values of physical education.	society effectively and learn independent
<b>BA</b>	II	Yoga Education	1.Importance of 2.Yoga 3.Yoga and Health 4.Role of yoga in enhancing sports performance.5.Effect of Asana	To enable the student to have good health,  To integrate moral value, to practice mental hygiene. It helps students to join as yoga instructor.
<b>BA</b>	III	History of Physical education	1,To develop knowledge about history of P.E. and sports.  2. Ability to identify sources of professional organizations.  3. To understand prevailing types competitions and sports awards	Its develop motor ability like strength , speed and co-ordination as they are important aspects for good performance in different games sports
<b>11.BA</b>	IV	Officiating and Coaching	1.To acquire the knowledge of yoga Education.  2.To gain the theoretical experience of various asanas of yoga. 3. To make the students to understand	A coach philosophy might be based on the coach belief in the social , emotional, moral and character building outcomes of



			about the Importance of research in yoga	players. Officiating provide leadership and guidance to participate and conducted and fair manner.
<b>BA</b>	V	<p>Organization in Physical Education</p> <p>or</p>	<p>1. Understand the concept and basic principles school management institutional planning and resource management.</p> <p>2. Understand and identify factors conducive to the effective management of school.</p> <p>3. Activities and Physical Education Programme and facilities.</p>	Physical education central exist to assist teachers, parents and others who work with youngster to guide them in the processes of becoming physically active and healthy for a life time.

		Recreation in Physical Education	<p>1. Need and importance of recreation in Physical Education.</p> <p>2. Scope of recreation in Physical Education</p> <p>3. Values of recreation in Physical Education.</p> <p>Promotion of P E</p>	<p>Student will develop competency in many movement activity. They will achieve maintain health enhancing level of physical fitness. They will also understand the relationship between history, culture and games</p>
<b>BA</b>		<p>Methods of Physical Education</p> <p>or</p>	<p>To develop awareness of teaching methods and science of teaching.</p> <p>To make the best use of instructional aids of all kinds.</p> <p>To develop unit plan and innovative lesson plan for developing concepts and acquisition of subject specific skills.</p>	<p>Students will demonstrate knowledge of physiological and sociological concept, principal and strategies that apply physical activity and sports. Student will demonstrate to skill safely engage in physical activity.</p>

	VI	First Aid, Health, and Safety Education	<p>1. Develop health awareness, right attitude and habits for healthy living in personal family and community life.</p> <p>2. Develop interest and ability to involve themselves and take responsibilities for implementing health and safety education activities in the school and community.</p> <p>3. Develop an awareness of nutrition health hazards, diseases and their prevention.</p>	<p>This helps to employs learn to before conscious of safety in work place leading to a reduced number of accident and injury but for employers it has implications within all aspects of bossiness operation</p>
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## DEPARTMENT OF PHYSICS

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
B.Sc. (AUTONOMOUS)	B.Sc. I SEM/1	Mechanics & Properties of Matter	It has two-fold role in preparing the students for linear, angular motion, hydrodynamics & Rigid bodies	Students can acquire various mechanical skills to determine MI , Y, n, k of rigid bodies.
	B.Sc. II SEM/2	Heat, Thermodynamics, Waves & Oscillations and Bio Physics	To understand the basic principle and laws of thermodynamics, wave mechanics, cell biology related to physics.	This course gives strong foundation in the fields of thermal, waves and biophysics.
	B.Sc. III SEM/3	Optics, Laser & Fibre optics & Electricity	To provide a good foundation in optics and knowledge of the behavior of light, Students acquire skills in fibre optics, lasers. Also to acquire basic knowledge of electric and magnetic properties.	Students acquire skills in various types of lasers, fiber optics and basics of electricity.
	B.Sc. V SEM/5.1	Atomic & Molecular Physics	Students able to obtain knowledge about the spectroscopy, generation of lasers and their applications.	Students acquire skills in various types of lasers, spectroscopy techniques.

	B.Sc. V SEM/5.2	Quantum Mechanics, Statistical Mechanics & Material physics	This course gives the basics of quantum mechanics. Also this paper pertains to the study of statistical concepts, distinguishing features of classical and quantum statistics, This course intends to show the significance of engineering materials, amorphous materials, dielectric, ferroelectric and magnetic materials.	Student develops a knowledge and understanding about 1D problems,. They learn how to apply FD, MB, BE statistics to various properties of matter. They learn about the significance of engineering materials.
	B.Sc. VI SEM/6.1	Nuclear physics & Solid State Physics	Students acquire knowledge about Nuclear & particle Physics. Students can able to predict the properties of the crystals and acquire knowledge about superconductors.	Explore an application of nuclear radiation physics and communicate their understanding to a group of their peers. The various properties of the crystal can be acquired.
	B.Sc VI SEM/6.2	Electronics, Astrophysics, Plasma Physics & Diagnostic physics	Students acquire knowledge on Fundamentals of Electronics, Astrophysics. Students acquire knowledge about basics of plasma physics and their applications. Also they acquire the basic knowledge about diagnostic instruments and their working and principle.	Bulding of gates, Op-Amps, study of stellar space, skills in diagnostic instruments.
B.Sc. (CBCS)	BSA031T	Mechanics	It has two-fold role in preparing the students for linear , angular motion, hydrodynamics & Rigid bodies.	Acquires the mathematical study of the motion of everyday objects and the forces that effect them.

	BSB031T	Electricity, Magnetism and Electromagnetic Theory	Study the electric field, voltage, Gauss law, Faradays law, Maxwells equations .It provide a good foundation in basic knowledge of electric and magnetic properties. Students acquire skills in Electromagnetic theory	Understands the devices, methods and systems used for electrical energy.
	BSC031T	Thermal Physics and Statistical Mechanics	Students acquire skills in Thermal Physics & Statistical Mechanics	Identify and solve problems in statistical mechanics using ensemble theory.
	BSC062T	Physics Workshop skill	Students acquire skills in Tools & Machine and their measurements	Students acquire skills in Tools & Machine and their measurements
	SEC-1B	Electrical ckts and Network Skills	Students acquire skills in Electrical circuits & their basic instrumentation	Students acquire skills in Electrical circuits & their basic instrumentation
	BSE031T	Atomic and Molecular Physics	Students acquire knowledge about vector model, coupling schemes, spectroscopy, laser techniques and their applications.	Skills about the physical properties of atoms & molecules.
	BSEO32T	Quantum Mechanics, Medical Physics and Method of Mathematical Physics	Students acquire basic knowledge in quantum mechanics, prominent medical instruments and their applications and mathematical methods.	Skills to solve bound problems in quantum mechanics, diagnostic instruments, application of mathematical methods in physics.

	BSE165T	Renewable Energy & Energy Harvesting	This course is designed for open elective students. Students acquire knowledge about Renewable Energy Sources and ways to harvest the energy.	Basic knowledge helps other than physics students to appear in competitive exams
	DSET 6.1	Digital and Analog Circuits and Nanomaterials	Students acquire knowledge in Digital and Analog circuits and also basics of Nanomaterials and their applications.	Students acquire knowledge in Digital and Analog circuits and also basics of Nanomaterials and their applications
	DSET 6.2	Solid state physics & Nuclear Physics	Analyse the relationship between conductors, insulators, semiconductors, superconductors, crystal structure, classification, Students acquire knowledge about Nuclear model, meson theory, various decays, counters, detectors, Quark model .	Acquires skills in preparing new materials. Gains knowledge how to use various nuclear detectors and accelerators.
	SECT 4A	Applied Optics	Students acquire skills in fibre optics and photonics	Basic knowledge helps other than physics students to appear in competitive exams
M.Sc. (GUG)	HCT 1.1	Classical Mechanics	It has a twofold role in preparing the student for the study of modern physics. It serves as the springboard for the various branches of modern physics.	Acquires the mathematical study of the motion of everyday objects and the forces that affect them.

	HCT 1.2	Electrodynamics	Students acquire knowledge in the interaction of relativistic charged particles with electromagnetic fields.	It introduce the students to the world of electromagnetic fields and their use for society.
	HCT 1.3	Introductory Quantum Mechanics	The purpose of this course is to introduce to the graduate student, the concepts of quantum mechanics, to describe the mathematical formalism.	Skills to solve 1D & 3D bound problems in physics.
	SCT 1.1	Mathematical Physics-I	Students acquire knowledge in Special functions, Calculus, Group theory, Green's function.	Applies the concepts and theories of a range of advanced topics in physics.
	SCT 1.2	Applied Physics	This course is designed to suit the graduate students, to get a glimpse of the advancements in the field of Lasers, Solid state devices, Radiation physics and Nanomaterials .	Skills in various types of lasers, applications, optical fibres, fabrication of nanomaterials.
	HCT 2.1	Basic Nuclear Physics	Students acquire knowledge about Nuclear & particle Physics	Students acquire skills to study nuclear radiation effects in their surroundings
	HCT 2.2	Basic Solid State Physics	Students can able to predict the properties of the crystals and acquire skill about X-ray pattern.	The subject will be useful to gain an understanding the typical properties of different solid state matter.
	SCT 2.1	Atomic & Molecular Physics	Students able to obtain knowledge about the spectroscopy, generation of lasers and their applications.	Skills about the physical properties of atoms & molecules.



	SCT 2.2	Plasma Physics	Students acquire knowledge about basics of plasma physics and their applications.	It enables in prediction of space weather, controlled fusion, accelerator physics.
	OET 2.1	Elementary concepts in Physics	This course is an open elective designed for the graduate students other than physics to acquire the basic elementary concepts in physics.	Basic knowledge helps other than physics students to appear in competitive exams.
	OET 2.2	Modern Physics	This course is a Generic elective one and is designed to suit the graduate students, other than physics, to get a glimpse of the advancements in the field of modern physics.	Basic knowledge helps other than physics students to appear in competitive exams.
	HCT 3.1	Electronics & Instrumentation	Students acquire knowledge about digital electronics, analog, transducers, measurements of various physical parameters and various experimental techniques.	Skills for the Fabrication of IC's ,Op-Amp, acquires knowledge about various characterization techniques & their applications .
	HCT 3.2	Mathematical Physics-II	Students acquire various Numerical approximations and Numerical Technical skills viz. LSF, Integration, Differentiation, solving ODE.	Applies the concepts and theories of a range of advanced topics in physics.

	SCT 3.1	Solid State Physics I/ Materials Physics I/ Nano Physics	<p>Students can able to predict the properties of the crystals and acquire skill about X-ray pattern.</p> <p>This course intends to show the significance of engineering materials, crystal growth techniques, importance of phase diagrams ,amorphous materials, dielectric ,ferroelectric and magnetic materials.</p> <p>Students acquire knowledge about the essence of nanomaterials and their synthesis.</p>	Acquires skills in characterization techniques, synthesis of various material & nanomaterials.
	SCT 3.2	Nuclear Physics I/ Energy Physics I/ Biophysics I	<p>Students acquire knowledge about Nuclear &amp; particle Physics.</p> <p>Students acquire skill to become Biophysicist.</p> <p>Students acquire knowledge about renewable &amp; non-renewable sources of energy and know how to harness the energy resources.</p>	Biological effects of nuclear radiation can be studied, harness of energy resources, how to use physics theories in plant/animal cells etc.
	OET 3.1	Mechanics	This course is an open elective designed for the graduate students other than physics to acquire the basic elementary concepts in physics.	Basic knowledge helps other than physics students to appear in competitive exams.
	OET 3.2	Radiation Physics	This course is an open elective designed for the graduate students other than physics to acquire the basic elementary concepts in radiation physics.	Basic knowledge helps other than physics students to appear in competitive exams.

	HCT 4.1	Statistical Mechanics	This paper pertains to the study of thermodynamics and statistical concepts, distinguishing features of classical and quantum statistics, irreversible phenomena and fluctuation theory.	Identify and solve problems in statistical mechanics using ensemble theory.
	HCT 4.2	Quantum Mechanics-II	This course is an advanced course. The student, after getting the exposure of introductory quantum mechanics in the earlier semester will be taught the advanced topics in quantum mechanics.	Develop knowledge and understanding of the concepts of Approximation methods , scattering theory to solve various problems.
	SCT 4.1	Solid State Physics II/ Materials Physics II/ Semiconductor Physics and devices	<p>Students can able to predict the properties of the crystals and acquire skill about X-ray pattern.</p> <p>This course intends to show the significance of engineering materials, crystal growth techniques, importance of phase diagrams , amorphous materials, dielectric ,ferroelectric and magnetic materials.</p> <p>Students acquire knowledge about the essence of nanomaterials and their synthesis.</p>	Acquires skills in characterization techniques, synthesis of various material & nanomaterials.


	SCT 4.2	Nuclear Physics II/ Energy Physics II/ Biophysics II	<p>Students acquire knowledge about Nuclear &amp; particle Physics.</p> <p>Students acquire skill to become Biophysicist.</p> <p>Students acquire knowledge about renewable &amp; non-renewable sources of energy.</p>	Biological effects of nuclear radiation can be studied, harness of energy resources, how to use physics theories in plant/animal cells etc.
	HCMP 4.3	Project	This project will be the basic foundations for students to do research in their respective work.	Acquires strong knowledge to do M.Phil, Ph.D. etc.
M.Sc.(CBCS)	PHA001	Classical Mechanics	It has a twofold role in preparing the student for the study of modern physics. It serves as the springboard for the various branches of modern physics.	Acquires the mathematical study of the motion of everyday objects and the forces that affect them.
	PHA002	Condensed Matter Physics	Students can able to predict the properties of the crystals and acquire skill about X-ray pattern.	The subject will be useful to gain an understanding the typical properties of different solid state matter.

	PHA003	Electrodynamics	Students acquire knowledge in the interaction of relativistic charged particles with electromagnetic fields.	It introduce the students to the world of electromagnetic fields and their use for society.
	PHA021	Mathematical Methods of Physics	Students acquire various Numerical approximations and Numerical Technical skills	Applies the concepts and theories of a range of advanced topics in physics.
	PHA022	Fundamentals of Astrophysics	Students acquire knowledge on Fundamentals of Astrophysics	Students will acquire knowledge to become astrophysicist.
	PHB001	Quantum Mechanics-I	The purpose of this course is to introduce to the graduate student, the concepts of quantum mechanics, to describe the mathematical formalism.	Skills to solve 1D & 3D bound problems in physics.
	PHB002	Nuclear & Particle Physics	Students acquire knowledge about Nuclear & particle Physics	Students acquire skills to study nuclear radiation effects in their surroundings.
	PHB021	Statistical Mechanics	This paper pertains to the study of thermodynamics and statistical concepts, distinguishing features of classical and quantum statistics, irreversible phenomena and fluctuation theory.	Identify and solve problems in statistical mechanics using ensemble theory.

	PHB022	Plasma Physics	Students acquire knowledge about basics of plasma physics and their applications.	It enables in prediction of space weather, controlled fusion, accelerator physics.
	PHB051	Modern Physics	This course is an Generic elective one and is designed to suit the graduate students, other than physics, to get a glimpse of the advancements in the field of modern physics.	Basic knowledge helps other than physics students to appear in competitive exams.
	PHC001	Quantum Mechanics-II	This course is an advanced course. The student, after getting the exposure of introductory quantum mechanics in the earlier semester will be taught the advanced topics in quantum mechanics.	Develop knowledge and understanding of the concepts of Approximation methods , scattering theory to solve various problems.
	PHC002	Electronics & Experimental Methods in Physics	Students acquire knowledge about digital electronics, analog, transducers, measurements of various physical parameters and various experimental techniques.	Skills for the Fabrication of IC's ,Op-Amp, acquires knowledge about various characterization techniques & their applications .
	PHC021	Biophysics-I	Students acquire skill to become Biophysicist.	Students acquire skill to become Biophysicist.
	PHC022	Nanophysics-I	Students acquire knowledge about the essence of nanomaterials and their synthesis.	Students acquire knowledge about the essence of

				nanomaterials and their synthesis.
	PHC051	Applied Physics	This course is an open elective one and is designed to suit the graduate students, other than physics, to get a glimpse of the advancements in the field of Lasers, Solid state devices, Radiation physics and Nanomaterials .	Basic knowledge helps other than physics students to appear in competitive exams.
	PHD001	Atomic & Molecular Physics	Students able to obtain knowledge about the spectroscopy, generation of lasers and their applications.	Skills about the physical properties of atoms & molecules.
	PHD002	Materials Physics	This course intends to show the significance of engineering materials, crystal growth techniques, importance of phase diagrams ,amorphous materials, dielectric ,ferroelectric and magnetic materials.	Acquires skills to make best materials, which are useful & ecofriendly to the society.
	PHD021	Biophysics-II	Students acquire skill to become Biophysicist.	Skills to become Biophysicist.
	PHD022	Nanophysics-II	Students acquire knowledge about the essence of nanomaterials and their synthesis.	Skills to prepare various nanomaterials, smart materials which are helpful to the society.

	CCPR 4.1	Project Work	This project will be the basic foundations for students to do research in their respective work.	Acquires strong knowledge to do M.Phil, Ph.D. etc.
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## DEPARTMENT OF CHEMISTRY

**2016-17**


Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
<b>B.Sc.</b>	CHT-101, CHT 102, CHT 103  CHP 104	Inorganic-Chemistry Organic-Chemistry Physical-Chemistry  Laboratory	<p><b>Inorganic</b>-Recognize fundamental variables &amp; general trend across the periodic table &amp; molecular geometries &amp; structure.</p> <p><b>Organic</b>-Predict &amp; explain patterns in shape, structure, bonding, stability, solubility &amp; reactivity.</p> <p><b>Physical</b>-The aim is to provide a core for future studies &amp; allied subjects in aspects as specified.</p>	To become a scientists in industries, chemists in cement factory, sugar factory, health department, to become a teacher, lecturer etc.,



<b>B.Sc.</b>	CHT-201, CHT 202, CHT 203  CHP 204	Inorganic-Chemistry Organic-Chemistry Physical-Chemistry  Laboratory	<p><b>Inorganic</b>-Recognize fundamental variables &amp; general trend across the periodic table &amp; molecular geometries &amp; structure.</p> <p><b>Organic</b>-Predict &amp; explain patterns in shape, structure, bonding, stability, solubility &amp; reactivity.</p> <p><b>Physical</b>-The aim is to provide a core for future studies &amp; allied subjects in aspects as specified.</p>	To become a scientists in industries, chemists in cement factory, sugar factory, health department, to become a teacher, lecturer etc.,
<b>B.Sc.</b>	CHT-301, CHT 302, CHT 303  CHP 304	Inorganic-Chemistry Organic-Chemistry Physical-Chemistry  Laboratory	<p><b>Inorganic</b>-Recognize fundamental variables &amp; general trend across the periodic table &amp; molecular geometries &amp; structure.</p> <p><b>Organic</b>-Predict &amp; explain patterns in shape, structure, bonding, stability, solubility &amp; reactivity.</p> <p><b>Physical</b>-The aim is to provide a core for future studies &amp; allied subjects in aspects as specified.</p>	To become a scientists in industries, chemists in cement factory, sugar factory, health department, to become a teacher, lecturer etc.,
<b>B.Sc.</b>	CHT-401, CHT 402, CHT 403  CHP 404	Inorganic-Chemistry Organic-Chemistry Physical-Chemistry  Laboratory	<p><b>Inorganic</b>-Recognize fundamental variables &amp; general trend across the periodic table &amp; molecular geometries &amp; structure.</p> <p><b>Organic</b>-Predict &amp; explain patterns in shape, structure, bonding, stability, solubility &amp; reactivity.</p> <p><b>Physical</b>-The aim is to provide a core for future studies &amp; allied subjects in aspects as specified.</p>	To become a scientists in industries, chemists in cement factory, sugar factory, health department, to become a teacher, lecturer etc.,

<b>B.Sc.</b>	CHT-501,	Theory	<p><b>Inorganic</b>-Recognize fundamental variables &amp; general trend across the periodic table &amp; molecular geometries &amp; structure.</p> <p><b>Organic</b>-Predict &amp; explain patterns in shape, structure, bonding, stability, solubility &amp; reactivity.</p> <p><b>Physical</b>-The aim is to provide a core for future studies &amp; allied subjects in aspects as specified.</p>	To become a scientists in industries, chemists in cement factory, sugar factory, health department, to become a teacher, lecturer etc.,
	CHP-501	Laboratory		
<b>B.Sc.</b>	CHT-502,	Theory	<p><b>Inorganic</b>-Recognize fundamental variables &amp; general trend across the periodic table &amp; molecular geometries &amp; structure.</p> <p><b>Organic</b>-Predict &amp; explain patterns in shape, structure, bonding, stability, solubility &amp; reactivity.</p> <p><b>Physical</b>-The aim is to provide a core for future studies &amp; allied subjects in aspects as specified.</p>	To become a scientists in industries, chemists in cement factory, sugar factory, health department, to become a teacher, lecturer etc.,
	CHP-502	Laboratory		
	CHT-601,	Theory	<p><b>Inorganic</b>-Recognize fundamental variables &amp; general trend across the periodic table &amp; molecular geometries &amp; structure.</p> <p><b>Organic</b>-Predict &amp; explain patterns in shape, structure, bonding, stability, solubility &amp; reactivity.</p> <p><b>Physical</b>-The aim is to provide a core for future studies &amp; allied subjects in aspects as specified.</p>	To become a scientists in industries, chemists in cement factory, sugar factory, health department, to become a teacher, lecturer etc.,
	CHP-601	Laboratory		

<b>B.Sc.</b>	CHT-602,	Theory	<p><b>Inorganic</b>-Recognize fundamental variables &amp; general trend across the periodic table &amp; molecular geometries &amp; structure.</p> <p><b>Organic</b>-Predict &amp; explain patterns in shape, structure, bonding, stability, solubility &amp; reactivity.</p> <p><b>Physical</b>-The aim is to provide a core for future studies &amp; allied subjects in aspects as specified.</p>	To become a scientists in industries, chemists in cement factory, sugar factory, health department, to become a teacher, lecturer etc.,
	CHP-602	Laboratory		

  
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### 2018-19 (CBCS)


Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
<b>B.Sc.</b>	DSC-CHEM-A (T)	Inorganic-Chemistry Organic-Chemistry	<p><b>Inorganic</b>-Recognize fundamental variables &amp; general trend across the periodic table &amp; molecular geometries &amp; structure.</p> <p><b>Organic</b>-Predict &amp; explain patterns in shape, structure, bonding, stability, solubility &amp; reactivity.</p> <p><b>Physical</b>-The aim is to provide a core for future studies &amp; allied subjects in aspects as specified.</p>	To become a scientists in industries, chemists in cement factory, sugar factory, health department, to become a teacher, lecturer etc.,
	DSC-CHEM-A (L)	Laboratory		

<b>B.Sc.</b>	DSC-CHEM-B (T)	Physical Chemistry Organic Chemistry	<p><b>Inorganic</b>-Recognize fundamental variables &amp; general trend across the periodic table &amp; molecular geometries &amp; structure.</p> <p><b>Organic</b>-Predict &amp; explain patterns in shape, structure, bonding, stability, solubility &amp; reactivity.</p> <p><b>Physical</b>-The aim is to provide a core for future studies &amp; allied subjects in aspects as specified.</p>	To become a scientists in industries, chemists in cement factory, sugar factory, health department, to become a teacher, lecturer etc.,
	DSC-CHEM-B (L)	Laboratory		
<b>B.Sc.</b>	DSC-CHEM-C (T)	Inorganic Chemistry Organic Chemistry Physical Chemistry	<p><b>Inorganic</b>-Recognize fundamental variables &amp; general trend across the periodic table &amp; molecular geometries &amp; structure.</p> <p><b>Organic</b>-Predict &amp; explain patterns in shape, structure, bonding, stability, solubility &amp; reactivity.</p> <p><b>Physical</b>-The aim is to provide a core for future studies &amp; allied subjects in aspects as specified.</p>	To become a scientists in industries, chemists in cement factory, sugar factory, health department, to become a teacher, lecturer etc.,
	DSC-CHEM-C (L)	Laboratory		
	SEC-CHEM-1	Chemo-informatics	<b>Chemo-informatics</b> - It Provides computer methods for learning from chemical data and for modeling tasks a chemist is facing.	Students becomes perfect in handling system to draw the chemical structure
		Analytical Clinical Biochemistry	<b>Analytical clinical biochemistry</b> - It deals with the laboratory medicine with the measurement of chemicals in blood, urine	Students primitive knowledge about laboratory techniques

			and other body fluids. These test results are useful for detecting health problems.	
<b>B.Sc.</b>	DSC-CHEM-D (T)	Inorganic Chemistry	<b>Inorganic</b> -Recognize fundamental variables & general trend across the periodic table & molecular geometries & structure.	To become a scientists in industries, chemists in cement factory, sugar factory, health department, to become a teacher, lecturer etc.,
	DSC-CHEM-D (L)	Organic Chemistry	<b>Organic</b> -Predict & explain patterns in shape, structure, bonding, stability, solubility & reactivity.	
		Physical Chemistry	<b>Physical</b> -The aim is to provide a core for future studies & allied subjects in aspects as specified.	
	SEC-CHEM-2	Laboratory		
		Pesticide Chemistry	<b>Pesticides chemistry</b> - They help farmers grow more food on less land by protecting crops from pests, diseases and weeds as well as raising productivity per hectare.	Students gets enriched with preservative techniques of Seeds and pulses
		Green Methods in Chemistry	<b>Green methods in chemistry</b> - Aims to design and produce cost-competitive chemical products and processes that attain the highest level of the pollution-prevention hierarchy by reducing pollution at its source	Student learns eco-friendly methods of chemical synthesis
<b>B.Sc.</b>	DSC-CHEM-E (T)	Analytical Methods in Chemistry	<b>Inorganic</b> -Recognize fundamental variables & general trend across the periodic table & molecular geometries & structure.	To become a scientists in industries, chemists in cement factory, sugar factory, health department, to become a teacher, lecturer etc.,
	DSC-CHEM-E (L)	Laboratory	<b>Organic</b> -Predict & explain patterns in shape, structure, bonding, stability, solubility & reactivity.	

			<b>Physical</b> -The aim is to provide a core for future studies & allied subjects in aspects as specified.	
	SEC-CHEM-3	Basic Analytical Chemistry	<b>Basic analytical chemistry</b> - It provides the compound separation, identification and quantification for measuring bioavailability of drugs, purifying drugs during synthesis.	Students learn basic methods for drug analysis
		Pharmaceutical Chemistry	<b>Pharmaceutical chemistry</b> - The study of drugs and it involves drug development. This includes drug discovery, delivery, absorption, and metabolism, also biomedical analysis, pharmacology, pharmacokinetics, and pharmacodynamics.	Students acquire knowledge of common pharmaceutical formulation uses
<b>B.Sc.</b>	DSC-CHEM-F (T)	Industrial Chemicals and Environment	<b>Inorganic</b> -Recognize fundamental variables & general trend across the periodic table & molecular geometries & structure.  <b>Organic</b> -Predict & explain patterns in shape, structure, bonding, stability, solubility & reactivity.	To become a scientist in industries, chemists in cement factory, sugar factory, health department, to become a teacher, lecturer etc.,
	DSC-CHEM-F (L)	Laboratory	<b>Physical</b> -The aim is to provide a core for future studies & allied subjects in aspects as specified.	
		Fuel Chemistry	<b>Fuel chemistry</b> - A fuel has stored energy. It is captured in chemical bonds through processes such as photosynthesis and respiration. Energy is released during oxidation.	Students learn about variety of efficient fuels

	SEC-CHEM-4	Chemistry of Cosmetics and Perfumes	<b>Chemistry of cosmetic and perfumes</b> - Preservatives which prevent infection of the skin and decomposition of the product. Acids, alkalis, buffers, and neutralizers which maintain an acidity level that prevents skin irritation and maintains product formulation.	Student learns to minimizes use of cosmetic and perfumes
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### DEPARTMENT OF MATHEMATICS

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
Bsc I sem	BSA033	<b>2016-17-Non-CBCS</b> Algebra-I	Students will be able to <ul style="list-style-type: none"> <li>• Learn to solve the system of linear equations, system of homogeneous and non-homogeneous system of m equations in n variables by using the concept of rank of matrix.</li> <li>• Learn to find eigen value and eigen vectors, determine inverse of matrix using cayley Hamilton theorem</li> <li>• Understand the importance of the roots of</li> </ul>	

	BSA040	Calculus-I	<p>the equations and learn various method of obtaining roots.</p> <ul style="list-style-type: none"> <li>• Learn the fundamental concepts of vector algebra and scalar and vector triple product ,product of four vectors related and properties</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Find the <math>n^{\text{th}}</math> derivative of standard functions</li> <li>• Apply the Leibnitz theorem for finding the <math>n^{\text{th}}</math> derivative of product of two functions.</li> <li>• Learn Rolles theorem, Lagrange's and Cauchy's mean value theorems for differentiability of the functions.</li> <li>• Apply Taylor's and Maclaurin's series for finding the series expansion of the functions.</li> <li>• Understand the concept of indeterminate forms, their occurrence in problems and evaluation.</li> <li>• Know the system of polar coordinates and find angle between radius vector and tangent to the curve.</li> <li>• Find angle of intersection of two curves, polar sub tangent and subnormal, pedal equations.</li> <li>• Learn about the reduction formulae, differentiation under integral sign by Leibnitz rule and apply in solving the problems.</li> </ul>	
Bsc II sem	BSB033	Algebra-II	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Acquire the basic knowledge of sequences and series of real numbers.</li> <li>• Understand the concept of convergence and</li> </ul>	



	BSB040	Calculus-II	<p>divergence of sequence and series.</p> <ul style="list-style-type: none"> <li>• Understand the nature of some standard sequences and examples.</li> <li>• Use of various methods for testing the convergence of the series.</li> <li>• Learn the summation of binomial, exponential and logarithmic series.</li> <li>• Understand Boolean algebra, Boolean functions and the applications to switching circuits.</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Know the applications of integration in finding the length of an arc ,surface areas and volume of solid revolution for standard curves.</li> <li>• Find derivative of arc in different form,deriving equation of conic and and find radius of curvature,centre of curvature, circle of curvature and envelopes.</li> <li>• Get the idea of concavity,convexity and point of inflexion, determination of assyptotes and learn tracing of some standard curves.</li> </ul>	
Bsc III sem	BSC033	Abstract Algebra & Functions of two & three variables	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Learn about the fundamental concepts of group theory .identifying cyclic subgroups and their generators.</li> <li>• Learn Lagranges theorem and its consequences, concepts of group</li> </ul>	

			<p>homomorphism and isomorphism.</p> <ul style="list-style-type: none"> <li>• Know the fundamental concepts of ring theory, properties of rings with examples.</li> <li>• Understand the concept of limit and continuity of functions of two variables</li> <li>• Calculate partial derivative of higher order homogeneous functions and learn Euler's theorem on homogeneous function of second order .</li> <li>• Learn the concept of total derivatives ,jacobians ,properties of jacobians and fundamental relations.</li> <li>• Learn the applications of functions of two and three variables for finding errors and approximation using total differentials.</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Form the differential equations of first order and first degree and solve them.</li> <li>• Determine the solutions to differential equations of first order and higher order.</li> <li>• Solve linear differential equations with constant coefficients by the knowledge of complementary function and particular integrals.</li> <li>• Solve simultaneous differential equations (two variables) with constant coefficients</li> <li>• Understand scalar field and gradient of a scalar fields along with geometrical meaning and find directional derivatives.</li> <li>• Understand vector field and find divergence and curl of a vector field, recognize solenoidal</li> </ul>	
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	BSC040	Differential Equations & Vector Analysis	<p>and irrotational vector fields.</p> <ul style="list-style-type: none"> <li>• Understand Greens', guass, and stokes theorem for finding the line, surface ,double and triple integrals.</li> </ul>	
Bsc IV sem	BSD033	Linear Algebra & Laplace Transform	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Understand the basic idea of vector space, subspace, bases, dimension and their properties. Relate matrices with linear transformations.</li> <li>• Understand the Laplace transform of some common functions.</li> <li>• Learn to use Laplace transforms of derivatives and integrals, inverse Laplace transform, applications of Laplace transform in solving higher order differential equations.</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Describe partitions of an interval , Riemann sums and Riemann integrability.</li> <li>• Learn necessary and sufficient condition for integrability and algebra of integrable functions.</li> <li>• Understand fundamental theorem of integral calculus,first and second mean value theorem of integral calculus</li> <li>• Understand the concept of Fourier series and to represent periodic functions in Fourier</li> </ul>	

	BSD040	Riemann Integration & Fourier Series	<p>series.</p> <ul style="list-style-type: none"> <li>• Fourier series of odd and even functions, half range cosine and sine series for a given periodic functions.</li> </ul>	
Bsc V sem	BSE027	Complex Analysis-I	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Learn to represent complex numbers algebraically and geometrically,</li> <li>• Learn limit continuity and differentiability and applying the the concept and consequences of analyticity and Cauchy-Riemann equations. Applications of Cauchy's integral theorem and formula to simple line integrals. Applying Liouille's theorem in fundamental theorem of algebra</li> <li>• Understand exponential series of complex quantities, hyperbolic and logarithm of complex numbers.</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Understand proper and improper integrals and types of improper integrals.</li> <li>• Understand convergence and divergence of improper integrals .</li> <li>• Learn duplication formula and sterling formula and applications to evaluation of integrals.</li> <li>• Learn the formation of partial differential equations and standard types of first order PDE and equations reducible to standard</li> </ul>	
	BSE028			

		<p>Improper Integrals, Differential Equations &amp; Topology</p>	<p>form.</p> <ul style="list-style-type: none"> <li>• Use the Charpits method to solve PDE</li> <li>• Define and illustrate the concept of topology,types of topology.</li> <li>• Understand open and closed sets,neighbourhoods and solve problems</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Understand the basic concepts of graphs along with types and examples.</li> <li>• Understand the definition s of path, cycle and solve shortest pathe problems</li> <li>• learn the matrix representation of graphs.</li> <li>• learn about trees, types of tress and its applications to fundamental circuits.</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Understand the concepts of sets,relation, functions and discrete structures such as partial ordered sets,partial ordered relations.</li> <li>• Evaluation of permutations, combinations , discrete probability.</li> <li>• Define graphs ,types of graphs,identify their main properties</li> <li>• Understand the definitions of paths,circuits,,tress and types of trees along with their applications in transport network and finite state machines.</li> </ul>	
	BSE029(a)			

		Graph Theory-I	Students will be able to	
	BSE029(b)	Discrete Mathematics-I	<ul style="list-style-type: none"> <li>• Learn fundamental techniques of mathematical modeling, characteristics and limitations.</li> <li>• Represent real world problems mathematically and identify appropriate mathematics to realize a solution</li> <li>• Learn to use ordinary differential equations in modeling the problems in other disciplines.</li> </ul>	
	BSE029(c)	Mathematical Modeling-I		
Bsc VI sem	BSF027	Numerical Analysis	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>• learn how to obtain numerical solutions of algebraic and transcendental equations.</li> <li>• Learn to find numerical solution of system of linear equations</li> <li>• Learn about various interpolating methods and understand numerical differentiation and integration by learning various numerical methods.</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>• identify the Legendre's and Bessel's differential equations.</li> <li>• Obtain Legendre polynomial from generating function and Rodrigue's formula.</li> </ul>	

	BSF028	Series Solution, Complex Analysis-II & Calculus of Variation	<ul style="list-style-type: none"> <li>• Derive recurrence relations and orthogonal properties of Legendre polynomial and Bessel's functions.</li> <li>• Learn the mapping of some elementary functions.</li> <li>• Acquire the knowledge of bilinear transformations.</li> <li>• Learn about residues and evaluate definite integrals using Cauchy's residue theorem.</li> <li>• Learn the basic notions and techniques in calculus of variation and use them in solve the problems existing in physics such as , existence of geodesics, hanging chain problem, Brachistochrone and isometric problems.</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Learn about the characterization of trees and concept of graph connectivity.</li> <li>• Define eulerian and Hamiltonian graphs and their characterizations</li> <li>• Apply the acquired knowledge in solving travelling salesmen problem, chaines postman problem and to electric networks.</li> <li>• Learn about planar graphs, characterization of planar graphs and how to use Euler's formula to check if a graph is planar</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>• analyze the algorithms and types of algorithms.</li> </ul>	
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	BSF029(a)	Graph Theory-II	<ul style="list-style-type: none"> <li>• learn generating functions, recurrence relations and solving the recurrence relations.</li> <li>• acquire basic knowledge of coding theory by learning coding of binary information and error detection, decoding and error correction.</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>• learn to model the problems in different disciplines using differential equations such as non linear model, multi species models, epidemic growth model and of technological innovations, diseases, chemical reactions, modeling in dynamics.</li> <li>• learn to model through difference equations such as population growth model, competition model, age structure model and applications in Hardey-Weinberg law in genetics.</li> </ul>  ಪ್ರಾಂಶುಪಾಲರು ಸರ್ಕಾರಿ ಮಹಾವಿದ್ಯಾಲಯ ಕಲಬುರಗಿ-೫೮೬೧೦೨	
Bsc I sem	BSA033T	<b>2018-19-CBCS</b> Algebra I & Calculus I	<p>This course will enable the students to</p> <ul style="list-style-type: none"> <li>• Learn rank and normal form and echelon from,</li> <li>• solve the system of linear equations, system of homogeneous and non-homogeneous system of m equations in n variables by using the concept of rank of matrix.</li> <li>• Learn to find eigen value and eigen</li> </ul>	



	BSA033P	Practical-1	<p>vectors, determine inverse of matrix using cayley Hamilton theorem.</p> <ul style="list-style-type: none"> <li>• Students will be familiar with the techniques of function with real variables.</li> <li>• Identify and apply the intermediate value theorem and L' Hospital rule.</li> </ul> <p>This course will enable the students to</p> <ul style="list-style-type: none"> <li>• Learn Free and Open Source Software (FOSS) tools for computer programming.</li> <li>• Solve problem on algebra and calculus theory studied in BMDSC1T by using FOSS software's.</li> <li>• Acquire knowledge of applications of algebra and calculus through FOSS.</li> </ul>	
Bsc II sem	BSB033T	Real analysis I & Calculus-II	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Know what is meant by infinite series and its convergence.</li> <li>• Learn method for knowing convergence</li> </ul>	

	BSB033P	Practical-2	<p>/divergence of some basic series.</p> <ul style="list-style-type: none"> <li>• Apply divergence test to determine divergence of an infinite series</li> <li>• Understand the concept of differentiation and fundamental theorems in differentiation and various rules</li> <li>• Find the extreme values of functions of two variables</li> <li>• To understand the concept of integral calculus and its applications for area under a curve, surface area and volume of surface of revolution</li> </ul> <p>This course will enable the students to</p> <ul style="list-style-type: none"> <li>• Learn Free and Open Source Software (FOSS) tools for computer programming.</li> <li>• Solve problem on real analysis and calculus theory studied in BMDSC2T by using FOSS software's.</li> <li>• Acquire knowledge of applications of algebra and calculus through FOSS.</li> </ul>	
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Bsc III sem	BSC033T	Algebra-II,Real analysis-II & Calculus-III	<p>This course will be enable the Students to</p> <ul style="list-style-type: none"> <li>• Recognize the mathematical objects called Groups</li> <li>• Link the fundamental concepts of groups and symmetries of geometrical objects.</li> <li>• Explain the significance of the notion of cosets, normal subgroups and factor groups</li> <li>• Students will be familiar with the techniques of fundamental of Riemann integration and their applications.</li> <li>• Apply the concept and principles of differential calculus to find what due meant by polar coordinates, angle between radius vector and tangent to the curves. Length of perpendicular from the pole to the tangent to the curve, pedal equations, curvature , centre of curvature, evolutes involutes envelops of different curves.</li> </ul> <p>This course will enable the students to</p> <ul style="list-style-type: none"> <li>• Learn Free and Open Source Software (FOSS) tools for computer programming.</li> <li>• Solve problem on algebra, real analysis and calculus theory studied in BMDSC2T by using FOSS software's.</li> <li>• Acquire knowledge of applications of algebra , real analysis and calculus through FOSS where students sketch curves in 2D and 3D.</li> </ul>	
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	BSC033P	Practical-3	<p>After completing the course students will be able</p> <ul style="list-style-type: none"> <li>• To understand lattices as algebraic structures</li> <li>• Homomorphism between lattices and Boolean Algebra</li> <li>• Polynomials switching circuits</li> <li>• Line integral , double integral s by changing order , variables and in polar coordinates</li> <li>• As well as Triple integrals over the given region.</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Understand the basic idea of vector space, subspace, bases, dimension and their properties. Relate matrices with linear transformations.</li> <li>• learn to how to find roots of the second and higher order algebraic equations by synthetic division , Descarte's rule of signs, solution of cubic equations by cardon , trigonometric , biquadratic method of equations</li> </ul>	
	BSC063AT	A)Lattices, Boolean algebra & Line, multiple integrals(SEC)		

	BSC063BT	B)Laplace transforms & Theory of equations(SEC)		
Bsc IV sem	BSD033T	Differential equations	<p>On completion of this course , the student will be able to identify the type of a given differential equation and select and apply the appropriate analytical technique for finding the solution. The students will be well conversant with the following types of differential equations</p> <ul style="list-style-type: none"> <li>• First order differential equations, clairauts equations, General and singular solutions of higher order degree equations solvable for x,y and p</li> <li>• Cauchy Euler differential equations which is linear with variable coefficients, legendred-linear differential equations and method of variation of parameters.</li> <li>• Total differential equations , integrability also necessary condition of integrability, condition of exactness and solution by inspection method , simultaneous equations.</li> <li>• Students also learn how to form partial differential equations solution of lagranges equations .</li> <li>• Complete integral of first order non linear partial differential equations by reducing to standard forms clairauts form , also charpit method.</li> </ul> <p>This course will enable the students to</p> <ul style="list-style-type: none"> <li>• Learn Free and Open Source</li> </ul>	

	BSD033P	Practical-4	<p>Software (FOSS) tools for computer programming.</p> <ul style="list-style-type: none"> <li>• Solve problem on solution of differential equations theory studied in BMDSC4T by using FOSS software's.</li> <li>• Acquire knowledge of how to solve first order non-linear differential equations through FOSS.</li> </ul> <p>By the end of the course, students should be able to</p> <ul style="list-style-type: none"> <li>• Calculate scalar and vector products</li> <li>• Understand the parametric equations of curves and surfaces.</li> <li>• Differentiate vector functions of a single variables</li> <li>• Calculate velocity and acceleration vector for moving particles</li> <li>• Find the divergence and curl of a vector field</li> <li>• Recognize Solenoidal and irrotational vector fields.</li> <li>• Evaluate line and surface integrals</li> <li>• Understand the various integral theorems relating line, surface and volume integrals.</li> </ul> <p>On completion of this course the students will be able to</p> <ul style="list-style-type: none"> <li>• The focus of this course is to familiarize the students with the concept of fourier series and fourier transform</li> <li>• Analyze the spectral characteristics of signals using fourier analysis.</li> </ul>	
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	BSD063AT	A) Vector calculus(SEC)	<ul style="list-style-type: none"> <li>• Identify system properties based on impulse response and fourier analysis.</li> <li>• Apply forms techniques to analyze continuous time and discrete- time.</li> </ul>	
	BSD063BT	B) Fourier series & Fourier transforms(SEC)		
Bsc V sem	BSE035T	A) Numerical analysis-I	<p>This course will enable the students to</p> <ul style="list-style-type: none"> <li>• learn how to obtain numerical solutions of algebraic and transcendental equations.</li> <li>• Learn to find numerical solution of system of linear equations</li> <li>• It has application in all branches of engineering,</li> <li>• To understand the curve fitting for various polynomials.</li> </ul> <p>This course will enable the students to</p> <ul style="list-style-type: none"> <li>• Learn Free and Open Source Software (FOSS) tools for computer programming.</li> </ul>	

	BSE035P	Practical-5	<ul style="list-style-type: none"> <li>• Solve problem on roots of transcendental equations and interpolation polynomials , solving system of equations studied in BMDSC5AT by using FOSS software's.</li> <li>• Acquire knowledge of applications of numerical analysis-I through FOSS</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Understand the basic concepts of graphs along with types and examples.</li> <li>• Understand the definition s of path, cycle and solve shortest path problems</li> <li>• learn the matrix representation of graphs.</li> <li>• learn about trees, types of tress and its applications to fundamental circuits.</li> </ul> <p>This course will enable the students to</p> <ul style="list-style-type: none"> <li>• Learn Free and Open Source Software (FOSS) tools for computer programming.</li> <li>• Solve problem on concept of graph theory in practical situations studied in BMDSC5BT by using FOSS software's.</li> <li>• Acquire knowledge of applications of graph theory-I through FOSS.</li> </ul> <p>Students will be able to</p>	
	BSE036T	B)Graph theory-I		



	<p>BSE036P</p> <p>BSE167AT</p> <p>BSE167BT</p>	<p>Practical-5</p> <p>A)Linear algebra(SEC)</p> <p>B)Complex analysis(SEC)</p>	<ul style="list-style-type: none"> <li>• Understand the basic idea of vector space, subspace, bases, dimension and their properties. Relate matrices with linear transformations.</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Learn to represent complex numbers algebraically and geometrically,</li> <li>• Learn limit continuity and differentiability and applying the concept and consequences of analyticity and Cauchy-Riemann equations. Applications of Cauchy's integral theorem and formula to simple line integrals. Applying Liouille's theorem in fundamental theorem of algebra</li> <li>• Understand exponential series of complex quantities, hyperbolic and logarithm of complex numbers.</li> </ul>	
Bsc VI sem	BSF035T	A)Numerical analysis-II	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Learn about the first and second order numerical differentiation .</li> <li>• Numerical integration by general quadrature formula, trapezoidal rule, simpsons 1/3<sup>rd</sup> rule and 3/8<sup>th</sup> rule waddles rule.</li> <li>• Various method of solution of initial value problems for ordinary differential equation like</li> </ul>	

			Picards method, Euler method,. Euler modified method, Runge kutta 2 <sup>nd</sup> and 4 <sup>th</sup> order method, Adam-Bashforth predictor and corrector method Milne predictor and corrector method.	
	BSF035P	Practical-6	<p>This course will enable the students to</p> <ul style="list-style-type: none"> <li>• Learn Free and Open Source Software (FOSS) tools for computer programming.</li> <li>• Solve problem on numerical differentiation and integration, solving IVP studied in BMDSC6AT by using FOSS software's.</li> <li>• Acquire knowledge of applications of numerical analysis-II through FOSS</li> </ul>	
	BSF036T	B)Graph theory-II	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Learn about the characterization of trees and concept of graph connectivity.</li> <li>• Define eulerian and Hamiltonian graphs and their characterizations</li> <li>• Apply the acquired knowledge in solving traveling salesmen problem, chaines postman problem and to electric networks.</li> <li>• Learn about planar graphs, characterization of planar graphs and how to use Euler's formula to check if a graph is planar,</li> <li>• An introduction of coloring of a graph, chromatic number of some of familiar graphs.</li> </ul>	
	BSF036P	Practical-6	<p>This course will enable the students to</p> <ul style="list-style-type: none"> <li>• Learn Free and Open Source Software (FOSS) tools for computer</li> </ul>	

		<p>programming.</p> <ul style="list-style-type: none"> <li>• Solve problem on concept of graph theory in practical situations studied in BMDSC6BT by using FOSS software's.</li> <li>• Acquire knowledge of applications of graph theory-II through FOSS.</li> </ul>	
BSF167AT	A)Improper integrals & Series solutions(SEC)	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>• Understand proper and improper integrals and types of improper integrals.</li> <li>• Understand convergence and divergence of improper integrals .</li> <li>• Learn duplication formula and sterling formula and applications to evaluation of integrals.</li> <li>• Learn series solution of Legendre's and Bessel's differential equations and their special forms and consequences.</li> </ul>	
BSF167BT	B)Series expansion, Calculus of residue & Statistical analysis(SEC)	<p>This course will enable the students to</p> <ul style="list-style-type: none"> <li>• Understand series expansion of Taylor's series. Laurent's series , zero of an analytic function and singularities</li> <li>• Learn what is mean by residues, Cauchy;s residue theorem and also evaluation of definite integral.</li> <li>• Cuves fitting by least square method, curve fitting of second degree parabola and for some other curves.</li> </ul> <p>Understand and correlation and regression , correlation coefficient regression lines and regression coefficient.</p>	 ಪ್ರಾಂಶುಪಾಲರು ಸರಕಾರಿ ಮಹಾವಿದ್ಯಾಲಯ ಕಲಬುರಗಿ-೫೮೨೦೨೨

# DEPARTMENT OF MATHEMATICS (PG)

2018-19

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
PG MSC MATHS M.Sc-I sem	CCT1.1	PG-2018-19  Real Analysis	<p>On satisfying the requirements of this course, students will have the knowledge and skillsto:</p> <p>1)Demonstrate an understanding of limits ad how that are used in sequences, series anddifferentiation.</p> <p>2)Construct rigorous mathematical proofs of basic results in realanalysis.</p> <p>Appreciate how abstract ideas and regions methods in mathematical analysis can be applied to important practical problems.</p>	<p>On satisfying the requirements of this course, students will have the knowledge and skillsto:</p> <p>1)Describe fundamental properties of the real numbers that lead to the formal development of real analysis.</p> <p>2)Comprehend regions arguments developing the theory underpinning real analysis</p>

	CCT1.2	Advanced Algebra-I	<p><b>On satisfying the requirements of this course, students will have the knowledge and skillsto:</b></p> <p>1)Explain Demonstrate accurate and efficient use of advanced algebraic techniques.</p> <p>2)Demonstrate capacity for mathematical reasoning through analyzing, Proving and explaining concepts from advanced algebra.</p> <p>3)Apply problem-solving using</p> <p>advanced algebraic techniques applied to diverse situations in physics, engineering and othermathematical fields.</p>	<p><b>On satisfying the requirements of this course, students will have the knowledge and skills to:</b></p> <p>1)Explain the fundamental concepts of advanced algebra and their role in modern mathematics and applied contexts.</p> <p>2) Demonstrate capacity for mathematical reasoning through analyzing, Proving and explaining concepts from advanced algebra.</p>
	CCT1.3	Ordinary Differential Eq.	<p><b>After completion of this course, students will be able to:</b></p> <p>1)It plays an important role in modeling virtually every physically technical or biological process from celestial motion to bridge design to interactions between neurons.</p> <p>2)Theory of differential equations is widely used in formulating many fundamental laws of physics andchemistry.</p> <p>3)Theory of differential equation is used in economics and biology to model the behavior of complex systems.</p> <p>4)Differential equations have a remarkable ability to predicts the world around us. They can describe exponential growth and decay population growth of species or change in investment return overtime.</p>	<p><b>After completion of this course, students will be able to:</b></p> <p>1) The study of Differential focuses on the existence and uniqueness of solutions and also emphasizes the rigorous justification of methods for approximating solutions in pure and applied mathematics.</p>

	CCT1.4	Complex Analysis	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <ol style="list-style-type: none"> <li>1) Know methods of finding the <math>n</math>th roots of complex numbers and the solutions of simple polynomial equations.</li> <li>2) Use analytical functions and conformal mappings;</li> <li>3) Compute definite integrals using residue calculus;</li> <li>4) Appreciate the existence of special functions and their use in a range of contexts.</li> </ol>	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <ol style="list-style-type: none"> <li>1) Perform basic algebraic manipulation with complex numbers.</li> <li>1) Understand the geometric interpretation of complex numbers.</li> </ol>
	CCT1.5	Topology	<p><b>After completion of this course , students will be able to:</b></p> <ol style="list-style-type: none"> <li>1) Topology uses to analyze complex networks Ex: Social networks, Biological networks, Internet etc.</li> <li>2) It applies Differential Topology to probability to identify multivariate interactions. This was used in neuro- science recently to deduce how neurons are interacting.</li> <li>3) This paper discusses using cell phones to actually map out the topology of indoor spaces.</li> <li>4) Another cool application is in the world of chemistry where one can discuss the shape of molecules by an analysis of the topology of a related graph.</li> <li>5) There is also an application for medical imaging software and technology.</li> </ol>	<p><b>After completion of this course , students will be able to:</b></p> <ol style="list-style-type: none"> <li>1) how Topology uses to analyze complex networks Ex: Social networks, Biological networks, Internet etc.</li> </ol>

	DSET1.1	Operation Research	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <p>1) Operation Research is used for defence capability acquisition decision making.</p> <p>2) It is used to find optimal or near optimal solutions to complex decision making problems.</p> <p>3) It is used in finding maximum (of profit or yield) in real-world objective.</p> <p>4) It is used in finding minimum (of loss or cost) in real-world objective.</p>	<p><b>Upon successful completion of this course, the student will be able how:</b></p> <p>1) Operation Research is used for defence capability acquisition decision making.</p> <p>2) It is used to find optimal or near optimal solutions to complex decision making problems.</p>
	DSET1.2	Classical Mechanics	<p><b>The course Provides the students about</b></p> <ol style="list-style-type: none"> <li>1) The Knowledge of hollow cylinder and solid Cylinder.</li> <li>2) How to use differential equations and other advanced mathematics in the solution of the Problems considered in (1).</li> <li>3) How to use conservation of energy and linear and angular momentum to solve the dynamics problems.</li> <li>4) Students should understand the forces in non inertial systems.</li> </ol>	<p><b>The course Provides the students about</b></p> <ol style="list-style-type: none"> <li>1) The Knowledge of hollow cylinder and solid Cylinder.</li> <li>2) How to use differential equations and other advanced mathematics in the solution of the Problems considered in (1).</li> </ol>

<b>M.Sc-II sem</b>	CCT2.1	Partial Differential Eq.	<b>After completion of this course, students will be able to:</b> <ol style="list-style-type: none"> <li>1) Use the Partial differential equations to formulate and get the solution of Physical and other problems involving functions of several variables such as the propagation of heat, sound, fluid flow, elasticity, electrostatics, electrodynamics etc.</li> <li>2) Use the Partial differential equations in different branches of Engineering.</li> </ol>	<b>After completion of this course, students will be able to:</b> <p>Use the Partial differential equations in different branches of Science.</p>
	CCT2.2	Advanced Algebra-II	<b>On satisfying the requirements of this course, students will have the knowledge and skillsto:</b> <ol style="list-style-type: none"> <li>1)Explain the fundamental concepts of advanced algebra and their role in modern mathematics and applied contexts.</li> <li>2)Explain Demonstrate accurate and efficient use of advanced algebraic techniques.</li> <li>3)Demonstrate capacity for mathematical reasoning through analyzing, Proving and explaining concepts from advancedalgebra.</li> <li>4)Apply problem-solving using  advanced algebraic techniques applied to diverse situations in physics, engineering and othermathematical fields.</li> </ol>	<b>On satisfying the requirements of this course, students will have the knowledge and skills to:</b> <p>Explain the fundamental concepts of advanced algebra and their role in modern mathematics and applied contexts.</p>



	CCT2.3	Programming in C with ANSI Features	<p><b>After completion of this course, students will be able to:</b></p> <p>Work on Operating Systems, Embedded Systems, Graphical User Interface, New Programming Platforms, Google, Mozilla Firefox and Thunderbird, MySQL, Compiler Design.</p>	<p><b>After completion of this course, students will be able to:</b></p> <p>How to write program of linear and ,non linear problem using this language.</p>
	DSET2.1	Fuzzy set &Fuzzy system	<p><b>The applications of Fuzzy logic are:</b></p> <p>Fuzzy logic has been used in numerous applications such as facial pattern recognition, air conditioners, washing machines, vacuum cleaners, antiskid braking systems, and transmission systems, control of subway systems and unmanned helicopters, knowledge-based systems for multiobjective optimization of power systems.</p> <p>Fuzzy logic is extremely useful for many people involved in research and development including engineers (electrical, mechanical, civil, chemical, aerospace, agricultural, biomedical, computer, environmental, geological, industrial).</p>	<p><b>After completion of this course, students will be able to:</b></p> <p>How Fuzzy logic has been used in Various fields.</p>
	DSET2.2	Probability and Statistics	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <p>1. Formulate complete, concise and correct mathematical proofs.</p>	<p><b>Upon successful completion of this course, the student will be able to:</b></p>

			<p>2. Create quantitative models to solve real problems in appropriate contexts.</p> <p>3. Effectively use professional level technology tools to support the study of mathematics and statistics.</p> <p>4. Execute statistical analyses with professional software.</p> <p>5. Build and assess data based models.</p>	Formulate complete, concise and correct mathematical proofs.
	GET2.1	Applied Mathematics	<p><b>After studying this course, students should be able to</b></p> <p>1) Demonstrate familiarity with emerging mathematical techniques appropriate in banks and other financial institutions.</p> <p>2) Demonstrate an ability to select and apply numerical methods appropriate for the solution of financial problems.</p>	<p><b>After studying this course, students should be able to</b></p> <p>Demonstrate familiarity with emerging mathematical techniques in different fields.</p>
	CCP2.3-I	Programming in C with ANSI Features	<p><b>After completion of this course, students will be able to:</b></p> <p>Work on Operating Systems, Embedded Systems, Graphical User Interface, New Programming Platforms, Google, Mozilla Firefox and Thunderbird, MySQL, Compiler Design.</p>	<p><b>After completion of this course, students will be able to:</b></p> <p><b>To write the Program for various problems.</b></p>

	CCP2.3-II	Sci-Lab	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Develop programs in Sci- lab.</li> <li>2. Evaluate, analyse and plot results.</li> <li>3. Perform mathematical modelling in Sci-Lab.</li> <li>4. Good understanding of linear algebra and signal processing concepts.</li> </ol>	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <p>To write the Program for various problems in Sci- lab.</p>
<b>M.Sc-III sem</b>	CCT3.1	Functional Analysis	<p>Functional analysis is the study of infinite-dimensional vector spaces equipped with extra structure. Such spaces arise naturally as spaces of functions. As well as being a beautiful subject in its own right, functional analysis has numerous applications in other areas of both pure and applied mathematics, including Fourier analysis, study of the solutions of certain differential equations, stochastic processes, and in quantum physics. In this unit we focus mainly on the study of Hilbert spaces-complete vector spaces equipped with an inner product- and linear maps between Hilbert spaces. Applications of the theory considered include Fourier series, differential equations, index theory, and the basics of wavelet analysis.</p> <p><b>On successful completion of this course, students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Appreciate how functional analysis uses and unifies ideas from vector spaces, the theory of metrics, and complex analysis.</li> <li>• Understand and apply fundamental theorems from the theory of normed and Banach spaces, including the Hahn-Banach theorem, the open mapping theorem, the</li> </ul>	<p><b>On successful completion of this course, students will be able to Know:</b></p> <p>How functional analysis uses and unifies ideas from vector spaces, the theory of metrics, and complex analysis.</p> <p>How the theory considered include Fourier series, differential equations, index theory, and the basics of wavelet analysis.</p>

			<p>closed graph theorem, and the Stone-Weierstrass theorem.</p> <ul style="list-style-type: none"> <li>• Appreciate the statement and proof of Banach-Steinhaus theorem.</li> <li>• Understand and apply ideas from the theory of Hilbert spaces</li> <li>• Understand the fundamentals of spectral theory, and appreciate some of its applications.</li> </ul>	
	CCT3.2	Computational Numerical Methods-I	<p><b>After completion of this course, students will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Use the different Computational Numerical Methods to find the roots of the equations.</li> <li>2. Use the different Computational Numerical Methods to find the interpolations.</li> <li>3. Use the different Computational Numerical Methods to find the solutions of differential equations.</li> </ol>	<p><b>After completion of this course, students will be able to:</b></p> <p>Use the different Computational Numerical Methods to find the roots of the equations.</p> <p>Use the different Computational Numerical Methods to find the interpolations.</p>

	CCT3.3	Fluid Mechanics-I	<p>The course on fluid mechanics is devised to introduce fundamental aspects of fluid flow behaviour..</p> <p><b>Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>▪ The student will understand stress-strain relationship in fluids, classify their behavior and also establish force balance in static systems. Further they would develop dimensionless groups that help in scale-up and scale-down of fluid flow systems.</li> <li>▪ Students will be able to apply Bernouli principle and compute pressure drop in flow systems of different configurations</li> <li>▪ Students will compute power requirement in fixed bed system and determine minimum fluidization velocity in fluidized bed</li> <li>▪ Students will be able to describe function of flow metering devices and apply Bernoulli equation to determine the performance of flow-metering devices</li> <li>▪ Students will be able to determine and analyze the performance aspects of fluid machinery specifically for centrifugal pump and reciprocating pump</li> </ul>	<p><b>After completion of this course, students will be able to:</b></p> <p>Know fundamental aspects of fluid flow behaviour.</p> <p>Students will learn to develop steady state mechanical energy balance equation for fluid flow systems, estimate pressure drop in fluid flow systems and determine performance characteristics of fluid machinery.</p>
	DSET3.1	Fuzzy logic & fuzzy Application	<p><b>The applications of Fuzzy logic are:</b></p> <p>Fuzzy logic has been used in numerous applications such as facial pattern recognition, air conditioners, washing machines, vacuum cleaners, antiskid braking systems, transmission systems, control of subway systems and unmanned helicopters, knowledge-based systems for multiobjective optimization of power systems.</p>	<p><b>After completion of this course, students will be able to:</b></p> <p>How Fuzzy logic has been used in</p> <p>Various fields.</p>

			<p>Fuzzy logic is extremely useful for many people involved in research and development including engineers (electrical, mechanical, civil, chemical, aerospace, agricultural, biomedical, computer, environmental, geological, industrial. mathematicians, computer software developers and researchers, natural scientists (biology, chemistry, earth science, and physics), medical researchers, social scientists (economics, management, political science, and psychology), public policy analysts, business analysts, and jurists</p>	
	DSET3.2	<p>Research Methodology &amp; Mathematical methods</p>	<p><b>After studying this course, students should be able to</b></p> <p>1) Demonstrate familiarity with emerging mathematical techniques appropriate in banks and other financial institutions.</p> <p>2) Demonstrate an ability to select and apply numerical methods appropriate for the solution of financial problems.</p> <p>3) The connections between the mathematical series and other scientific and humoristic disciplines.</p>	<p><b>After studying this course, students should be able to</b></p> <p>Understand the principles of mathematical reasoning and their use in understanding analyzing and developing formal arguments.</p>

			Undertake a piece of directed in mathematical finance.	
	GET3.1	Operation Research	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <p>1)Operation Research is used for defence capability acquisition decisionmaking.</p> <p>2)It is used to find optimal or near optimal solutions to complex decision making problems.</p> <p>3)It is used in finding maximum (of profit or yield) in real-worldobjective.</p> <p>4)It is used in finding minimum (of loss or cost) in real-worldobjective.</p>	<p><b>Upon successful completion of this course, the student will be able how:</b></p> <p>1) Operation Research is used for defence capability acquisition decision making.</p> <p>2)It is used to find optimal or near optimal solutions to complex decision making problems.</p>

	CCP3.2-I	Computational Numerical Methods-I	<p><b>After completion of this course, students will be able to:</b></p> <ol style="list-style-type: none"> <li>4. Use the different Computational Numerical Methods to find the roots of the equations.</li> <li>5. Use the different Computational Numerical Methods to find the interpolations.</li> <li>6. Use the different Computational Numerical Methods to find the solutions of differential equations.</li> </ol>	<p><b>After completion of this course, students will be able to:</b></p> <p>Use the different Computational Numerical Methods to find the roots of the equations.</p> <p>Use the different Computational Numerical Methods to find the interpolations.</p>
	CCP3.2-II	Programming in MAT-LAB	<p><b>After completion of this course, students will be able to:</b></p> <ol style="list-style-type: none"> <li>1)use Mat-lab for interactive computations.</li> <li>2)Familiar with memory and file management in Mat-lab.</li> <li>3)generate plots and export this for use in reports and presentations.</li> <li>4)Able to Program scripts and functions using the Mat-lab development environment.</li> </ol>	<p><b>After completion of this course, students will be able to:</b></p> <ol style="list-style-type: none"> <li>1)use Mat-lab for interactive computations.</li> <li>2)Familiar with memory and file management in Mat-lab.</li> <li>3)generate plots and export this for use in reports and presentations.</li> </ol>




<b>M.Sc-IV sem</b>	CCT4.1	Measure Theory	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <p>1) They will have an understanding of how these underpin the use of mathematical concepts such as volume, area, and integration and</p> <p>2) They will develop a perspective on the broader impact of measure theory in ergodic theory and have the ability to pursue further studies in this and related area.</p> <p>3) The students will learn about measure theory random variables, independence, expectations and conditional expectations, product measures and discrete parameter martingale etc.</p> <p>4) Explain the concept of length, area, volume using Lebesgue's theory.</p> <p>Apply the general principles of measure theory and integration in such concrete subjects as the theory of probability or financial mathematics.</p>	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <p>*Students will understand the fundamentals of measure theory and be acquainted with the proofs of the fundamental theorems underlying the theory of integration.</p>
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	CCT4.2	Fluid Mechanics-I	<p>The course on fluid mechanics is devised to introduce fundamental aspects of fluid flow behaviour.</p> <p>Students will learn to develop steady state mechanical energy balance equation for fluid flow systems, estimate pressure drop in fluid flow systems and determine performance characteristics of fluid machinery.</p> <p><b>Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>▪ The student will understand stress-strain relationship in fluids, classify their behavior and also establish force balance in static systems. Further they would develop dimensionless groups that help in scale-up and scale-down of fluid flow systems.</li> <li>▪ Students will be able to apply Bernouli principle and compute pressure drop in flow systems of different configurations</li> <li>▪ Students will compute power requirement in fixed bed system and determine minimum fluidization velocity in fluidized bed</li> <li>▪ Students will be able to describe function of flow metering devices and apply Bernoulli equation to determine the performance of flow-metering devices</li> <li>▪ Students will be able to determine and analyze the performance aspects of fluid machinery specifically for centrifugal pump and reciprocating pump</li> </ul>	<p><b>After completion of this course, students will be able to:</b></p> <p>Know fundamental aspects of fluid flow behaviour.</p> <p>Students will learn to develop steady state mechanical energy balance equation for fluid flow systems, estimate pressure drop in fluid flow systems and determine performance characteristics of fluid machinery</p>
	CCT4.3	Graph Theory	<p><b>Applications of Graph theory are</b></p> <ul style="list-style-type: none"> <li>• Graphs are used to define the <b>flow of computation</b>.</li> <li>• Graphs are used to represent <b>networks of</b></li> </ul>	<p><b>After completion of this course, students will be able :</b></p>

			<p><b>communication.</b></p> <ul style="list-style-type: none"> <li>• Graphs are used to represent <b>data organization.</b></li> <li>• Graph transformation systems work on rule-based in-memory manipulation of graphs. Graph databases ensure transaction-safe, persistent storing and querying of graph structured data.</li> <li>• Graph theory is used to find shortest path in road or a network.</li> <li>• In <b>Google Maps</b>, various locations are represented as vertices or nodes and the roads are represented as edges and graph theory is used to find the shortest path between two nodes.</li> </ul>	How graph theory is applied in different fields.
	CCT4.4	Computational Numerical Methods-II	<p><b>After completion of this course, students will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Use the different Computational Numerical Methods to solve the ordinary differential equations.</li> <li>2. Use the different Computational Numerical Methods to solve the boundary value problems.</li> <li>3. Use the different Computational Numerical Methods to solve the partial differential equations.</li> </ol>	<p><b>After completion of this course, students will be able to:</b></p> <p>Use the different Computational Numerical Methods to find the roots of the equations.</p> <p>Use the different Computational Numerical Methods to find the interpolations.</p>

	CCT4.5	Project	<p><b>Upon successful completion of this course, the student will be able for:</b></p> <ol style="list-style-type: none"> <li>1. Project based learning for maths involves the introduction of challenging problems that get their creative juices flowing.</li> <li>2. Student will collect information about the problem, besides how to approach finding a solution.</li> <li>3. Maths project helps student in visualizing the basic concept, theorems, principles and the underlying process involved in solving them.</li> <li>4. It helps the problem solving capability and also be able to learn it in a fulfilling way for their life time</li> </ol>	<p><b>Upon successful completion of this course, the student will be able for:</b></p> <ol style="list-style-type: none"> <li>1. Project based learning for maths involves the introduction of challenging problems that get their creative juices flowing.</li> <li>2. Student will collect information about the problem, besides how to approach finding a solution.</li> <li>3. Maths project helps student in visualizing the basic concept, theorems, principles and the underlying process involved in solving them.</li> <li>4. It helps the problem solving capability and also be able to learn it in a fulfilling way for their life time</li> </ol>
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	DSET4.1	Differential Geometry	<p><b>After completion of this course, students will be able to:</b></p> <ol style="list-style-type: none"> <li>1. To define equivalence of two curves.</li> <li>2. Find a derivative map of an isometry.</li> <li>3. Integrate differential forms on surfaces.</li> <li>4. List topological aspects of surfaces.</li> <li>5. To define the concepts of manifolds.</li> </ol>	<p><b>After completion of this course, students will be able :</b></p> <p>How to calculate the distance between two objects in spaces,</p> <p>Integrate differential forms on surfaces etc.</p>
	DSET4.2	Computational Fluid Dynamics	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Analyse the accuracy and stability of finite difference methods for model equations.</li> <li>2. Use and program numerical methods in fluid dynamics.</li> <li>3. Assess the efficiency of numerical methods.</li> <li>4. Choose appropriate boundary conditions for model problems.</li> <li>5. Find numerical solutions of advection, diffusion and stationary problems.</li> </ol>	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Analyses the accuracy and stability of finite difference methods..</li> <li>2.How to use and program numerical methods in fluid dynamics.</li> </ol> <div style="text-align: right;">   ಪ್ರಾಂಶುಪಾಲರು  ಸರ್ಕಾರಿ ಮಹಾವಿದ್ಯಾಲಯ  ಕಲಬುರಗಿ-587105 </div>

**2017-18**

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
PG  MSC MATHS  M.Sc-I sem	HCT1.1	PG-2017-18  Real Analysis	<p><b>On satisfying the requirements of this course, students will have the knowledge and skills about:</b></p> <p>1) Demonstrate an understanding of limits and how they are used in sequences, series and differentiation.</p> <p>2) Construct rigorous mathematical proofs of basic results in real analysis.</p> <p>Appreciate how abstract ideas and regions methods in mathematical analysis can be applied to important practical problems.</p>	<p><b>On satisfying the requirements of this course, students will have the knowledge and skills about:</b></p> <p>1) Describe fundamental properties of the real numbers that lead to the formal development of real analysis.</p> <p>2) Comprehend regions arguments developing the theory underpinning real analysis</p>
	HCT1.2	Algebra-I	<p><b>On satisfying the requirements of this course, students will have the knowledge and skill show to:</b></p> <p>1) Explain Demonstrate accurate and efficient use of advanced algebraic techniques.</p> <p>2) Demonstrate capacity for mathematical reasoning through analyzing, Proving and explaining concepts from advanced algebra.</p> <p>3) Apply problem-solving using</p> <p>advanced algebraic techniques applied to diverse situations in physics, engineering and other mathematical fields.</p>	<p><b>On satisfying the requirements of this course, students will have the knowledge and skills how to:</b></p> <p>1) Explain the fundamental concepts of advanced algebra and their role in modern mathematics and applied contexts.</p> <p>2) Demonstrate capacity for mathematical reasoning through analyzing, Proving and explaining concepts from advanced algebra.</p>

	HCT1.3	Ordinary Differential Eq.	<p><b>After completion of this course, students will be able to explain:</b></p> <p>1) It plays an important role in modeling virtually every physically technical or biological process from celestial motion to bridge design to interactions between neurons.</p> <p>2) Theory of differential equations is widely used in formulating many fundamental laws of physics and chemistry.</p> <p>3) Theory of differential equation is used in economics and biology to model the behavior of complex systems.</p> <p>4) Differential equations have a remarkable ability to predict the world around us. They can describe exponential growth and decay population growth of species or change in investment return overtime.</p>	<p><b>After completion of this course, students will be able to:</b></p> <p>1) The study of Differential focuses on the existence and uniqueness of solutions and also emphasizes the rigorous justification of methods for approximating solutions in pure and applied mathematics.</p>
	HCT1.4	DISCRETE MATHEMATICS	<p><b>After completion of this course , students will be able to:</b></p> <p>1) Generalize the Problem.</p> <p>2) Identify and abstract patterns from data.</p> <p>3) Write soft ware.</p> <p>1) Use logical Notation, Perform logical Proofs.</p> <p>3) Apply recursive functions and solve recurrence relation.</p> <p>4) Use graphs and Trees.</p> <p>5) Apply Basic and advanced Principles of counting.</p>	<p><b>After completion of this course , students will be able to:</b></p> <p>1) Use logical Notation.</p> <p>2) Perform logical Proofs.</p> <p>3) Apply recursive functions and solve recurrence relation.</p> <p>4) Use graphs and Trees.</p> <p>5) Apply Basic and advanced Principles of counting.</p>
	CCT1.5	GENERAL Topology	<p><b>After completion of this course , students will be able how:</b></p>	

			<p>1)Topology uses to analyze complexnetworks Ex: Social networks, Biological networks, Internet etc.</p> <p>2)It applies Differential Topology to probability to identity multivariate interactions. This was used in neuro- science recently to deduce how neurons areinteracting.</p> <p>3)This paper discusses using cell phones to actually map out the topology of indoor spaces.</p> <p>4)Another cool application is in the world of chemistry where one can discuss the shape of molecules by an analysis of the topology of a relatedgraph.</p> <p>5)There is also an application for medical imaging software andtechnology.</p>	<p><b>After completion of this course , students will be able to:</b></p> <p>1)how Topology uses to analyze complexnetworks Ex: Social networks, Biological networks, Internet etc.</p>
	SCT1.1	Operation Research	<p><b>Upon successful completion of this course, the student will be able how:</b></p> <p>1)Operation Research is used for defiance capability acquisition decisionmaking.</p> <p>2)It is used to find optimal or near optimal solutions to complex decision making problems.</p> <p>3)It is used in finding maximum (of profit or yield) in real-worldobjective.</p> <p>4)It is used in finding minimum (of loss or cost) in real-worldobjective.</p>	<p><b>Upon successful completion of this course, the student will be able how:</b></p> <p>1)Operation Research is used for defiance capability acquisition decisionmaking.</p> <p>2)It is used to find optimal or near optimal solutions to complex decision making problems.</p>



	SCT1.2	Fuzzy Sets and Fuzzy Systems	<p><b>The applications of Fuzzy logic are:</b></p> <p>Fuzzy logic has been used in numerous applications such as facial pattern recognition, air conditioners, washing machines, vacuum cleaners, antiskid braking systems, and transmission systems, control of subway systems and unmanned helicopters, knowledge-based systems for multiobjective optimization of power systems.</p> <p>Fuzzy logic is extremely useful for many people involved in research and development including engineers (electrical, mechanical, civil, chemical, aerospace, agricultural, biomedical, computer, environmental, geological, industrial).</p>	<p><b>After completion of this course, students will be able to:</b></p> <p>How Fuzzy logic has been used in Various fields.</p>
<b>M.Sc-II sem</b>	HCT2.1	Partial Differential Eq.	<p><b>After completion of this course, students will be able to:</b></p> <p>3) Use the Partial differential equations to formulate and get the solution of Physical and other problems involving functions of several variables such as the propagation of heat, sound, fluid flow, elasticity, electrostatics, electrodynamics etc.</p> <p>4) Use the Partial differential equations in different branches of Engineering.</p>	<p><b>After completion of this course, students will be able to:</b></p> <p>Use the Partial differential equations in different branches of Science.</p>

	HCT2.2	Algebra-II	<p><b>On satisfying the requirements of this course, students will have the knowledge and skillsto:</b></p> <p>1)Explain the fundamental concepts of advanced algebra and their role in modern mathematics and appliedcontexts.</p> <p>2)Explain Demonstrate accurate and efficient use of advanced algebraictechniques.</p> <p>3)Demonstrate capacity for mathematical reasoningthroughanalyzing,Provingand explaining concepts from advancedalgebra.</p> <p>4)Apply problem-solving using</p> <p style="padding-left: 40px;">advanced algebraic techniques applied to diverse situations in physics, engineering and othermathematical fields.</p>	<p><b>On satisfying the requirements of this course, students will have the knowledge and skillsto:</b></p> <p>Explain the fundamental concepts of advanced algebra and their role in modern mathematics and appliedcontexts.</p>
	HCT2.3	Programming in C	<p><b>After completion of this course, students will be able to:</b></p> <p>Work on Operating Systems, Embedded Systems, Graphical User Interface, New Programming Platforms, Google, Mozilla Firefox and Thunderbird, MySQL, Compiler Design.</p>	<p><b>After completion of this course, students will be able to:</b></p> <p>How to write program of linear and non -linear problem using this language.</p>

	SCT2.1	Complex Analysis	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <p>1) Know methods of finding the <math>n</math>th roots of complex numbers and the solutions of simple polynomial equations.</p> <p>2) Use analytical functions and conformal mappings;</p> <p>3) Compute definite integrals using residue calculus;</p> <p>4) Appreciate the existence of special functions and their use in a range of contexts.</p>	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <p>1) Perform basic algebraic manipulation with complex numbers.</p> <p>1) Understand the geometric interpretation of complex numbers.</p>
	SCT2.2	Fuzzy Logic and applications	<p><b>On satisfying the requirements of this course, students will have the knowledge and skills how:</b></p> <p>Fuzzy logic has been used in numerous applications such as facial pattern recognition, air conditioners, washing machines, vacuum cleaners, anti-skid braking systems, and transmission systems, control of subway systems and unmanned helicopters, knowledge-based systems for multiobjective optimization of power systems.</p> <p>Fuzzy logic is extremely useful for many people involved in research and development including engineers (electrical, mechanical, civil, chemical, aerospace, agricultural, bio-medical, computer, environmental, geological, industrial).</p>	<p><b>After completion of this course, students will be able to apply:</b></p> <p>How Fuzzy logic has been used in Various fields.</p>

	OET2.1	Operation Research	<p><b>Upon successful completion of this course, the student will be able how:</b></p> <p>1)Operation Research is used for defiance capability acquisition decisionmaking.</p> <p>2)It is used to find optimal or near optimal solutions to complex decision making problems.</p> <p>3)It is used in finding maximum (of profit or yield) in real-worldobjective.</p> <p>4)It is used in finding minimum (of loss or cost) in real-worldobjective.</p>	<p><b>Upon successful completion of this course, the student will be able how:</b></p> <p>1)Operation Research is used for defiance capability acquisition decisionmaking.</p> <p>2)It is used to find optimal or near optimal solutions to complex decision making problems.</p>
	HCP2.3	Programming in C	<p><b>After completion of this course, students will be able to:</b></p> <p>Work on Operating Systems, Embedded Systems, Graphical User Interface, New Programming Platforms, Google, Mozilla Firefox and Thunderbird, MySQL, Compiler Design.</p>	<p><b>After completion of this course, students will be able to:</b></p> <p><b>To write the Program for various problems.</b></p>
Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come

M.Sc-III sem	HCT3.1	Functional Analysis	<p>On successful completion of this course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Appreciate how functional analysis uses and unifies ideas from vector spaces, the theory of metrics, and complex analysis.</li> <li>• Understand and apply fundamental theorems from the theory of normed and Banach spaces, including the Hahn-Banach theorem, the open mapping theorem, the closed graph theorem, and the Stone-Weierstrass theorem.</li> <li>• Appreciate the statement and proof of Banach-Steinhaus theorem.</li> <li>• Understand and apply ideas from the theory of Hilbert spaces</li> <li>• Understand the fundamentals of spectral theory, and appreciate some of its applications.</li> </ul>	<p>On successful completion of this course, students will be able to <b>Know:</b></p> <p>How functional analysis uses and unifies ideas from vector spaces, the theory of metrics, and complex analysis.</p> <p>How the theory considered include Fourier series, differential equations, index theory, and the basics of wavelet analysis.</p>
	HCT3.2	Graph Theory-I	<p>On successful completion of this course, students will be able to explain how :</p> <ul style="list-style-type: none"> <li>• Graph theory is used to define the <b>flow of computation, networks of communication.</b></li> <li>• Graphs are used to represent <b>data organization.</b></li> <li>• Graph transformation systems work on rule-based in-memory manipulation of graphs. Graph databases ensure transaction-safe, persistent storing and querying of graph structured data.</li> <li>• Graph theory is used to find shortest path in road or a network.</li> </ul>	

			<ul style="list-style-type: none"> <li>In <b>Google Maps</b>, various locations are represented as vertices or nodes and the roads are represented as edges and graph theory is used to find the shortest path between two nodes.</li> </ul>	
	HCT3.3	Computational Numerical Methods-I	<p><b>After completion of this course, students will be able to:</b></p> <ol style="list-style-type: none"> <li>Use the different Computational Numerical Methods to find the roots of the equations.</li> <li>Use the different Computational Numerical Methods to find the interpolations.</li> <li>Use the different Computational Numerical Methods to find the solutions of differential equations.</li> </ol>	<p><b>After completion of this course, students will be able to:</b></p> <p>Use the different Computational Numerical Methods to find the roots of the equations.</p> <p>Use the different Computational Numerical Methods to find the interpolations.</p>

	SCT3.1	Fluid Mechanics-I	<p><b>The course on fluid mechanics is devised to introduce fundamental aspects of fluid flow behaviour..</b></p> <p><b>Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>▪ The student will understand stress-strain relationship in fluids, classify their behavior and also establish force balance in static systems. Further they would develop dimensionless groups that help in scale-up and scale-down of fluid flow systems.</li> <li>▪ Students will be able to apply Bernouli principle and compute pressure drop in flow systems of different configurations</li> <li>▪ Students will compute power requirement in fixed bed system and determine minimum fluidization velocity in fluidized bed</li> <li>▪ Students will be able to describe function of flow metering devices and apply Bernoulli equation to determine the performance of flow-metering devices</li> <li>▪ Students will be able to determine and analyze the performance aspects of fluid machinery specifically for centrifugal pump and reciprocating pump</li> </ul>	<p><b>After completion of this course, students will be able to:</b></p> <p>Know fundamental aspects of fluid flow behaviour.</p> <p>Students will learn to develop steady state mechanical energy balance equation for fluid flow systems, estimate pressure drop in fluid flow systems and determine performance characteristics of fluid machinery.</p>
	SCT3.2	Classical Mechanics	<p><b>The course Provides the students about</b></p> <ol style="list-style-type: none"> <li>5) The Knowledge of hallow cylinder and solid Cylinder.</li> <li>6) How to use differential equations and other advanced mathematics in the solution of the Problems considered in (1).</li> <li>7) How to use conservation of energy and linear and angular momentumto solve the dynamics problems.</li> <li>8) Students should understand the forces in non- inertial systems.</li> </ol>	<p><b>The course Provides the students about</b></p> <ol style="list-style-type: none"> <li>1) The Knowledge of hallow cylinder and solid Cylinder.</li> <li>2) How to use differential equations and other advanced mathematics in the solution of the Problems considered in (1).</li> </ol>

	OET3.1	Operation Research-II	<p><b>Upon successful completion of this course, the student will be able how:</b></p> <p>1)Operation Research is used for defence capability acquisition decisionmaking.</p> <p>2)It is used to find optimal or near optimal solutions to complex decision making problems.</p> <p>3)It is used in finding maximum (of profit or yield) in real-worldobjective.</p> <p>4)It is used in finding minimum (of loss or cost) in real-worldobjective.</p>	<p><b>Upon successful completion of this course, the student will be able how:</b></p> <p>1)Operation Research is used for defence capability acquisition decisionmaking.</p> <p>2)It is used to find optimal or near optimal solutions to complex decision making problems.</p>
	HCP3.3	Computational Numerical Methods-I	<p><b>After completion of this course, students will be able to:</b></p> <p>10. Use the different Computational Numerical Methods to find the roots of the equations.</p> <p>11. Use the different Computational Numerical Methods to find the interpolations.</p> <p>12. Use the different Computational Numerical Methods to find the solutions of differential equations.</p>	<p><b>After completion of this course, students will be able to:</b></p> <p>Use thedifferent Computational Numerical Methods to find the roots of the equations.</p> <p>Use the different Computational Numerical Methods to find the interpolations.</p>



<b>M.Sc-IV sem</b>	HCT4.1	Measure Theory	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <p>1) They will have an understanding of how these underpin the use of mathematical concepts such as volume, area, and integration and</p> <p>2) They will develop a perspective on the broader impact of measure theory in ergodic theory and have the ability to pursue further studies in this and related area.</p> <p>3) The students will learn about measure theory random variables, independence, expectations and conditional expectations, product measures and discrete parameter martingales.</p> <p>4) Explain the concept of length, area, volume using Lebesgue's theory.</p> <p>Apply the general principles of measure theory and integration in such concrete subjects as the theory of probability or financial mathematics.</p>	<p><b>Upon successful completion of this course, the student will be able how</b></p> <p>*Students will understand the fundamentals of measure theory and be acquainted with the proofs of the fundamental theorems underlying the theory of integration.</p>
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	HCT4.2	Graph Theory-II	<p><b>Upon successful completion of this course, the student will be able to explain how:</b></p> <ul style="list-style-type: none"> <li>• Graph theory is used to define the flow of computation, networks of communication.</li> <li>• Graphs are used to represent <b>data organization</b>.</li> <li>• Graph transformation systems work on rule-based in-memory manipulation of graphs. Graph databases ensure transaction-safe, persistent storing and querying of graph structured data.</li> <li>• Graph theory is used to find shortest path in road or a network.</li> <li>• In <b>Google Maps</b>, various locations are represented as vertices or nodes and the roads are represented as edges and graph theory is used to find the shortest path between two nodes.</li> </ul>	<p><b>After completion of this course, students will be able :</b></p> <p>How graph theory is applied in different fields</p>
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	HCT4.3	Computational Numerical Methods-II	<p><b>After completion of this course, students will be able to:</b></p> <ol style="list-style-type: none"> <li>4. Use the different Computational Numerical Methods to solve the ordinary differential equations.</li> <li>5. Use the different Computational Numerical Methods to solve the boundary value problems.</li> <li>6. Use the different Computational Numerical Methods to solve the partial differential equations.</li> </ol>	<p><b>After completion of this course, students will be able to:</b></p> <p>Use the different Computational Numerical Methods to find the roots of the equations.</p> <p>Use the different Computational Numerical Methods to find the interpolations.</p>
	HCT4.4	Differential Geometry	<p><b>After completion of this course, students will be able to:</b></p> <ol style="list-style-type: none"> <li>1. To define equivalence of two curves.</li> <li>2. Find a derivative map of an isometry.</li> <li>3. Integrate differential forms on surfaces.</li> <li>4. List topological aspects of surfaces.</li> <li>5. To define the concepts of manifolds.</li> </ol>	<p><b>After completion of this course, students will be able :</b></p> <p>How to calculate the distance between two objects in spaces,</p> <p>Integrate differential forms on surfaces etc.</p>

	SCT4.1	Fluid Mechanics-II	<p>The course on fluid mechanics is devised to introduce fundamental aspects of fluid flow behaviour.</p> <p>Students will learn to develop steady state mechanical energy balance equation for fluid flow systems, estimate pressure drop in fluid flow systems and determine performance characteristics of fluid machinery.</p> <p><b>Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>▪ The student will understand stress-strain relationship in fluids, classify their behavior and also establish force balance in static systems. Further they would develop dimensionless groups that help in scale-up and scale-down of fluid flow systems.</li> <li>▪ Students will be able to apply Bernoulli-principle and compute pressure drop in flow systems of different configurations</li> <li>▪ Students will compute power requirement in fixed bed system and determine minimum fluidization velocity in fluidized bed</li> <li>▪ Students will be able to describe function of flow metering devices and apply Bernoulli equation to determine the performance of flow-metering devices</li> <li>▪ Students will be able to determine and analyze the performance aspects of fluid machinery specifically for centrifugal pump and reciprocating pump</li> </ul>	<p><b>After completion of this course, students will be able to:</b></p> <p>Know fundamental aspects of fluid flow behaviour.</p> <p>Students will learn to develop steady state mechanical energy balance equation for fluid flow systems, estimate pressure drop in fluid flow systems and determine performance characteristics of fluid machinery</p>
	SCT4.2	Computational Fluid Dynamics	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <p>1. Analyses the accuracy and stability of finite difference methods for model equations.</p>	<p><b>Upon successful completion of this course, the student will be able to:</b></p>

			<p>2. Use and program numerical methods in fluid dynamics.</p> <p>3. Assess the efficiency of numerical methods.</p> <p>4. Choose appropriate boundary conditions for model problems.</p> <p>5. Find numerical solutions of advection, diffusion and stationary problems.</p>	<p>1. Analyses the accuracy and stability of finite difference methods..</p> <p>2.How to use and program numerical methods in fluid dynamics.</p>
	HCMP 4.5	Major Project	<p><b>Upon successful completion of this course, the student will be able for:</b></p> <p>1. Project based learning for maths involves the introduction of challenging problems that get their creative juices flowing.</p> <p>2. Student will collect information about the problem, besides how to approach finding a solution.</p> <p>3. Maths project helps student in visualizing the basic concept, theorems, principles and the underlying process involved in solving them.</p> <p>4. It helps the problem solving capability and also be able to learn it in a fulfilling way for their life time</p>	<p><b>Upon successful completion of this course, the student will be able for:</b></p> <p>1. Project based learning for maths involves the introduction of challenging problems that get their creative juices flowing.</p> <p>2. Student will collect information about the problem, besides how to approach finding a solution.</p> <p>3. Maths project helps student in visualizing the basic concept, theorems, principles and the underlying process involved in solving them.</p>

				4. It helps the problem solving capability and also be able to learn it in a fulfilling way for their life time
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**2016-17**

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
PG MSC MATHS M.Sc-I sem	HCT1.1	PG-2016-17  Real Analysis	<b>On satisfying the requirements of this course, students will have the knowledge and skills how to:</b>  1) Demonstrate an understanding of limits and how that are used in sequences, series and differentiation. 2) Construct rigorous mathematical proofs of basic results in real analysis. 3) Appreciate how abstract ideas and regions methods in mathematical analysis can be applied to important practical problems.	<b>On satisfying the requirements of this course, students will have the knowledge and skills how to:</b>  1) Describe fundamental properties of the real numbers that lead to the formal development of real analysis. 2) Comprehend regions arguments developing the theory underpinning real analysis

	HCT1.2	Algebra-I	<p><b>On satisfying the requirements of this course, students will have the knowledge and skills how to:</b></p> <p>1) Explain Demonstrate accurate and efficient use of advanced algebraic techniques.</p> <p>2) Demonstrate capacity for mathematical reasoning through analyzing, Proving and explaining concepts from advanced algebra.</p> <p>3) Apply problem-solving using advanced algebraic techniques applied to diverse situations in physics, engineering and other mathematical fields.</p>	<p><b>On satisfying the requirements of this course, students will have the knowledge and skills to:</b></p> <p>1) Explain the fundamental concepts of advanced algebra and their role in modern mathematics and applied contexts.</p> <p>2) Demonstrate capacity for mathematical reasoning through analyzing, Proving and explaining concepts from advanced algebra.</p>
	HCT1.3	Ordinary Differential Eqns.	<p><b>After completion of this course, students will be able to:</b></p>	<p><b>After completion of this course, students will be able to:</b></p>

			<p>1)It plays an important role in modeling virtually every physically technical or biological process from celestial motion to bridge design to interactions between neurons.</p> <p>2)Theory of differential equations is widely used in formulating many fundamental laws of physics and chemistry.</p> <p>3)Theory of differential equation is used in economics and biology to model the behavior of complex systems.</p> <p>4)Differential equations have a remarkable ability to predict the world around us. They can describe exponential growth and decay population growth of species or change in investment return over time.</p>	<p>1) The study of Differential focuses on the existence and uniqueness of solutions and also emphasizes the rigorous justification of methods for approximating solutions in pure and applied mathematics.</p>
	HCT1.4	DISCRETE MATHEMATICS	<p><b>After completion of this course , students will be able to:</b></p> <p>1) Generalize the Problem.</p> <p>2) Identify and abstract patterns from data.</p> <p>3) Write soft ware.</p> <p>1) Use logical Notation, Perform logical Proofs.</p> <p>3) Apply recursive functions and solve recurrence relation.</p> <p>4) Use graphs and Trees.</p> <p>5) Apply Basic and advanced Principles of counting.</p>	<p><b>After completion of this course , students will be able to:</b></p> <p>1) Use logical Notation.</p> <p>2) Perform logical Proofs.</p> <p>3) Apply recursive functions and solve recurrence relation.</p> <p>4) Use graphs and Trees.</p> <p>5) Apply Basic and advanced Principles of counting.</p>
	HCT1.5	General Topology	<p><b>After completion of this course , students will be able to:</b></p> <p>1)Topology uses to analyze complex networks Ex: Social networks, Biological networks, Internet etc.</p> <p>2)It applies Differential Topology to probability to</p>	<p><b>After completion of this course , students will be able to:</b></p> <p>1)how Topology uses to analyze</p>



			<p>identity multivariate interactions. This was used in neuro- science recently to deduce how neurons are interacting.</p> <p>3) This paper discusses using cell phones to actually map out the topology of indoor spaces.</p> <p>4) Another cool application is in the world of chemistry where one can discuss the shape of molecules by an analysis of the topology of a related graph.</p> <p>5) There is also an application for medical imaging software and technology.</p>	<p>complex networks Ex: Social networks, Biological networks, Internet etc.</p>
	SCT1.1	Classical Mechanics	<p><b>The course Provides the students about</b></p> <p>9) The Knowledge of hollow cylinder and solid Cylinder.</p> <p>10) How to use differential equations and other advanced mathematics in the solution of the Problems considered in (1).</p> <p>11) How to use conservation of energy and linear and angular momentum to solve the dynamics problems.</p> <p>12) Students should understand the forces in non inertial systems.</p>	<p><b>The course Provides the students about</b></p> <p>1) The Knowledge of hollow cylinder and solid Cylinder.</p> <p>2) How to use differential equations and other advanced mathematics in the solution of the Problems considered in (1).</p>
	SCT1.2	Fuzzy Sets and Fuzzy Systems	<p><b>The applications of Fuzzy logic are:</b></p> <p>Fuzzy logic has been used in numerous applications such as facial pattern recognition, air conditioners, washing machines, vacuum cleaners, anti-skid braking systems, and transmission systems, control of subway systems and unmanned helicopters, knowledge-based</p>	<p><b>After completion of this course, students will be able to:</b></p> <p>How Fuzzy logic has been used in Various fields.</p>

			<p>systems for multiobjective optimization of power systems.</p> <p>Fuzzy logic is extremely useful for many people involved in research and development including engineers (electrical, mechanical, civil, chemical, aerospace, agricultural, biomedical, computer, environmental, geological, industrial).</p>	
<b>M.Sc-II sem</b>	HCT2.1	Partial Differential Eq.	<p><b>After completion of this course, students will be able to:</b></p> <p>5) Use the Partial differential equations to formulate and get the solution of Physical and other problems involving functions of several variables such as the propagation of heat, sound, fluid flow, elasticity, electrostatics, electrodynamics etc.</p> <p>6) Use the Partial differential equations in different branches of Engineering.</p>	<p><b>After completion of this course, students will be able to:</b></p> <p>Use the Partial differential equations in different branches of Science.</p>
	HCT2.2	Algebra-II	<p><b>On satisfying the requirements of this course, students will have the knowledge and skillsto:</b></p> <p>1)Explain the fundamental concepts of advanced algebra and their role in modern mathematics and appliedcontexts.</p> <p>2)Explain Demonstrate accurate and efficient use of advanced algebraictechniques.</p>	<p><b>On satisfying the requirements of this course, students will have the knowledge and skillsto:</b></p> <p>Explain the fundamental concepts of advanced algebra and their role in modern mathematics and appliedcontexts.</p>

			<p>3) Demonstrate capacity for mathematical reasoning through analyzing, Proving and explaining concepts from advanced algebra.</p> <p>4) Apply problem-solving using advanced algebraic techniques applied to diverse situations in physics, engineering and other mathematical fields.</p>	
	HCT2.3	Programming in C	<p><b>After completion of this course, students will be able to:</b></p> <p>Work on Operating Systems, Embedded Systems, Graphical User Interface, New Programming Platforms, Google, Mozilla Firefox and Thunderbird, MySQL, Compiler Design.</p>	<p><b>After completion of this course, students will be able to:</b></p> <p>How to write program of linear and ,non linear problem using this language.</p>
	SCT2.1	Complex Analysis	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <p>1) Know methods of finding the <math>n</math>th roots of complex numbers and the solutions of simple polynomial equations.</p> <p>2) Use analytical functions and conformal mappings;</p> <p>3) Compute definite integrals using residue calculus;</p> <p>4) Appreciate the existence of special functions and their use in a range of contexts.</p>	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <p>1) Perform basic algebraic manipulation with complex numbers.</p> <p>1) Understand the geometric interpretation of complex numbers.</p>

	SCT2.2	Atmospheric Science	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <ol style="list-style-type: none"> <li>1) Apply mathematical tools to study atmospheric processes.</li> <li>2) Explain the composition and structure of the atmosphere.</li> <li>3) Understand the Earth-Sun relationships and their application to the concepts of radiative energy transfer and energy budgets.</li> <li>4) Understand the underlying physical principles and measurement of meteorological variables and the operating principles and performance characteristics of instruments used to make those measurements.</li> <li>5) Understand atmospheric general circulation and the basic principles of physical and applied climatology and climate change.</li> <li>6) Use and interpret weather charts, maps, and diagrams.</li> <li>7) Diagnose and forecast synoptic and mesoscale weather phenomena.</li> <li>8) Write, compile, and successfully execute a computer program in a scientific programming language (e.g., Fortran, C++, etc.).</li> <li>9) Demonstrate proficiency in using computer based weather visualization packages.</li> <li>10) Demonstrate the ability to communicate weather information in written and oral form.</li> </ol>	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <ol style="list-style-type: none"> <li>1) Apply mathematical tools to study atmospheric processes.</li> <li>2) Explain the composition and structure of the atmosphere.</li> <li>3) Understand the Earth-Sun relationships and their application to the concepts of radiative energy transfer and energy budgets.</li> <li>4) Understand the underlying physical principles and measurement of meteorological variables and the operating principles and performance characteristics of instruments used to make those measurements.</li> <li>5) Understand atmospheric general circulation and the basic principles of physical and applied climatology and climate change.</li> </ol>

	OET2.1	Operation Research-I	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <p>1)Operation Research is used for defence capability acquisition decisionmaking.</p> <p>2)It is used to find optimal or near optimal solutions to complex decision making problems.</p> <p>3)It is used in finding maximum (of profit or yield) in real-worldobjective.</p> <p>4)It is used in finding minimum (of loss or cost) in real-worldobjective.</p>	<p><b>Upon successful completion of this course, the student will be able how:</b></p> <p>1)Operation Research is used for defence capability acquisition decisionmaking.</p> <p>2)It is used to find optimal or near optimal solutions to complex decision making problems.</p>
	HCP2.3	Programming in C	<p><b>After completion of this course, students will be able to:</b></p> <p>Work on Operating Systems, Embedded Systems, Graphical User Interface, New Programming Platforms, Google, Mozilla Firefox and Thunderbird, MySQL, Compiler Design.</p>	<p><b>After completion of this course, students will be able to:</b></p> <p><b>To write the Program for various problems.</b></p>

	OEP2.1	Operation Research-I	<p><b>Upon successful completion of this course, the student will be able how :</b></p> <p>1)Operation Research is used for defiance capability acquisition decisionmaking.</p> <p>2)It is used to find optimal or near optimal solutions to complex decision making problems.</p> <p>3)It is used in finding maximum (of profit or yield) in real-worldobjective.</p> <p>4)It is used in finding minimum (of loss or cost) in real-worldobjective.</p>	<p><b>Upon successful completion of this course, the student will be able how:</b></p> <p>1)Operation Research is used for defiance capability acquisition decisionmaking.</p> <p>2)It is used to find optimal or near optimal solutions to complex decision making problems.</p>
<b>M.Sc-III sem</b>	HCT3.1	Functional Analysis	<p><b>On successful completion of this course, students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Appreciate how functional analysis uses and unifies ideas from vector spaces, the theory of metrics, and complex analysis.</li> <li>• Understand and apply fundamental theorems from the theory of normed and Banach spaces, including the Hahn-Banach theorem, the open mapping theorem, the closed graph theorem, and the Stone-Weierstrass theorem.</li> <li>• Appreciate the statement and proof of Banach-Steinhaus theorem.</li> <li>• Understand and apply ideas from the theory of Hilbert spaces</li> </ul>	<p><b>On successful completion of this course, students will be able to Know:</b></p> <p>How functional analysis uses and unifies ideas from vector spaces, the theory of metrics, and complex analysis.</p> <p>How the theory considered include Fourier series, differential equations, index theory, and the basics of wavelet analysis.</p>

			<ul style="list-style-type: none"> <li>Understand the fundamentals of spectral theory, and appreciate some of its applications.</li> </ul>	
	HCT3.2	Graph Theory-I	<p>On successful completion of this course, students will be able how:</p> <ul style="list-style-type: none"> <li>Graph theory is used to define the <b>flow of computationand networks of communication.</b></li> <li>Graphs are used to represent <b>data organization.</b></li> <li>Graph transformation systems work on rule-based in-memory manipulation of graphs. Graph databases ensure transaction-safe, persistent storing and querying of graph structured data.</li> <li>Graph theory is used to find shortest path in road or a network.</li> <li>In <b>Google Maps</b>, various locations are represented as vertices or nodes and the roads are represented as edges and graph theory is used to find the shortest path between two nodes.</li> </ul>	<p>On successful completion of this course, students will be able how:</p> <ul style="list-style-type: none"> <li>Graph theory is used to define the <b>flow of computationand networks of communication.</b></li> <li>Graphs are used to represent <b>data organization.</b></li> <li>Graph transformation systems work on rule-based in-memory manipulation of graphs.</li> </ul>

	HCT3.3	Computational Numerical Methods-I	<p><b>After completion of this course, students will be able to:</b></p> <ol style="list-style-type: none"> <li>13. Use the different Computational Numerical Methods to find the roots of the equations.</li> <li>14. Use the different Computational Numerical Methods to find the interpolations.</li> <li>15. Use the different Computational Numerical Methods to find the solutions of differential equations.</li> </ol>	<p><b>After completion of this course, students will be able to:</b></p> <p>Use the different Computational Numerical Methods to find the roots of the equations.</p> <p>Use the different Computational Numerical Methods to find the interpolations.</p>
	SCT3.1	Fluid Mechanics-I	<p>The course on fluid mechanics is devised to introduce fundamental aspects of fluid flow behaviour..</p> <p><b>Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>▪ The student will understand stress-strain relationship in fluids, classify their behavior and also establish force balance in static systems. Further they would develop dimensionless groups that help in scale-up and scale-down of fluid flow systems.</li> <li>▪ Students will be able to apply Bernoulli principle and compute pressure drop in flow systems of different configurations</li> <li>▪ Students will compute power requirement in fixed bed system and determine minimum fluidization velocity in fluidized bed</li> <li>▪ Students will be able to describe function of flow metering devices and apply Bernoulli equation to</li> </ul>	<p><b>After completion of this course, students will be able to:</b></p> <p>Know fundamental aspects of fluid flow behaviour.</p> <p>Students will learn to develop steady state mechanical energy balance equation for fluid flow systems, estimate pressure drop in fluid flow systems and determine performance characteristics of fluid machinery.</p>



			<p>determine the performance of flow-metering devices</p> <ul style="list-style-type: none"> <li>▪ Students will be able to determine and analyze the performance aspects of fluid machinery specifically for centrifugal pump and reciprocating pump.</li> </ul>	
	SCT3.2	Computer Aided Geometric Design	<p><b>After completion of this course, students will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Design the representations, constructions, deformations and approximations of curves, surfaces and volumes.</li> <li>2. Design the shapes for household products, cars or ships as well as the representation of physical phenomena</li> <li>3. Apply Bezier Curves, Bezier Surfaces, B-spline, B-spline Surfaces in day today life</li> </ol>	<p><b>After completion of this course, students will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Design the representations, constructions, deformations and approximations of curves, surfaces and volumes.</li> <li>2. Design the shapes for household products, cars or ships as well as the representation of physical phenomena</li> </ol>
	OET3.1	Operation Research-II	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <ol style="list-style-type: none"> <li>1)Operation Research is used for defiance capability acquisition decisionmaking.</li> <li>2)It is used to find optimal or near optimal solutions to complex decision making problems.</li> <li>3)It is used in finding maximum (of profit or yield) in real-worldobjective.</li> </ol>	<p><b>Upon successful completion of this course, the student will be able how:</b></p> <ol style="list-style-type: none"> <li>1)Operation Research is used for defiance capability acquisition decisionmaking.</li> <li>2)It is used to find optimal or near optimal solutions to</li> </ol>

			4)It is used in finding minimum (of loss or cost) in real-worldobjective.	complex decision making problems.
	HCP3.3	Computational Numerical Methods-I	<b>After completion of this course, students will be able to:</b> <ul style="list-style-type: none"> <li>16. Use the different Computational Numerical Methods to find the roots of the equations.</li> <li>17. Use the different Computational Numerical Methods to find the interpolations.</li> <li>18. Use the different Computational Numerical Methods to find the solutions of differential equations.</li> </ul>	<b>After completion of this course, students will be able to:</b> <p>Use thedifferent Computational Numerical Methods to find the roots of the equations.</p> <p>Use the different Computational Numerical Methods to find the interpolations.</p>

	OEP3.1	Operation Research-II	<p><b>Upon successful completion of this course, the student will be able how:</b></p> <p>1)Operation Research is used for defiance capability acquisition decisionmaking.</p> <p>2)It is used to find optimal or near optimal solutions to complex decision making problems.</p> <p>3)It is used in finding maximum (of profit or yield) in real-worldobjective.</p> <p>4)It is used in finding minimum (of loss or cost) in real-worldobjective.</p>	<p><b>Upon successful completion of this course, the student will be able how:</b></p> <p>1)Operation Research is used for defiance capability acquisition decisionmaking.</p> <p>2)It is used to find optimal or near optimal solutions to complex decision making problems.</p>
<b>M.Sc-IV sem</b>	HCT4.1	Measure Theory	<p><b>Upon successful completion of this course, the student will be able how:</b></p> <p>1)Thesudents will learn about measure theory random variables, independence, expectations and conditional expectations, product measures and discrete parametermartingaleus.</p> <p>2)how these underpin the use of mathematical concepts such as volume, area, and integrationand</p> <p>3)They will develop a perspective on the broader impact of measure theory in argotictheory and have the ability to pursue further studies in this and related area.</p>	<p><b>Upon successful completion of this course, the student will be able how</b></p> <p>*Students will understand the fundamentals of measure theory and be acquainted with the proofs of the fundamental theorems underlying the theory of integration.</p>


			<p>4) Explain the concept of length, area, volume using Lebesgue's theory.</p> <p>Apply the general principles of measure theory and integration in such concrete subjects as the theory of probability or financial mathematics.</p>	
	HCT4.2	Graph Theory-II	<p><b>After completion of this course, students will be able how</b></p> <ul style="list-style-type: none"> <li>• Graph theory is used to define the <b>flow of computation</b> and <b>networks of communication</b>.</li> <li>• Graph theory is used to represent <b>data organization</b>.</li> <li>• Graph transformation systems work on rule-based in-memory manipulation of graphs. Graph databases ensure transaction-safe, persistent storing and querying of graph structured data.</li> <li>• Graph theory is used to find shortest path in road or a network.</li> <li>• In <b>Google Maps</b>, various locations are represented as vertices or nodes and the roads are represented as edges and graph theory is used to find the shortest path between two nodes.</li> </ul>	<p><b>After completion of this course, students will be able :</b></p> <p>How graph theory is applied in different fields</p>

	HCT4.3	Computational Numerical Methods-II	<p><b>After completion of this course, students will be able to:</b></p> <ol style="list-style-type: none"> <li>7. Use the different Computational Numerical Methods to solve the ordinary differential equations.</li> <li>8. Use the different Computational Numerical Methods to solve the boundary value problems.</li> <li>9. Use the different Computational Numerical Methods to solve the partial differential equations.</li> </ol>	<p><b>After completion of this course, students will be able to:</b></p> <p>Use the different Computational Numerical Methods to find the roots of the equations.</p> <p>Use the different Computational Numerical Methods to find the interpolations.</p>
	HCT4.4	Differential Geometry	<p><b>After completion of this course, students will be able to:</b></p> <ol style="list-style-type: none"> <li>1. To define equivalence of two curves.</li> <li>2. Find a derivative map of an isometry.</li> <li>3. Integrate differential forms on surfaces.</li> <li>4. List topological aspects of surfaces.</li> <li>5. To define the concepts of manifolds.</li> </ol>	<p><b>After completion of this course, students will be able :</b></p> <p>How to calculate the distance between two objects in spaces,</p> <p>Integrate differential forms on surfaces etc.</p>

	SCT4.1	Fluid Mechanics-I	<p>The course on fluid mechanics is devised to introduce fundamental aspects of fluid flow behaviour.</p> <p>Students will learn to develop steady state mechanical energy balance equation for fluid flow systems, estimate pressure drop in fluid flow systems and determine performance characteristics of fluid machinery.</p> <p><b>Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>▪ The student will understand stress-strain relationship in fluids, classify their behavior and also establish force balance in static systems. Further they would develop dimensionless groups that help in scale-up and scale-down of fluid flow systems.</li> <li>▪ Students will be able to apply Bernouli principle and compute pressure drop in flow systems of different configurations</li> <li>▪ Students will compute power requirement in fixed bed system and determine minimum fluidization velocity in fluidized bed</li> <li>▪ Students will be able to describe function of flow metering devices and apply Bernoulli equation to determine the performance of flow-metering devices</li> <li>▪ Students will be able to determine and analyze the performance aspects of fluid machinery specifically for centrifugal pump and reciprocating pump</li> </ul>	<p><b>After completion of this course, students will be able to:</b></p> <p>Know fundamental aspects of fluid flow behaviour.</p> <p>Students will learn to develop steady state mechanical energy balance equation for fluid flow systems, estimate pressure drop in fluid flow systems and determine performance characteristics of fluid machinery</p>
	SCT4.2	Computational Fluid Dynamics	<p><b>Upon successful completion of this course, the student will be able to:</b></p> <p>1.Analyse the accuracy and stability of finite difference methods for model equations.</p>	<p><b>Upon successful completion of this course, the student will be able to:</b></p>

			<p>2. Use and program numerical methods in fluid dynamics.</p> <p>3. Assess the efficiency of numerical methods.</p> <p>4. Choose appropriate boundary conditions for model problems.</p> <p>5. Find numerical solutions of advection, diffusion and stationary problems.</p>	<p>1. Analyses the accuracy and stability of finite difference methods..</p> <p>2.How to use and program numerical methods in fluid dynamics.</p>
	<p>HCMP</p> <p>4.5</p>	Project	<p><b>Upon successful completion of this course, the student will be able for:</b></p> <p>1. Project based learning for maths involves the introduction of challenging problems that get their creative juices flowing.</p> <p>2. Student will collect information about the problem, besides how to approach finding a solution.</p> <p>3. Maths project helps student in visualizing the basic concept, theorems, principles and the underlying process involved in solving them.</p> <p>4. It helps the problem solving capability and also be able to learn it in a fulfilling way for their life time</p>	<p><b>Upon successful completion of this course, the student will be able for:</b></p> <p>1. Project based learning for maths involves the introduction of challenging problems that get their creative juices flowing.</p> <p>2. Student will collect information about the problem, besides how to approach finding a solution.</p> <p>3. Maths project helps student in visualizing the basic concept, theorems, principles and the underlying process involved in solving them.</p>

				4. It helps the problem solving capability and also be able to learn it in a fulfilling way for their life time
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### DEPARTMENT OF BOTONY

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
B.Sc I sem	Paper T-1.1	Diversity Of Microbes & Algae	Student will be able to identify and differentiate various microorganisms present on the earth such as Virus, Bacteria, Mycoplasma, Cyanobacteria and Algae also familiarize with their uses to mankind and hazardous	<b>Nil</b>



B.Sc II Sem	Paper T-2.1	Diversity Of Fungi & Bryophytes	<p>Student can able to Differentiate Fungi &amp; Bryophytes based on their external and external characteristics.</p> <p>Familiar with Biofertilizers and Bio pesticide</p>	
B.Sc III Sem	Paper T-3.1	Pteridophytes, Gymnosperms, Palaeobotany& Angiosperm Morphology	<p>Student can able to Differentiate Pteridophytes, gymnosperms based on their habitat ,external and external characteristics.</p> <p>able to know fossil plants and Fossilization of plants.</p> <p>able to learn and observe and name various external parts of plants.</p>	<b>Nil</b>
B.Sc IV Sem	Paper T-4.1	Anatomy And Embryology Of Angiosperms	<p>Able to draw internal structures by differentiating various parts</p> <p>*can explain Reproductive structures and able to describe developmental stages in plants.</p>	
B.Sc V Sem	Paper T-5.1	Taxonomy Of Angiosperms, Economic Botany,  Ethnobotany&Pharmaconosy	<p>Imparting knowledge of various methods of Plant Classification.</p> <p>*Imparting knowledge of Economically useful plants such as Food Crops, Medicinal plants etc.</p> <p>* To gain traditional knowledge about plants.</p> <p>*Able to analyze raw drug of Medicinal plants.</p>	

B.Sc V Sem	Paper T-5.2	Plant Ecology, Biodiversity and Its Conservation	<p>To impart knowledge about Ecology and environment</p> <p>Impart knowledge about soil, water and other environmental factors with respect to plant life.</p> <p>To impart knowledge about various Biodiversity and Strategies involved in Conservation.</p>	
B.Sc V Sem	Paper T-6.1	Cytology, Genetics, Molecular Biology And Biotechnology	<p>To impart knowledge about complexity of Cell and functions.</p> <p>To impart knowledge on Basics of genetics and role of Chromosomes.</p> <p>To impart Knowledge about Nucleic acid and their role. In-vitro propagation of plants.</p> <p>To impart knowledge on Transgenic plants and their applications.</p>	<b>Nil</b>
B.Sc V Sem	Paper T-6.2	Plant Physiology And Plant Breeding	<p>To impart knowledge on concept of Physiology and various Physiological processes.</p> <p>To impart knowledge on Plant breeding and application in Horticulture.</p>	<b>Nil</b>

  
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## DEPARTMENT OF ZOOLOGY


### B.Sc. Non-CBCS-2016

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>B.Sc</b>	<b>Z.I- Biology of Non Chordates</b>	<b>B.Sc I Semester Zoology</b>	<b>Students will be able to identify animals based on their unique characters</b>	<b>Students may be employed as Environmental consultant, Research scientist and assistant, Park Naturalist, Restoration ecologist and natural resource management wildlife protection Boards</b>
	<b>Z.2- Biology of Chordates</b>	<b>B.Sc II Semester Zoology</b>	<b>Students will be able to identify animals based on their unique characters</b>	<b>Students may be employed as Environmental consultant, Research scientist and assistant, Park Naturalist, Restoration ecologist and natural resource management wildlife protection Boards</b>
	<b>Z.3-Comparative anatomy of Vertebrates and Histology</b>	<b>B.Sc III Semester Zoology</b>	<b>Students gain knowledge of vertebrate anatomy and their evolution based on their structure and organisation of anatomical systems</b>	<b>Students may be employed as Environmental consultant, Research scientist and assistant, Park Naturalist, Restoration ecologist and natural resource</b>

			Students learn to describe cellular level of organisation and related functions in animals	management wildlife protection Boards
	<b>Z.4- Physiology and Biochemistry</b>	<b>B.Sc IV Semester</b>	Students study the physiological concepts of homeostasis and control mechanism of body systems with emphasis on clinical relevance The study of biochemistry is to describe and explain ,in molecular terms, all chemical processes of living organisms and their interaction with their environments both in health and disease conditions	Students may be employed as Environmental consultant, Research scientist and assistant, Park Naturalist, Restoration ecologist and natural resource management wildlife protection Boards
	<b>Z.5.1 Cell,Immunobiology and Developmental Biology -</b>	<b>B.Sc V Semester Zoology</b>	Students learn to describe cellular level of organisation and related functions in animals The students will be able to identify the cellular and molecular level basis of the immune system and role of the immune system in maintaining health	Students may be employed as Environmental consultant, Research scientist and assistant, Park Naturalist, Restoration ecologist and natural resource management wildlife protection Boards

			Students learn the development aspects and their evolutionary significance and attempt to understand the molecular, genetic, cellular, and integrative aspects of building an organism	Stem cell biologist, Researcher in developmental and regenerative biology, IVF Centres, Hospital labs
	<b>Z.5.2-Genetics.</b>	<b>B.Sc I Semester Zoology</b>		Students may be employed as Environmental consultant, Research scientist and assistant, Park Naturalist, Restoration ecologist and natural resource management wildlife protection Boards
	<b>Z.6.1-Animal behaviour and Evolution</b>	<b>B.Sc II Semester Zoology</b>	Genetics is the study of mechanism of heredity and variation Genetics study have a tremendous impact on applied areas including medicine, agriculture ,forestry, fisheries and biotechnology	Students may be employed as Environmental consultant, Research scientist and assistant, Park Naturalist, Restoration ecologist and natural resource management wildlife protection Boards
	<b>Z.6.2- Ecology,Zoogeography and Wildlife Biology</b>	<b>B.Sc III Semester Zoology</b>	Study of ecology is to understand the nature of environmental influences on individual organisms, their populations and communities, on ecoscapes and	Students may be employed as Environmental consultant, Research scientist and assistant, Park Naturalist, Restoration ecologist and natural resource

			<p>ultimately at the level of biosphere Wildlife study provides balance and stability to natural processes of wildlife conservation and educate people on living sustainably with other species</p> <p>Zoogeography provides knowledge of different realms of the world with their flora and fauna</p>	management wildlife protection Boards
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### B.Sc. CBCS -2018 Onwards

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
B.Sc	DSCT-I ANIMAL DIVERSITY	B.Sc I Semester Zoology	Students will be to identify animals based on their unique characters	Students can get employed in Zoological survey and Biodiversity
	DSCT-2 COMPARATIVE ANATOMY and DEVELOPMENTAL BIOLOGY	B.Sc II Semester Zoology	Students gain knowledge of vertebrate anatomy and their evolution based on their structure and organization of anatomical systems	Students can be employed as chiropractors, model preparation assistants, Orthopedic surgical assistant

			Students learn the development aspects and their evolutionary significance and attempt to understand the molecular, genetic, cellular, and integrative aspects of building an organism	Jobs available in Fertility clinics and animal husbandry and research assistant in stem cell laboratories Researcher in developmental and regenerative biology
	<b>DSCT PHYSIOLOGY AND BIOCHEMISTRY</b>	<b>B.Sc III Semester Zoology</b>	Students study the physiological concepts of homeostasis and control mechanism of body systems with emphasis on clinical relevance The study of biochemistry is to describe and explain, in molecular terms, all chemical processes of living organisms and their interaction with their environments both in health and disease conditions	Student can be employed in forensic and pathological labs, and as biomedical assistants /clinical research assistant, pharmacologist, medical representative and Physician associate
	<b>SECT-I A AQUATIC BIOLOGY</b>	<b>B.Sc III Semester</b>	Enriching the understanding of marine and freshwater systems, their structure, function ecology, and food web dynamics	Freshwater and marine biology technicians, fishery data manager. careers can be found in federal, state, non-government, and non-profit agencies
	<b>SECT-I B AQUARIUM FISH KEEPING</b>	<b>B.Sc III Semester</b>	It imparts the knowledge of acquiring handling	Students can set up their business of exotic fish marketing, can be

			and maintaining of fish, and can study their behaviour in man created environment	employed in aquarium centres and theme parks
	<b>DSCT.-4 GENECTICS AND EVOLUTIONARY BIOLOGY</b>	<b>B.Sc IV Semester</b>	Genetics is the study of mechanism of heredity and variation Genetics study have a tremendous impact on applied areas including medicine, agriculture, forestry, fisheries and biotechnology Study of evolution gives an insight on changes in all of life's over generations	Students can be employed in forensic science, clinical research associates, genetic counsellor  Evolutionary biologist may find employment with state and federal agencies, academic and private institution, non private entities, and animal facilities
	<b>SECT-2A APICULTURE</b>	<b>B.Sc IV Semester</b>	Students develop the techniques of development of nuclear stock production, capacity building programmes and training of bee breeders and bee keeping	Students get employed in rural sectors, horticulture units, bee breeding units and self employment
	<b>SECT-2B SERICULTURE</b>	<b>B.Sc IV Semester</b>	Development of sericulture for sustainable development and It gives students a thorough knowledge about the various skills that are necessary for self employment in	Students get employed in Government and private sectors, sericulture research centres, and self employability



			mulberry, seed production and manufacture of silk yarns	
	<b>DSET-1A CELL BIOLOGY AND HISTOLOGY</b>	<b>B.Sc V Semester Zoology</b>	Students learn to describe cellular level of organization and related functions in animals Students learn to describe cellular level of organization and related functions in animals	Students may get employed in health care industries ,medical sales product representatives and Diagnostic Labarotaries  Histologist application specialist,technicians and in pathology labarotaries
	<b>DSET-1B REPRODUCTIVE BIOLOGY</b>	<b>B.Sc V Semester Zoology</b>	Students study human reproductive system and its disorders and current reproductive technologies	Reproductive Biology assistants ,clinical research lab assistants and in in vitro fertilization practices Artificial reproductive Technologies Labarotaries
	<b>SECT-3A MEDICAL DIAGONOTICS</b>	<b>B.Sc V Semester</b>	Students learn diagnosing monitoring, screening of diseases and a knowledge of the working and handling of medical equipment's	Careers in medical diagnostic and medical field,Emergency medical technicians, para medics and physician assistant.
	<b>SECT-3B PUBLIC HEALTH AND HYGIENE</b>	<b>B.Sc V Semester</b>	Study aims to improve the quality of life through prevention and treatment of disease promotion and helps in practicing	Several health careers exists such as, epidemiologist, public health officer, health and in educators care centres

			healthy living habits of the society	
	<b>DSET -IA ECOLOGY, ZOOGEOGRAPHY AND WILDLIFE BIOLOGY</b>	<b>B.Sc VI Semester Zoology</b>	<p>Study of ecology is to understand the nature of environmental influences on individual organisms, their populations and communities, on ecosystems and ultimately at the level of biosphere</p> <p>Wildlife study provides balance and stability to natural processes of wildlife conservation and educate people on living sustainably with other species</p> <p>Zoogeography provides knowledge of different realms of the world with their flora and fauna</p>	Students may be employed as Environmental consultant, Research scientist and assistant, Park Naturalist, Restoration ecologist and natural resource management wildlife protection Boards
	<b>DSET-1B-Animal behaviour</b>	<b>B.Sc VI Semester Zoology</b>	<p>Study of animal behaviour focus on animal behaviour in natural conditions and evolutionary adaptive traits</p> <p>Chronobiology is the study of biological rhythms. it examines the effects of time on biological events and</p>	Students can be employed as wildlife technicians, veterinary assistant, animal adoption centres, animal service assistants

			internal biological clocks	
	<b>SECT-4A Applied Zoology</b>	<b>B.Sc VI Semester</b>	<b>It provides a strong foundation for applying fundamental concept to meet global challenges in different aspects of life for the betterment of mankind</b>	<b>Students can be employed in various in various sectors like Milk Dairies, Animal Husbandry, Poultryes, Fish and Prawn cultures and in more advanced techniques like study of organism and their preservation</b>
	<b>SECT-4B VERMICULTURE</b>	<b>B.Sc VI Semester</b>	<b>It imparts knowledge of earthworm varieties, their rearing and technology involved in vermicomposting</b>	<b>Employability found in government and public sectors, Vermicomposting units and in garbage managrment units and self employed in vermicomposting of farm wastes</b>

### M.Sc CBCS-2018 Onwards

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>M.Sc I Semester Zoology</b>	<b>CCT 1.1</b>	<b>Biosystematics ,Structure and Function of Non- Chordates</b>	<b>students will be to identify animals based on their unique characters</b>	<b>Students can get employed in Zoological survey and Biodiversity Boards</b>
<b>M.Sc I</b>	<b>CCT-1.2</b>	<b>Molecular Cell Biology</b>	<b>Students in this program increase their knowledge of</b>	<b>Clinical Research Assistant in Hospitals. Laboratory Technician</b>

<b>Semester Zoology</b>			the biological processes that occur at the cellular and molecular levels while gaining rich laboratory experience.	in Industrial and Government Agencies .Sales in Pharmaceuticals and Medical Supplies. Assistant Biologist in Food Inspection Agencies. Teaching Assistant or Tutor in Private Schools. Quality Control in Bio-pharmaceutical Industry.Laboratory Assistant in Genetic Testing Services. Marketing
<b>M.Sc I Semester Zoology</b>	<b>CCT 1.3</b>	<b>Molecular Genetics</b>	Genectics study have a tremendous impact on applied areas including medicine, agriculture ,forestery,fisheries and biotechnology	Students can be employed in forensic science, clinical research associates, genetic counsellor
<b>M.Sc I Semester Zoology</b>	<b>DSET 1.1</b>	<b>a)Biostastics,Animal Care and Computer Applications</b>	Biostatisticians use the fundamentals of statistics for purposes of research in the medical and public health sectors.Designing studies, gathering data, and analysing the collected information are some tasks	Senior consulting research statistician at a university. Biostatistian at a leading biotechnology company.Statistical analyst in the health sectors Centers for Disease Control and Prevention  Students can be Employed at Zoo, Veterinary hospitals

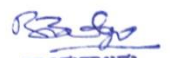
<b>M.Sc I Semester Zoology</b>	<b>DSET 1.1</b>	<b>b)Biodiversity</b>	<b>The student study about survey and research of biodiversity,conservation plans,history,environmental law etc</b>	<b>Carrer specialization awaits Biodiversity students to become future-Veterinarian, Herpetologist,Ichtylogist, Entomologist,Primatologist, marine Biologist, Wildlife Conservationistband Natural Resource Manager</b>
<b>M.ScII Semester Zoology</b>	<b>CCT 2.1</b>	<b>Structures and  Functions of  Chordates</b>	<b>Students will be able to identify animals based on their unique characters</b>	<b>Students may be employed as Environmental consultant, Research scientist and assistant, Park Naturalist, Restoration ecologist and natural resource management wildlife protection Boards</b>
<b>M.Sc II Semester Zoology</b>	<b>CCT 2.1</b>	<b>Developmental Biology</b>	<b>Students learn the development aspects and their evolutionary significance and attempt to understand the molecular, genetic,cellular, and intergative aspects of building an organism</b>	<b>Fertility clinics and animal husbandries and research assistant in stem cell labarotaries Researcher in developmental and regenerative biology</b>
<b>M.Sc II Semester Zoology</b>	<b>DSET 2.1</b>	<b>a)Parasitology</b>	<b>It focuses on the various characteristic of the parasite( morphology, life cycle, ecology, taxanomy,etc) ,the type of</b>	<b>Career option in medical, agriculture, pharmaceutics field and also in academics</b>

			the host they infect and the relation between the two	
M.Sc II Semester Zoology	DSET 2.1	b)Evolutionary Biology	Evolutionary biology is the unifying concept that runs through all the life sciences, from origin of life to understanding human behavior to dealing with challenges posed by diseases	Evolutionary biologist may find employment with state and federal agencies, academic and private institutions, non-profit entities, and animal facilities
M.ScII Semester Zoology	GET 2.1	Economic Zoology	It deals with the application of Zoological knowledge for the benefit of mankind. It is a specialized branch which deals with animal world that is associated with the economy, health and welfare of humans	1. Students can start their own business i.e. self-employment. Get employment in different applied sectors
M.ScIII Semester Zoology	CCT 3.1	Biology of Reproduction	The scope of reproduction covers the clinical science and medical aspects of reproduction, including, reproductive tract, physiology and pathology, gonad function, fertilization, embryo development, implantation and early pregnancy	Reproductive endocrinologist, medical researches, animal breeders, animal scientist and veterinary theriogenologist

<b>M.Sc III Semester Zoology</b>	<b>CCT 3.2</b>	<b>Animal Physiology</b>	<p>Students study the physiological concepts of homeostasis and control mechanism of body systems with emphasis on clinical relevance</p> <p>The study of biochemistry is to describe and explain ,in molecular terms, all chemical processes of living organisms and their interaction with their environments both in health and disease conditions</p>	<p>Student can be employed in forensic and pathological labs, and as biomedical assistants /clinical research assistant, pharmacologist, medical representative and Physician associate</p>
<b>M.Sc III Semester Zoology</b>	<b>DSET 3.1</b>	<b>a)Environmental Biology</b>	<p>Gain knowledge about sustainable way of living, behavior of organisms under natural conditions environmental problems and issues, effectively using natural resources without harming the environment and conservation of nature</p>	<p>Career opportunity in Environmental consultancy, Environmental NGO, State, National and International Agencies, Government PSUs</p> <p>Like IOCL, CIL, NTPCL, Wildlife photographer, film maker, conservation journalist and in waste water treatment</p>
<b>M.Sc III Semester Zoology</b>	<b>DSET 3.1</b>	<b>b)Aquatic Biology and Fisheries</b>	<p>It involves aquaculture, gears,navigation, oceanography, aquarium management, breeding,processing, export and import of seafood,</p>	<p>Job opportunity in Marine Product Export Development Authority, Export Inspection Agency, Coastal Aquaculture Authority of India, Fisheries Survey of India and National Institute of Oceanography,and</p>

			<b>special products and by-products</b>	<b>private sectors and self employment</b>
<b>M.Sc III Semester Zoology</b>	<b>GET 3.1</b>	<b>Human Physiology</b>	<b>Human Physiology is the study of all aspects of how the body works, ranging from the molecular level through the level of cells,tissues,organs, and organ systems</b>	<b>Opportunities asresearch assistant,lab assistant,clinical trial coordinator, surgical technicians and medical assistants</b>
<b>M.Sc IV Semester Zoology</b>	<b>CCT 4.1</b>	<b>Animal Biotechnology</b>	<b>Animal Biotechnology involves the application of science and engineering principles to the processing or production of materials by animals or aquatic species to provide goods and services</b>	<b>It has lucrative opportunities in the medical sector as well as research and development .It give employment chances in forensic sciences</b>
<b>M.Sc IV Semester Zoology</b>	<b>CCT 4.2</b>	<b>Applied Zoology</b>	<b>It provides a strong foundation for applying fundamental concept to meet global challenges in different aspects of life for the betterment of mankind</b>	<b>Students can be employed in various in various sectors like Milk Dairies, Animal Husbandries, Poultries, Fish and Parwn cultures and in more advanced techniques like study of organism and their preservation</b>
<b>M.Sc IV Semester Zoology</b>	<b>DSET 4.1</b>	<b>a)General Endocrinology</b>	<b>Endocrinology deals with the study of hormones and its disorders</b>	<b>This offers carrer opportunities in hospitals,medical laboratories, pharma companies,hatcheries,wildlife rehabilitation centres</b>



M.Sc IV Semester	DSET 4.1	b)Animal Behaviour	 ಪ್ರಾಚಾರ್ಯರು ಸರ್ಕಾರಿ ಮಹಾವಿದ್ಯಾಲಯ ಕಲಬುರಗಿ-585105	Job options are available as Academic researcher, nutritionist ,physiotherapist, Nature conservation officer, Zoo Keeper.
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## DEPARTMENT OF MICROBIOLOGY


Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
UG	B.Sc	Bachelor of science		
2016 onwards	1.1	Basics of microbiology	They Study the Microbiology basics & types of microbes.	Study the different types of microbes for
	1.1 pract	Based on Paper 1.1		
	2.1	Techniques in Microbiology	They study the isolation & cultivation of Microbes from different sources	Learn the cultivation of Microbes & they can handle different types of equipments
	2.1 Pract	Based on Paper 2.1		

	3.1	Microbial Physiology & Metabolism	Microbial Physiology activity & metabolism	They handle the microbes & to study the biochemical characters
	3.1 Pract	Based on Paper 3.1		
	4.1	Agricultural & Environmental Microbiology	In this paper study microbes from soil & importance in the Environment	He can work as a microbiologist in the water plant & soil testing labs.
	4.1 Pract	Based on Paper 4.1		
	5.1	Food Microbiology	Here he will study food microbes & different foods containing microbes & role	He can work in food & Pharma industries as microbiologists
	5.1 Pract	Based on Paper 5.1	Here he will study food microbes & different foods containing microbes & role	He can work in food & Pharma industries as microbiologists
	5.2	Industrial Microbiology	He will study different production of products from microbes in industries	He can work as a Microbiologist in Pharmaceuticals Industries for Production industries.
	6.1	Microbial Genetics & Molecular Biology	He will study the isolation of DNA, RNA Proteins etc	He can work as molecular biologist in Genetic labs

	6.1 Project	Project Report & Viva Voce 6.1	He will study different production of products from microbes in industries	He can work as a Microbiologist in Pharmaceuticals Industries for Production industries.
	6.2	Medical Microbiology & Immunology	He will study the different types of diseases & immunology	He can work in the different types of medical diagnostic labs as a Microbiologist
	6.2 Pract	Based on Paper 6.2	He will study the different types of diseases & immunology	He can work in the different types of medical diagnostic labs as a Microbiologist
<b>UG 2018-19 onwards</b>	<b>B.Sc (CBCS)</b>	<b>Choice Based Credit System(CBCS)</b>		
	DSCT1.1	Introduction to Microbiology& Microbial Diversity	They Study the Microbiology basics & types of microbes.	Study the different types of microbes for
	1.1 Pract	Based on Paper 1.1		

	DSCT2.1	Microbial Physiology, Biochemistry,& Metabolism	They study the isolation &cultivation of Microbes from different sources	Learn the cultivation of Microbes &they can handle different types of equipments
	DSCT 2.1 Pract	Based on Paper 2.1		
	DSCT 3.1	Techniques in Microbiology	They Study the Microbiology basics & types of microbes.	Study the different types of microbes for
	DSCT3.1 Pract	Based on paper3.1		
	SECT 1.1	Fundamentals of Microbiology	They study the isolation &cultivation of Microbes from different sources	Learn the cultivation of Microbes &they can handle different types of equipments
	SECT 1.1 Pract	Fundamentals of Microbiology	They Study the Microbiology basics & types of microbes.	Study the different types of microbes for
	DSCT 4.1	Agricultural & Environmental Microbiology	In this paper study microbes from soil & importance in he Environment	He can work as a microbiologist in the water plant & soil testing labs.
	DSCT 4.1 Pract	Based on Theory 4.1		

	SCET 2.1	Food fermentation Techniques	He will study different production of products from microbes in industries	He can work as a Microbiologist in Pharmaceuticals Industries for Production industries.
	SECT 2.1 Pract	Based on theory 2.1		
	DSET5.1a	Food & Industrial Microbiology	He will study different production of products from microbes in industries	He can work as a Microbiologist in Pharmaceuticals Industries for Production industries.
	DSET5.1 a	Based on Paper 5.1a	He will study different production of products from microbes in industries	He can work as a Microbiologist in Pharmaceuticals Industries for Production industries.
	SECT3.1a	Medical Microbiology	He will study the different types of diseases & their impotance	He can work in the diagnostic laboratory to testing different samples as Microbiologist.
	SECT3.1a Pract	Based on Paper 5.1a	He will study different production of products from microbes in industries	He can work as a Microbiologist in Pharmaceuticals

				Industries for Production industries.
	DSET 6.1a	Microbial Genetics & medical Microbiology	He will study the isolation of DNA,RNA Proteins etc	He can work as molecular biologist in Genetic labs
	DSET 6.1a Pract	Based on Paper 6.1a	He will study the isolation of DNA,RNA Proteins etc	He can work as molecular biologist in Genetic labs
	SECT 4.1 a	Microbial diagnosis in health clinics / Microbial Quality control in food & Pharmaceutical industries	In this paper study microbes from soil & importance in he Environment	He can work as a microbiologist in the water plant & soil testing labs.
	SECT 4 .1a Pract	Based on Paper 4.1a	In this paper study microbes from soil & importance in he Environment	He can work as a microbiologist in the water plant & soil testing labs.
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P.G 2016 onwards	M.Sc Course			

<b>P.G CBCS 2.018-19 onwards</b>		<b>Choice Based Credit System(CBCS) Autonomous syllabus5//</b>		
<b>I Sem</b>	<b>M.Sc</b>	<b>Microbiology</b>		
	CCT1.1	Fundamentals of Microbiology	They study the isolation &cultivation of Microbes from different sources	Learn the cultivation of Microbes &they can handle different types of equipments
	CCT1.2	Cell Biology & Biochemistry	He will study the biochemistry & enzymes	He will handle biochemisty lab & he can work as Biochemist in diagnostic & Pharma labs
	CCT1.3	Bacteriology	In this paper study microbes from soil & importance in he Environment	He can work as a microbiologist in the water plant & soil testing labs.
	DSET1.1	a.Mycology & Virology	In this paper study microbes from soil & importance of fungi & viruses	He can work as a microbiologist in the water plant, fungi & virus testing labs.
	CCP/DSEP 1.1	Practical 1.1	He will study the biochemistry & enzymes	He will handle biochemisty lab & he can


				work as Biochemist in diagnostic & Pharma labs
	CCP/DSEP1.2	Practical 1.2	In this paper study microbes from soil & importance in the Environment	He can work as a microbiologist in the water plant & soil testing labs.
<b>II Sem</b>	CCT2.1	Microbial Metabolism & Enzymology	He will study the biochemistry & enzymes	He will handle biochemistry lab & he can work as Biochemist in diagnostic & Pharma labs
	CCT2.2	Microbial Genetics	He will study the isolation of DNA, RNA Proteins etc	He can work as molecular biologist in Genetic labs
	DSET 2.1	a. Environmental Microbiology	In this paper study microbes from soil & importance in the Environment	He can work as a microbiologist in the water plant & soil testing labs.
	GET2.1	General Microbiology	They study the isolation & cultivation of Microbes from different sources	Learn the cultivation of Microbes & they can handle different types of equipments



	CCP/DSEP2.1	Practical2.1	In this paper study microbes from soil & importance in he Environment	He can work as a microbiologist in the water plant & soil testing labs.
	CCP/DSEP2.2	Practical 2.2	He will study the isolation of DNA,RNA Proteins etc	He can work as molecular biologist in Genetic labs
<b>III Sem</b>	CCT3.1	Medical Microbiology & Pharmaceuticals	In this paper study microbes from soil & importance in he Environment	He can work as a microbiologist in the water plant & soil testing labs.
	CCT3.2	Food & Dairy Microbiology	He study the microbe usefull in food & diary industries	He can work as Microbiologist in dairy food industries
	DSET 3.1	a. Genetic Engineering & R-DNA Technology	He will study the isolation of DNA,RNA Proteins etc	He can work as molecular biologist in Genetic labs
	GET3.1	Microbes in Human Welfare	Microbes in human welfare	Types of microbes in different areas & he can work in different companies
	CCP/DSEP 3.1	Practical 3.1	He study the microbe usefull in food & diary industries	He can work as Microbiologist in dairy food industries

	CCP/DSEP 3.2	Practical 3.2	He will study the isolation of DNA,RNA Proteins etc	He can work as molecular biologist in Genetic labs
<b>IV Sem</b>	CCT 4.1	Industrial Microbiology	He will study different production of products from microbes in industries	He can work as a Microbiologist in Pharmaceuticals Industries for Production industries.
	CCT 4.2	Immunology & Immunotechnology	In this paper study microbes from soil & importance in he Environment	He can work as a microbiologist in the water plant & soil testing labs.
	DSET 4.1a	Agricultural Microbiology	He will study the soil microbes & uses in Biofertilizes,biopesticides etc	He can work as Microbiologist in the biofertilizer,or Biopesticide industries,water testing labs,pollution control board labs etc
	CCP/DSEP4.1	Practical 4.1	In this paper study microbes from soil & importance in he Environment	He can work as a microbiologist in the water plant & soil testing labs.

	CCP/DSEP4.2	Practical4.2	He will study the soil microbes & uses in Biofertilizes,biopesticides etc	He can work as Microbiologist in the biofertilizer or Biopesticide industries, water testing labs,pollution control board labs etc
	CCPR 4.1	Project work	On the basis of Project he has a research experience & he can proceed for his Ph.D or any research work	On the basis of Project he has a research experience & he can proceed for his Ph.D or any research Projects as a research fellow,R.Assistant etc

  
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## DEPARTMENT OF ELECTRONICS

2020-21

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
UG-SCIENCE	BSAT	NETWORK ANALYSIS AND ANALOG ELECTRONICS	BASIC KNOWLEDGE OF ELECTRONICS CIRCUITS AND NETWORKS	GET DESIGN KNOWLEDGE OF CIRCUITS AND DEVICES
	BSAP	PRACTICAL	APPLICATIONS OF CIRCUITS IN VARIOUS CASES	GET DESIGN KNOWLEDGE OF CIRCUITS AND DEVICES
	BSBT	LINEAR AND DIGITAL INTEGRATED CIRCUITS	TYPES OF CIRCUITS	FULL KNOWLEDGE OF ELECTRONIC CIRCUITS
	BSBP	PRACTICAL	APPLICATIONS OF CIRCUITS IN VARIOUS CASES	GET DESIGN KNOWLEDGE OF CIRCUITS AND DEVICES
	BSC	COMMUNICATION ELECTRONICS	COMMUNICATION BASICS	COMMUNICATION SKILLS
	BSCP	PRACTICAL	APPLICATIONS OF CIRCUITS IN VARIOUS CASES	GET DESIGN KNOWLEDGE OF CIRCUITS AND DEVICES
	BSDT	MICROPROCESSOR AND MICROCONTROLLER ELECTRONICS	BASICS OF PROCESSORS	PROGRAMMING PROCESSORS
	BSDP	PRACTICAL	PROGRAMMING THE PROCESSOR FOR CSE STUDIES	PROGRAMMING THE PROCESSORS TO DEVELOP MODULES


	BSET-5.1	ELECTRONIC INSTRUMENTATION	APPLICATION OF INSTRUMENTS FORMEASUREMENTS	DESIGN AND MODIFICATION OF INSTRUMETS IN DESIGN
	BSEP-5.1	PRACTICAL	APPLICATIONS OF INSTRUMENTS IN VARIOUS CASES	DESIGN AND DEVELOPMENT OF NEW INSTRUMENTS
	BSET-5.2	PHOTONIC DEVICES AND POWER ELECTRONICS	BASICS OF POWER AND PHOTONIC DEVICES	USE AND APPLICATIONS OF DEVICES
	BSEP-5.2	PRACTICAL	APPLICATIONS OF CIRCUITS IN VARIOUS CASES	GET DESIGN KNOWLEDGE OF PHOTONIC DEVICES
	BSFT-6.1	ANTENNA THEORY AND WIRELESS NETWORKS	KNOWLEDGE OF ANTENNAS ANS NETWORKS	APPLICATIONS OF ANTENNAS AND NETWORKS
	BSFP-6.1	PRACTICAL	KNOWLEDGE OF ANTENNA USES	DESIGN AND DEVELOPMENT OF NEW ANTENNAS
	BSFT-6.2	PIC MICROCONTROLLER AND C-PROGRAMMING	KNOWLEDGE OF PROCESSOR	PROGRAMMING PIC PROCESSOR
	BSFP-6.2	PRACTICAL	PIC PROCESSOR APPLICATIONS	PROGRAMMING THE PIC CONTROLLERS FOR MODULES

  
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**2019-20**

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>UG-SCIENCE</b>	BSAT	NETWORK ANALYSIS AND ANALOG ELECTRONICS	BASIC KNOWLEDGE OF ELECTRONICS CIRCUITS AND NETWORKS	GET DESIGN KNOWLEDGE OF CIRCUITS AND DEVICES
	BSAP	PRACTICAL	APPLICATIONS OF CIRCUITS IN VARIOUS CASES	GET DESIGN KNOWLEDGE OF CIRCUITS AND DEVICES
	BSBT	LINEAR AND DIGITAL INTEGRATED CIRCUITS	TYPES OF CIRCUITS	FULL KNOWLEGDE OF ELECTRONIC CIRCUITS
	BSBP	PRACTICAL	APPLICATIONS OF CIRCUITS IN VARIOUS CASES	GET DESIGN KNOWLEDGE OF CIRCUITS AND DEVICES
	BSC	COMMUNICATION ELECTRONICS	COMMUNICATION BASICS	COMMUNICATION SKILLS
	BSCP	PRACTICAL	APPLICATIONS OF CIRCUITS IN VARIOUS CASES	GET DESIGN KNOWLEDGE OF CIRCUITS AND DEVICES
	BSDT	MICROPROCESSOR AND MICROCONTROLLER ELECTRONICS	BASICS OF PROCESSORS	PROGRAMMING PROCESSORS
	BSDP	PRACTICAL	PROGRAMMING THE PROCESSOR FOR CSE STUDIES	PROGRAMMING THE PROCESSORS TO DEVELOP MODULES

	BSET-5.1	ELECTRONIC INSTRUMENTATION	APPLICATION OF INSTRUMENTS FORMEASUREMENTS	DESIGN AND MODIFICATION OF INSTRUMETS IN DESIGN
	BSEP-5.1	PRACTICAL	APPLICATIONS OF INSTRUMENTS IN VARIOUS CASES	DESIGN AND DEVELOPMENT OF NEW INSTRUMENTS
	BSET-5.2	PHOTONIC DEVICES AND POWER ELECTRONICS	BASICS OF POWER AND PHOTONIC DEVICES	USE AND APPLICATIONS OF DEVICES
	BSEP-5.2	PRACTICAL	APPLICATIONS OF CIRCUITS IN VARIOUS CASES	GET DESIGN KNOWLEDGE OF PHOTONIC DEVICES
	BSFT-6.1	ANTENNA THEORY AND WIRELESS NETWORKS	KNOWLEDGE OF ANTENNAS ANS NETWORKS	APPLICATIONS OF ANTENNAS AND NETWORKS
	BSFP-6.1	PRACTICAL	KNOWLEDGE OF ANTENNA USES	DESIGN AND DEVELOPMENT OF NEW ANTENNAS
	BSFT-6.2	PIC MICROCONTROLLER AND C-PROGRAMMING	KNOWLEDGE OF PROCESSOR	PROGRAMMING PIC PROCESSOR
	BSFP-6.2	PRACTICAL	PIC PROCESSOR APPLICATIONS	PROGRAMMING THE PIC CONTROLLERS FOR MODULES


  
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**2018-19**

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>UG-SCIENCE</b>	BSAT	NETWORK ANALYSIS AND ANALOG ELECTRONICS	BASIC KNOWLEDGE OF ELECTRONICS CIRCUITS AND NETWORKS	GET DESIGN KNOWLEDGE OF CIRCUITS AND DEVICES
	BSAP	PRACTICAL	APPLICATIONS OF CIRCUITS IN VARIOUS CASES	GET DESIGN KNOWLEDGE OF CIRCUITS AND DEVICES
	BSBT	LINEAR AND DIGITAL INTEGRATED CIRCUITS	TYPES OF CIRCUITS	FULL KNOWLEGDE OF ELECTRONIC CIRCUITS
	BSBP	PRACTICAL	APPLICATIONS OF CIRCUITS IN VARIOUS CASES	GET DESIGN KNOWLEDGE OF CIRCUITS AND DEVICES
	BSC	COMMUNICATION ELECTRONICS	COMMUNICATION BASICS	COMMUNICATION SKILLS
	BSCP	PRACTICAL	APPLICATIONS OF CIRCUITS IN VARIOUS CASES	GET DESIGN KNOWLEDGE OF CIRCUITS AND DEVICES
	BSDT	MICROPROCESSOR AND MICROCONTROLLER ELECTRONICS	BASICS OF PROCESSORS	PROGRAMMING PROCESSORS
	BSDP	PRACTICAL	PROGRAMMING THE PROCESSOR FOR CSE STUDIES	PROGRAMMING THE PROCESSORS TO DEVELOP MODULES




	BSET-5.1	ELECTRONIC INSTRUMENTATION	APPLICATION OF INSTRUMENTS FOR MEASUREMENTS	DESIGN AND MODIFICATION OF INSTRUMENTS IN DESIGN
	BSEP-5.1	PRACTICAL	APPLICATIONS OF INSTRUMENTS IN VARIOUS CASES	DESIGN AND DEVELOPMENT OF NEW INSTRUMENTS
	BSET-5.2	PHOTONIC DEVICES AND POWER ELECTRONICS	BASICS OF POWER AND PHOTONIC DEVICES	USE AND APPLICATIONS OF DEVICES
	BSEP-5.2	PRACTICAL	APPLICATIONS OF CIRCUITS IN VARIOUS CASES	GET DESIGN KNOWLEDGE OF PHOTONIC DEVICES
	BSFT-6.1	ANTENNA THEORY AND WIRELESS NETWORKS	KNOWLEDGE OF ANTENNAS AND NETWORKS	APPLICATIONS OF ANTENNAS AND NETWORKS
	BSFP-6.1	PRACTICAL	KNOWLEDGE OF ANTENNA USES	DESIGN AND DEVELOPMENT OF NEW ANTENNAS
	BSFT-6.2	PIC MICROCONTROLLER AND C-PROGRAMMING	KNOWLEDGE OF PROCESSOR	PROGRAMMING PIC PROCESSOR
	BSFP-6.2	PRACTICAL	PIC PROCESSOR APPLICATIONS	PROGRAMMING THE PIC CONTROLLERS FOR MODULES

  
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## 2017-18

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
UG-SCIENCE	BSAT	FUNDAMENTALS OF ELECTRONICS	BASIC KNOWLEDGE OF ELECTRONIC CIRCUITS AND DEVICES	GET DESIGN KNOWLEDGE CIRCUITS AND DEVICES
	BSAP	PRACTICALS	APPLICATIONS OF CIRCUITS	GET PRACTICAL KNOWLEDGE IN USE OF CIECUITS FOR DESIGNING
	BSBT	ELECTRONIC DEVICES	ACQUINTED WITH TYPES OF CIRCUITS	GET FULL KNOWLEGDE OF ELECTRONIC CIRCUITS AND OSCILLATORS AMPLIFIERS
	BSBP	PRACTICALS	APPLICATIONS OF CIRCUITS	GET PRACTICAL KNOWLEDGE IN USE OF CIECUITS FOR DESIGNING
	BSC	OP-AMP AND LINEAR INTEGRATED CIRCUITS	OP-AMPS	LINEAR ICS AND OP-AMP APPLICATIONS
	BSCP	PRACTICALS	APPLICATIONS OF CIRCUITS	GET PRACTICAL KNOWLEDGE IN USE OF CIECUITS FOR DESIGNING
	BSDT	DIGITAL ELECTRONICS	BASICS OF DIGITAL ELECTRONICS	DIGITAL CIRCUIT DESIGN USING ICS
	BDSP	PRACTICALS	APPLICATIONS OF CIRCUITS	GET PRACTICAL KNOWLEDGE IN USE OF CIECUITS FOR DESIGNING
	BSET-5.1	ELECTRONICS INSTRUMENTATION	EXPOSED TO INSTRUMENTS	USAGE OF INSTRUMENTATION

	BSEP-5.1	PRACTICALS	APPLICATIONS OF CIRCUITS	GET PRACTICAL KNOWLEDGE IN USE OF CIECUITS FOR DESIGNING
	BSET-5.2	MICROPROCESSOR AND INTERFACING	KNOWLEDGE OF MICROPROCESSOR	PROGRAMMING MICROPROCESSOR
	BSEP-5.2	PRACTICALS	PROGRAMMING MICROPOCESSOR	USE OF MICROPROCESSOR IN VARIOUS CASES
	BSFT-6.1	ADVANCED ELECTRONICS COMMUNICATION& C- PROGRAMMING	KNOWLEDGE OF COMMUNICATION AND C-PROGRAMMING	PROGRAMMING AND COMMUNICATION KNOWLEDGE
	BSFP-6.1	PRACTICALS	APPLICATIONS OF CIRCUITS	GET PRACTICAL KNOWLEDGE IN USE OF CIECUITS FOR DESIGNING
	BSFT-6.2	SIGNAL CONDITIONERS AND MICROCONTROLLER	KNOWLEDGE OF MICROPROCESSOR	PROGRAMMING MICROPROCESSOR
	BSFP-6.2	PRACTICAL	KNOWLEDGE OF SIGNAL CONDITIONERS AND MICROPROCESSOR	USE OF MICROCONTROLLERS IN VARIOUS CASES


  
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**2016-17**

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
UG-SCIENCE	BSAT	FUNDAMENTALS OF ELECTRONICS	BASIC KNOWLEDGE OF ELECTRONIC CIRCUITS AND DEVICES	GET DESIGN KNOWLEDGE CIRCUITS AND DEVICES

	BSAP	PRACTICALS	APPLICATIONS OF CIRCUITS	GET PRACTICAL KNOWLEDGE IN USE OF CIECUITS FOR DESIGNING
	BSBT	ELECTRONIC DEVICES	ACQUINTED WITH TYPES OF CIRCUITS	GET FULL KNOWLEGDE OF ELECTRONIC CIRCUITS AND OSCILLATORS AMPLIFIERS
	BSBP	PRACTICALS	APPLICATIONS OF CIRCUITS	GET PRACTICAL KNOWLEDGE IN USE OF CIECUITS FOR DESIGNING
	BSC	OP-AMP AND LINEAR INTEGRATED CIRCUITS	OP-AMPS	LINEAR ICS AND OP-AMP APPLICATIONS
	BSCP	PRACTICALS	APPLICATIONS OF CIRCUITS	GET PRACTICAL KNOWLEDGE IN USE OF CIECUITS FOR DESIGNING
	BSDT	DIGITAL ELECTRONICS	BASICS OF DIGITAL ELECTRONICS	DIGITAL CIRCUIT DESIGN USING ICS
	BSDP	PRACTICALS	APPLICATIONS OF CIRCUITS	GET PRACTICAL KNOWLEDGE IN USE OF CIECUITS FOR DESIGNING
	BSET-5.1	ELECTRONICS INSTRUMENTATION	EXPOSED TO INSTRUMENTS	USEAGE OF INSTRUMENTATION
	BSEP-5.1	PRACTICALS	APPLICATIONS OF CIRCUITS	GET PRACTICAL KNOWLEDGE IN USE OF CIECUITS FOR DESIGNING
	BSET-5.2	MICROPROCESSOR AND INTERFACING	KNOWLEDGE OF MICROPROCESSOR	PROGRAMMING MICROPROCESSOR
	BSEP-5.2	PRACTICALS	PROGRAMMING MICROPOCESSOR	USE OF MICROPROCESSOR IN VARIOUS CASES

	BSFT-6.1	ADVANCED ELECTRONICS COMMUNICATION& C- PROGRAMMING	KNOWLEDGE OF COMMUNICATION AND C-PROGRAMMING	PROGRAMMING AND COMMUNICATION KNOWLEDGE
	BSFP-6.1	PRACTICALS	APPLICATIONS OF CIRCUITS	GET PRACTICAL KNOWLEDGE IN USE OF CIECUITS FOR DESIGNING
	BSFT-6.2	SIGNAL CONDITIONERS AND MICROCONTROLLER	KNOWLEDGE OF MICROPROCESSOR	PROGRAMMING MICROPROCESSOR
	BSFP-6.2	PRACTICAL	KNOWLEDGE OF SIGNAL CONDITIONERS AND MICROPROCESSOR	USE OF MICROCONTROLLERS IN VARIOUS CASES

  
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## DEPARTMENT OF STATISTICS

Program Name	Course Code	Course Name	Course Out Come(non cbcs )	Specific Course Out come
<b>BSC I</b>	PAPER-1	Descriptive Statistics AND Mathematics	Organize, manage and present data. • Analyze statistical data graphically using frequency distributions and cummulative frequency distributions. • • Analyze statistical data using measures of central tendency, dispersion and location. • Use the basic probability rules, including additive and multiplicative laws, using the terms, independent and mutually exclusive events. • • Translate real-world problems into probability models. • • Derive the probability density function of transformation of random variables. • Calculate probabilities, and derive the marginal and	Students learn to design data collection plans and basic tools of descriptive statistics.  Student learn to i) identify the relationship between two variables using scatter plot ii) Interpret a sample correlation.

			conditional distributions of bivariate random variables. • Analyze Statistical data using MS-Excel	
<b>BSC II</b>	Paper-2	Descriptive statistics Probability theory and Distribution	Use discrete and continuous probability distributions, including requirements, mean and variance, and making decisions. • Define binomial outcomes and compute probability of getting X successes in N trials • Identify the characteristics of different discrete and continuous distributions. • Identify the type of statistical situation to which different distributions can be applied. • Use Poisson, exponential distributions to solve statistical problems.. • Use the normal probability distribution including standard normal curve calculations of appropriate areas. • Use different distributions to solve simple practical problems. • Analyze Statistical data using MS-Excel.	Students learn different types of continuous distribution with their properties and applications.

<b>BSC III</b>	Paper-3	Distribution Theory and order statistics	discrete and continuous probability distributions, including requirements, mean and variance, and making decisions. • Define binomial outcomes and compute probability of getting X successes in N trials • Identify characteristics of different discrete and continuous distributions. • Identify the type of statistical situation to which different distributions can be applied. • Use Poisson, exponential distributions to solve statistical problems.. • Use normal probability distribution including standard normal curve calculations of appropriate areas. • Use different distributions to solve simple practical problems. Analyze Statistical data using MS-Excel.	A survey is given of recent advances, including a number of original contributions by the author, in the use of order statistics to obtain point and interval estimates of the parameters of various statistical populations from complete and from censored samples. In a few cases estimators based on order statistics are the efficient estimators, but more often they are substitute estimators that sacrifice some efficiency in the interest of computational simplicity and/or robustness in the presence of outliers. In life testing, they are often used to obtain estimates of the parameters of the life distribution before all of the items placed on test have failed. Point estimators based on order statistics may be either best linear unbiased estimators, based on all available
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				observations from complete or censored samples or on one or more observations chosen in some optimal manner,
<b>BSC V</b>	Paper-5  Paper-6	Theory of Estimation and C - Language Testing of Hypothesis	Choose, administer and interpret the correct tests based on the situation, including identification of appropriate sampling and potential errors.c. Choose the appropriate hypothesis test given a situation.d. Describe the meaning and uses of alpha and p-values.e. Write the appropriate null and alternative hypotheses, including whether the alternative should be one-sided or two-sided.f. Determine and calculate the appropriate test statistic (e.g. z-test, multiple t-tests, Chi-Square, ANOVA)  g. Determine and interpret effect sizes.h. Interpret results of a hypothesis test.	Every time you conduct a hypothesis test, there are four possible outcomes of your decision to reject or not reject the null hypothesis: <b>(1) You don't reject the null hypothesis when it is true</b> , (2) you reject the null hypothesis when it is true, (3) you don't reject the null hypothesis when it is false, ..
<b>BSC VI</b>	Paper -7  Paper-8	Sampling Techniq and Design of experiments  Operation Research	Understand the meaning, purpose, and tools of Operations Research Describe the history of Operations Research Describe the Stages of O.R Explain the Applications of Operations Research Describe the Limitations of Operation Research Understand the OR specialist and Manager relationshipDescribe some of the factors affecting reproducibility and external validity .List the different types of formal experimental designs (e.g. completely randomised, randomised block, repeated measures, Latin square and factorial experimental designs).Explain the concept of variability, its causes and methods of reducing it Describe possible causes of bias and ways of alleviating it Identify the experimental unit and recognise issues of non-independence (pseudo-replication). Describe the six factors affecting significance, including the meaning of statistical power and “p-values” .Identify formal ways of determining sample size. Explain the fundamental principles behind the output of an ANOVA, including “blocking” and “interactions	formulate and solve problems as networks and graphs. develop linear programming (LP) models for shortest path, maximum flow, minimal spanning tree, critical path, minimum cost flow, and transshipment problems. solve the problems using special solution algorithms.use CPM and PERT techniques, to plan, schedule, and control project activities.construct linear integer programming models and discuss the solution techniques.  formulate pure, mixed, and binary integer programming models.solve the integer programming models using branch-and-bound method.  explain why heuristics are used to solve some large-scale integer programming problems.

<b>Program Name</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Course Out Come</b>	<b>Specific Course Out come</b>
<b>BSC I</b>	DSCT1	Descriptive Statistics	<p>Organize, manage and present data.</p> <ul style="list-style-type: none"> <li>Analyze statistical data graphically using frequency distributions and cumulative frequency distributions.</li> <li>Analyze statistical data using measures of central tendency, dispersion and location.</li> <li>Use the basic probability rules, including additive and multiplicative laws, using the terms, independent and mutually exclusive events.</li> <li>Translate real-world problems into probability models.</li> <li>Derive the probability density function of transformation of random variables.</li> <li>Calculate probabilities, and derive the marginal and conditional distributions of bivariate random variables.</li> <li>Analyze Statistical data using MS-Excel</li> </ul>	<p>Students learn to design data collection plans and basic tools of descriptive statistics.</p> <p>Student learn to i) identify the relationship between two variables using scatter plot ii) Interpret a sample correlation.</p>
	DSCP1	Practical-I		
<b>BSC II</b>	DSCT2	Probability and Probability Distribution	<p>Use discrete and continuous probability distributions, including requirements, mean and variance, and making decisions.</p> <ul style="list-style-type: none"> <li>Define binomial outcomes and compute probability of getting X successes in N trials</li> <li>Identify the characteristics of different discrete and continuous distributions.</li> <li>Identify the type of statistical situation to which different distributions can be applied.</li> <li>Use Poisson, exponential distributions to solve statistical problems..</li> <li>Use the normal probability distribution including standard normal curve calculations of appropriate areas.</li> <li>Use different distributions to solve simple practical</li> </ul>	<p>Students learn different types of continuous distribution with their properties and applications.</p>




			problems. using MS-Excel.	• Analyze Statistical data	
	DSCP2	Practical-II			
<b>BSC III</b>	DSCT3	Sampling Distribution	Understand the basic concepts of sampling distributions. Understand the Central Limit Theorem and when to apply it. Understand the details of important sampling distributions, namely chi-square, Student $t$ , and Fisher's $F$ -distributions and use them to make conclusions about problems that arise in applied statistics. Develop the distributions of various order statistics. Make use of MINITAB, Microsoft Excel, and Minitab in areas of applied statistics		Understand the concept of sampling distribution of a statistic and its properties, difference between parameter and statistic.
	DSCP3	Practical-III			
<b>SEC -I</b>	SECT 1	a)Applied Statistics- Ib)Demographic Method	Learning Outcomes: Students finishing this course successfully are expected to have 1. describe and verify mathematical considerations for analyzing time series, including concepts of white noise, stationarity, autocovariance, autocorrelation 2. apply various techniques of time series models, including the seasonal autoregressive moving average (SARIMA) models, regression with ARMA models 3. apply various techniques for the modeling: including parameter estimation, assumption verification, and residual sequence diagnosis 4. verify the properties of linear predictor operator, and apply various linear forecasting techniques 5. describe and apply techniques of selected additional topics, such as		Time series analysis has many different objectives, depending on the field of application. These include forecasting future values of the series, extracting a signal hidden in noisy data, discovering the mechanism by which the data are generated, simulating independent realizations of the series to see how it might behave in the future (and hence, for example, to estimate the probability of extreme events like floods), and eliminating the <u>seasonal component</u> from data sets like the

			spectral analysis, state space models, ARCH and GARCH, multivariate time series, principle component analysis, process control, and other topics.	one in example 2 in order to reveal more clearly the underlying trend. In studying monthly economic statistics, for example, it is important to carry out this so-called deseasonalization so as not to confuse the long-term trend with the month-to-month seasonal variation. For all such applications, time series analysis usually begins with an attempt to find a mathematical model which provides a good representation of the observed data.
	SECP 1	Practical-IV		
<b>BSC IV</b>	DSCT4	Statistical Quality Control	Understand the philosophy and basic concepts of quality improvement. 2. Describe the DMAIC process (define, measure, analyze, improve, and control). 3. Demonstrate the ability to use the methods of statistical process control. 4. Demonstrate the ability to design, use, and interpret control charts for variables. 5. Demonstrate the ability to design, use, and interpret control charts for attributes. 6. Perform analysis of process capability and measurement system capability. 7. Design, use, and interpret exponentially weighted moving average and moving average control charts	The objective of statistical quality control is <b>to monitor production through many stages of manufacturing</b> Descriptive statistics Statistics used to describe quality characteristics and relationships.} The general category of statistical tools used to evaluate organizational quality. ... SQC : Three broad categories →
<b>SEC-2</b>	SECT 2	a) Applied Statistics-II b)MS-Excel	Know the practical issues arising in sampling studies. • Appropriately interpret results of analysis of variance tests. • Design experiments, carry them out, and analyze the data they yield. • Demonstrate understanding of the concepts of time series and its applications in different areas. • Explain how supply and demand relationships between the price of a product and the quantity of the same product. • Determine the equilibrium price and quantity from a table of prices and the related quantity supplied and	construct simple price, quantity, and value indexes;construct weighted price, quantity, and value indexes;construct special-purpose (composite) indexes;interpret indexes to identify trends in a data set;use the consumer price index to determine the purchasing power of the dollar and to compute real income;shift the base to make two

			quantity demanded. • Acquire knowledge on vital statistics, Index numbers and calculate an indices from given data. • Analyze statistical data using MS-Excel.	series comparable;splice an old series with a new series of index numbers.
<b>BSC V</b>	DSET 5	a) Theory of Estimation and C - Language b) Testing of Hypothesis	Choose, administer and interpret the correct tests based on the situation, including identification of appropriate sampling and potential errors.c. Choose the appropriate hypothesis test given a situation.d. Describe the meaning and uses of alpha and p-values.e. Write the appropriate null and alternative hypotheses, including whether the alternative should be one-sided or two-sided.f. Determine and calculate the appropriate test statistic (e.g. z-test, multiple t-tests, Chi-Square, ANOVA)  g. Determine and interpret effect sizes.h. Interpret results of a hypothesis test.	Every time you conduct a hypothesis test, there are four possible outcomes of your decision to reject or not reject the null hypothesis: <b>(1) You don't reject the null hypothesis when it is true</b> , (2) you reject the null hypothesis when it is true, (3) you don't reject the null hypothesis when it is false, ..
<b>SEC-3</b>	SECT 3	a) Operation Research Technique b)Statistics Computing using C-Program	Know the various techniques of operations research. • Translate a real – word problem, given in words, into a mathematical formulation. • Analyze the results and propose recommendations to the decision making processes. • Build and solve transformation models and assignment models. • Implement practical cases in operations research by using TORA. • Analyze statistical data using MS-Excel.	propose the best strategy using decision making methods under uncertainty and game theory. select the best strategy on the basis of decision criteria under risk. select the best strategy on the basis of decision criteria under the uncertainty. determine the best choice using decision tree. solve the zero-sum two- person games. solve multi-level decision problems using dynamic programming method. explain fundamentals of dynamic programming. use deterministic and stochastic dynamic programming

				approaches.use computer softwares to solve decision models.
<b>BSC VI</b>	DSET6	a)Sampling Survey and Indian Official Statistics b) Operation Research	Understand the meaning, purpose, and tools of Operations Research Describe the history of Operations Research Describe the Stages of O.R Explain the Applications of Operations Research Describe the Limitations of Operations Research Understand the OR specialist and Manager relationship	formulate and solve problems as networks and graphs. develop linear programming (LP) models for shortest path, maximum flow, minimal spanning tree, critical path, minimum cost flow, and transshipment problems. solve the problems using special solution algorithms.use CPM and PERT techniques, to plan, schedule, and control project activities.construct linear integer programming models and discuss the solution techniques. formulate pure, mixed, and binary integer programming models.solve the integer programming models using branch-and-bound method. explain why heuristics are used to solve some large-scale integer programming problems. set up decision models and use some solution methods for nonlinear optimization problems. analyse the general nonlinear programming problems
<b>SEC-4</b>	SECT 4	a) Designs of Experiment b) Inventory replacement and Queuing Theory	Describe some of the factors affecting reproducibility and external validity .List the different types of formal experimental designs (e.g. completely randomised, randomised block, repeated measures, Latin square and factorial experimental designs).Explain the concept of variability, its causes and methods of reducing it Describe possible causes of bias and ways of alleviating it Identify the experimental unit and recognise issues of non-independence (pseudo-replication). Describe the six	Control languages used to specify experimental designs to ANOVA programs must have syntax and semantics to express several different types of information about the data and their analysis. The languages associated with several widely distributed ANOVA programs are compared for their flexibility and legibility in expressing the set of designs

			factors affecting significance, including the meaning of statistical power and “p-values” .Identify formal ways of determining sample size.	encountered in design texts. The types of output of the programs are listed.
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## DEPARTMENT OF COMMERCE

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
B.COM	BCA031	FINANCIAL ACCOUNTING - I	Students are able to acquaint with the basic knowledge of maintaining the books of accounts. This helps in learning and implementing the procedures to record and interpret the transactions occurring in the business. It also enables the learner to compute the profits and losses in the firm..	To understand the preparation of financial statements
	BCA032	BUSINESS ORGANISATION AND MANAGEMENT	The objective of this course is to learn about the various forms of business organization and the process of setting a new venture entity under a country's legal-economic structure	
	BCA033	PRINCIPLES OF MARKETING	To provide students with an extensive understanding of marketing concepts, and, to orient them with the role	It gives full insight in to the aspects of marketing

			and relevance of the marketing function, with a focus on product and price decisions.	
	BCA034	BUSINESS ECONOMICS	To integrate the concept of price and output decisions of firms under various market structure. The objective of this course is to impart the knowledge of economics as a subject and its importance while business. The business decisions are made scientifically on the basis of all available information.	
	BCA035	BUSINESS ORGANIZATION AND MANAGEMENT	The objective of this course is to learn about the various forms of business organization and the process of setting a new venture entity under a country's legal-economic structure	
	BCB031	FINANCIAL ACCOUNTING - II	To introduce preparation of certain specific financial statements	To introduce preparation of certain specific financial statements
	BCB032	BUSINESS LAW	This course is designed to provide the student with knowledge of the legal environment in which a consumer and businesses operates, and to provide the student with knowledge of legal principles.	Students are able to understand laws relating to business
	BCB033	INDIAN FINANCIAL SYSTEM	At the end of the course, students will be able to: • Outline the structure and functions of the Indian financial system. • Illustrate the functioning of financial market and government security market in the development of Indian financial system. • Evaluate the functioning of different financial institutions	Understand the structure and working of Indian financial system

	BCB034	INDUSTRIAL ECONOMICS	Students are in a position to establish small scale industries	
	BCB035	MANAGEMENT OF BANKING OPERATIONS	Students will get the knowledge of banking operations and their management	
	BCC031	CORPORATE ACCOUNTING - I	The outcome is impart the knowledge about preparation and presentation of financial statements of a company	The outcome is impart the knowledge about preparation and presentation of financial statements of a company
	BCC032	COMPANY LAW	Students will acquire the knowledge of establishing a company and its conduct	Students are able to establish a company
	BCC033	QUANTITATIVE TECHNIQUES FOR BUSINESS DECISIONS-I	Provides students with quantitative skills that are required to make business decisions. These skills involve using statistical, forecasting and estimation techniques. Formulation and application of mathematical models in business decision making scenarios.	To become business analyst for various decisions
	BCC034	SMALL BUSINESS MANAGEMENT		
	BCC035	COMPUTERIZED SYSTEM OF ACCOUNTING	Students gain practical knowledge about preparation of financial statements using technology	To become experts in preparation of financial statements using technology
	BCC070	SEC – E-COMMERCE	Students get full idea of e-commerce and its operations and accounting	Students can open online website for business

	BCD033	QUANTITATIVE TECHNIQUE FOR BUSINESS DECISIONS-I	Provides students with quantitative skills that are required to make business decisions. These skills involve using statistical, forecasting and estimation techniques. Formulation and application of mathematical models in business decision making scenarios.	To become business analyst for various decisions
	BCD034	CORPORATE ACCOUNTING - II	The outcome is impart the knowledge about preparation and presentation of financial statements of a company	The outcome is impart the knowledge about preparation and presentation of financial statements of a company
	BCD035	FINANCIAL MANAGEMENT	The outcome is gain the knowledge of financial planning and management of assets and liabilities of an organisation	To take financial, investment and dividend decisions in an organisation
	BCD036	INDIAN BANKING	Students are able to understand the basic structure and functioning of banking system in India	
	BCD070	COMMERCE- Indian Financial System	To know the Indian financial system and capital & money market and also the various instruments	Understand the structure and working of Indian financial system
	BCE031	DSET-5.1 (A) - INCOME TAX-I	To enable the students to identify the basic concepts, definitions and terms related to Income Tax. To enable the students to compute income under various heads namely income from salaries, house property, business/ profession, capital gains and income from other sources.	
	BCE032	DSET-5.1 (B) - HUMAN	To make the students understand the principles and processes of human resource management.	



		RESOURCE MANAGEMENT		
	BCE033	DSET-5.2 (A) - COST ACCOUNTING - I	Students are able to ascertain and fix the cost of the product	Students are able to ascertain and fix the cost of the product
	BCE034	DSET-5.2(B) - OFFICE MANAGEMENT & SECRETARIAL PRAC	Students will be able to support management in office administration. Students will be able to prepare business documents. Students will be able to manage records. Students will be able to demonstrate business communication skills. Students will be able to utilize appropriate office technology. Students will be able to execute the duties of an office administrator	
	BCE035	DSET-5.3 (A) - AUDITING AND CORPORATE GOVERNANCE	On successful completion of this course, students will be able to:  Articulate knowledge of fundamental audit concepts. Apply critical thinking skills and solve auditing problems through the use of case studies. Demonstrate the use of Auditing, Assurance Standards and the Code of Ethics for professional Accountants.  Demonstrate the ability to undertake research on significant auditing issues and to keep up-to-date with developments in auditing theory and practice.	
	BCE036	DSET-5.3 (B) - BUSINESS ENVIRONMENT	On completion of this course, the students will be able to: 1. Explain the concept of the various constituents of environment and their impact on businesses. 2. Apply the trade theories , investment theories, exchange rate theories and regional trading bloc theories and their impact on economic welfare. 3. Analyse the principle	

			and the different exchange rate regimes' impact on businesses	
	BCE164	SEC - GOODS AND SERVICES TAX	Students are able to understand the provisions of Indirect taxes and to get practical knowledge	They become independent GST return prepares and Practitioners
	BCE184	GE - BASICS OF ACCOUNTING	Identify and interpret accounting information to inform users and make decisions. Apply critical thinking skills by identifying and analyzing accounting issues using relevant accounting frameworks.	
	DSET-6.1	INCOME TAX-II	To enable the students to identify the basic concepts, definitions and terms related to Income Tax. To enable the students to compute income under various heads namely income from salaries, house property, business/ profession, capital gains and income from other sources.	
	DSET-6.1	INTERNATIONAL BUSINESS	Students should be able to: Explain business expansion abroad and key issues related to their operations in other countries. Compare and contrast cultures and societies globally using socioeconomic and cultural frameworks. Develop an entry strategy into other markets recognizing the nature of institutions and forces governing the process of globalization.	
	DSET-6.2	COST ACCOUNTING	Students are able to ascertain and fix the cost of the product	Students are able to ascertain and fix the cost of the product

	DSET-6.2	BANKING AND INSURANCE	To make the students understand the various services offered and various risks faced by banks • To make them aware of various banking innovations after nationalization To give them an overview about insurance industry • To make the students understand various principles, provisions that govern the Life and General Insurance Contracts.	
	DSET-6.3	MANAGEMENT ACCOUNTING	To provide theoretical and practical knowledge for preparing and analyzing fund flow, cash flow statements and other financial statements.	
	DSET-6.3	INVESTMENT MANAGEMENT	Students will understand the characteristics of different financial assets such as money market instruments, bonds, and stocks, and how to buy and sell these assets in financial markets. And understand the benefit of diversification of holding a portfolio of assets, and the importance played by the market portfolio. Students will know how to apply different valuation models to evaluate fixed income securities, stocks, and how to use different derivative securities to manage their investment risks.	
	SECT-4	E-COMMERCE	Students are in a position to understand the business of e-commerce.	Students are in a position to understand the business of e-commerce
	GET-2	PRINCIPLES OF INVESTMENT	After studying this text the learner should / should be able to:	

			<ol style="list-style-type: none"> <li>1. Distinguish the ultimate investments of the financial system and real economy and the investment vehicles which intermediate them and the investors.</li> <li>2. Define the objective of investment.</li> <li>3. Explain the investment environment and the research levels.</li> <li>4. Demonstrate an understanding of, and the relationship between, risk and return.</li> <li>5. Appreciate the existence of investment theories and the lessons drawn from them that are relevant to investments.</li> <li>6. Describe the principle underlying the valuation of investments.</li> </ol>	
M.COM	MCA001	Organization Behaviour and Theory	<p>On successful completion of the course students will be able to:</p> <ol style="list-style-type: none"> <li>1. Explain the basic fundamentals of the business environment, organisational theory and marketing, including capacity to recognise and use relevant terminology.</li> <li>2. Contribute to a team project in an effective manner.</li> </ol>	

			3. Describe the processes underlying diversity within an organisation.	
	MCA002	Managerial Economics	<p>Upon successful completion students will be able to:</p> <p>Develop an understanding of the applications of managerial economics.</p> <p>Interpret regression analysis and discuss why it's employed in decision-making.</p> <p>Discuss optimization and utility including consumer behavior.</p> <p>Assess the relationships between short-run and long-run costs.</p> <p>Analyze perfectly competitive markets including substitution.</p> <p>Explain uniform pricing and how it relates to price discrimination and total revenue.</p>	
	MCA003	Accounting Theory and Analysis	<p>On successful completion of this unit, students will be able to: Demonstrate an understanding of the development of accounting theory and practice , Explain the scientific approaches of induction and deduction and demonstrate the ability to conduct accounting research. Compare and contrast different models and approaches to accounting.</p>	

	MCA004	Business Environment and Government Policy	After learning this module, students will be able to understand: 1. To understand the different environment in the business climate 2. To know the minor and major factors affecting the business in various streams 3. To know the different environment like, political, technological and economic environment in the business 4. To acquire in-depth knowledge about legal environment etc.	
	MCA021	Indian Accounting Standards - I	Students gets through knowledge of recognition, measurement and recording of elements of financial statements	To become experts in preparation of financial statements of a company
	MCA022	Indian Accounting Standards - I	Students gets through knowledge of recognition, measurement and recording of elements of financial statements	To become experts in preparation of financial statements of a company
	MCA023	Indian Banking System	On successful completion of the module students will be able to: 1. To Understand the Dynamics of Indian Banking Sector. 2. To Analyze the Pertinent Issues in the Banking Sector 3. To Familiarize students with the Reforms in the Banking Sector. 4. Comprehend the need, definition, functions and economic significance of financial institutions and markets. 5. To Critically understand the evolving role of Central Banking and Grasp the conduct of monetary policy	
	MCA024	Principles and Practice of Taxation	Students gets knowledge about the basics of taxation and principles	Students gets knowledge about the basics of taxation and principles

	MCA025	Indian Financial System	To know the Indian financial system and capital & money market and also the various instruments	Understand the structure and working of Indian financial system
	MCA026	Principles and Practice of Insurance	Students gets knowledge about the basics of insurance and principles	Students gets knowledge about the basics of insurance and principles
	MCB001	Human Resource Management	To make the students understand the principles and processes of human resource management.	
	MCB002	Financial Management	The outcome is gain the knowledge of financial planning and management of assets and liabilities of an organisation	To take financial, investment and dividend decisions in an organisation
	MCB003	Business Research Methods	The primary objective of this course is to develop a research orientation among the scholars and to acquaint them with fundamentals of research methods. Specifically, the course aims at introducing them to the basic concepts used in research and to scientific social research methods and their approach. It includes discussions on sampling techniques, research designs and techniques of analysis.	
		Strategic Management	It helps a decision maker to get equipped with management tools and anticipating changes and directing the organizational activities along the right path	
	MCB004	Marketing Management	To impart basic knowledge on strategies of marketing and emerging issues on marketing, which mainly focuses on distribution strategies, communication strategies,	

			selling strategies, competitive strategies which enables the students to understand the real marketing techniques adopted by organizations	
	MCB021	Indian Accounting Standards - II	Students gets through knowledge of recognition, measurement and recording of elements of financial statements	To become experts in preparation of financial statements of a company
	MCB022	Indian Accounting Standards - II	Students gets through knowledge of recognition, measurement and recording of elements of financial statements	To become experts in preparation of financial statements of a company
	MCB023	Credit Management in Banks	Students are fully equipped with the knowledge of management of various risks in banking business	
	MCB024	Corporate Tax Planning and Management	Students are able to determine the tax liability and management of tax matters of a company	Tax planning and management of the company
	MCB025	Financial Services	After completion of this course, the student will be able to 1. Understand the role and function of the financial system in reference to the macro economy. 2. Demonstrate an awareness of the current structure and regulation of the Indian financial services sector. 3. Evaluate and create strategies to promote financial products and services.	
	MCB026	Management of Life Insurance	Students are able to know the principles of life insurance and management of different products	
	MCB051	Capital Market	Students are able to understand the fundamentals of capital market	




	MCC002	Entrepreneurship Development and Project Formulation	Demonstrate a fundamental comprehension of business opportunity evaluation, from the perspective of a prospective investor. Program ,Identify the most recognized sources of potential funding and financing for business start-ups and/or expansion. Program, Demonstrate basic computer proficiency, including the use of word processing, presentation, and spreadsheet software packages, as well as a basic facility with the internet and other research tools.	
	MCC003	Business Ethics and Corporate Governance	After completion of the course the learners will be able to: • Explain the relationship between ethics, morals and values in the workplace. • Formulate ethical philosophy to explain how it contributes to current practice. • Critically apply understanding of ethics in real–world contexts. • Discuss the influence of corporate governance system on the performance of individual firms. • Discuss the moral and social responsibility dimensions of corporate governance	To become an honest individual and businessman
	MCC021	Strategic Cost Management	After having taken this course participants will be able to: Understand cost drivers , Apply alternative cost accounting methods , Analyze cost and value , Analyze and evaluate cost management strategies	
	MCC022	Strategic Cost Management	After having taken this course participants will be able to: Understand cost drivers Apply alternative cost accounting methods Analyze cost and value Analyze and evaluate cost management strategies	

	MCC023	Banking Technology	Students are able understand the various types of technologies used for management of banks	
	MCC024	Goods and Services Tax and Custom Duty	Students are able to understand the provisions of Indirect taxes and to get practical knowledge	They become independent GST return prepares and Practitioners
	MCC025	Security Analysis and Portfolio Management	At the end of this course students should be able to: • To provide a theoretical and practical background in the field of investments. • Designing and managing the bond as well as equity portfolios in the real word. • Valuing equity and debt instruments. • Measuring the portfolio performance	
	MCC026	Management of Life Insurance	Students are able to manage the life insurance business	
	MCC051	GE - Income Tax Procedure and Practice	To get the basic knowledge about income tax provisions	To get the basic knowledge about income tax provisions
	MCD001	CCT4.1 - Global Business Management	Students graduating with an International Business concentration should be able to:  Explain business expansion abroad and key issues related to their operations in other countries. Compare and contrast cultures and societies globally using socioeconomic and cultural frameworks. Develop an entry strategy into other markets recognizing the nature of institutions and forces governing the process of globalization.	

	MCD002	CCT4.2 - Management Accounting	Students are in a position to evaluate and analyse the financial statements using different techniques	Analysis and interpretations of financial statement and take managerial decisions
	MCD003	CCT4.3 - E- Commerce and Accounting	Students get full idea of e-commerce and its operations and accounting	Students get full idea of e-commerce and its operations and accounting
	MCD004T	CCPR4.4 - Project Report	Students are able to solve a particular problem with practical study	
	MCD004P	CCPR4.4 - Project Report	Students are able to solve a particular problem with practical study	
	MCD021	DSET4.1- Marginal Costing for Managerial Decisions	Students are able to: Know the meaning of marginal cost. Understand the various elements of marginal costing technique.  Appreciate the importance of marginal costing as a decision making tool.  Apply marginal costing technique under appropriate situations.	
	MCD022	DSET4.1B - International Financial Management	This course focuses on the theoretical and practical knowledge required for the management of financial and investment functions of multinational corporations. Students will discover how the international capital markets, foreign exchange markets, and the derivatives market can be used to manage transaction and	

			operating risks facing the multinational firm. The relevance of country risk and international corporate governance in cross-border investments will also be examined. The general emphasis is on the identification and management of opportunities and risk relating to international investments, exchange rate fluctuations, international financial markets and government policy changes.	
	MCD023	DSET4.1C - Global Business Finance	After the course the students will have a general understanding of foreign currency markets, currency risks, financing multinational entities and understanding international portfolio analysis and evaluate political risk. The students will have an extended understanding of the foreign exchange market with risk instruments. Students will be able to evaluate expectation hypothesis of spot versus futures exchange rates.	
	MCD024	DSET4.2A - Cost Accounting Standards	Students gets full idea of costing standards which helps them to take proper decisions	
	MCD025	DSET4.2B- Financial Derivatives and Risk Management	On successful completion of the course students will be able to:  Analyse and price diverse derivatives products to generate an optimal risk management strategy. Demonstrate critical thinking, analytical and problem solving skills in the context of derivatives pricing and hedging practice.	

	MCD026	DSET4.2C - Actuarial Science	<ol style="list-style-type: none"> <li>1. Have sufficient exposure to actuarial and financial mathematics to be familiar with Actuaries credentials</li> <li>2. Be familiar with the role of insurance in society, basic economic theory, and the basics of how insurance and financial markets operate.</li> <li>3. Have familiarity with several of the technical tools, computer languages or software packages used by actuaries.</li> <li>4. Be able to apply this knowledge and these skills in new combinations and to new problems.</li> </ol>	They can act as actuaries

  
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## DEPARTMENT OF COMPUTER SCIENCE

UG 2020-21

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
UG-SCIENCE	BSAT	Problem Solving using Computer	The course is designed to provide Basic knowledge of Python.	Can be used for <ul style="list-style-type: none"> <li>• Web Development</li> <li>• Game Development</li> <li>• Business Applications</li> <li>• CAD Applications</li> </ul>

	BSAP	Practical	Applications of Python programming	Getting practical Knowledge
	BSABT	Database Management Systems	The course emphasizes the understanding of the fundamentals of relational systems including data models, database architectures, and database manipulations.	Develop database for <ul style="list-style-type: none"> <li>• Software Companies</li> <li>• Universities</li> <li>• Telecommunication</li> <li>• Finance</li> </ul>
	BSBP	Practical	Learn to create database	Design to build database for colleges different firms
	BSCT	Object Oriented Programming in C++	Understanding the object oriented programming and C++ concepts. Students are able to explain the difference between object oriented programming and procedural programming.	Get Knowledge of <ul style="list-style-type: none"> <li>• User interface design such as windows, menu.</li> <li>• Real Time Systems.</li> <li>• Object oriented databases.</li> <li>• AI</li> </ul>
	BSCP	Practical	Basic concepts of OOPS	Learn programming concepts and write programs in C++
	BSDT	Data Structures	Students will implement various sorting, searching, and hashing algorithms. Students will build a substantial, complex data structure.	Can be used in Software Companies for <ul style="list-style-type: none"> <li>• Compiler Design</li> <li>• Graphics</li> <li>• Numerical Analysis</li> <li>• Artificial Intelligence</li> </ul>
	BDP	Practical	Get practical knowledge	Learn programming concepts practically

	BSET	a)Programming in Java  b)Computer Networks	Covers software design, implementation, and testing using <b>Java</b> . Introduces object-oriented design techniques and problem solving. Emphasizes development of secure, well-designed software projects that solve practical real-world problems.  b) The <b>course objectives</b> include <b>learning</b> about <b>computer network</b> organization and implementation, obtaining a theoretical understanding of data	<ul style="list-style-type: none"> <li>• Mobile Applications</li> <li>• Web-based Applications</li> <li>• Scientific Applications.</li> <li>• Gaming Applications.</li> <li>• Self-employment in the field of Networking, Assembling Installing and troubleshooting of Networking.</li> </ul>
	BSEP	Practical	Learn java and Networking	Develop programs in java and acquire knowledge of networking.
	BSFT	a)Programming in VB.NET  b) Operating System	Students will be exposed to the following concepts and/or skills at an Introductory conceptual level: Design, formulate, and construct applications with VB.NET.  b)A student will be able to understand the basic components of a computer operating system, and the interactions among the various components.	Software Companies <ul style="list-style-type: none"> <li>• Windows console mode <b>applications</b></li> <li>• Web (ASP.NET) <b>applications</b></li> <li>• Windows services.</li> <li>• Application programs</li> <li>• Operating System:</li> </ul>

	BSFP	Practical	Practical on VB.NET and Operating System	Get Practical Knowledge
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### UG 2019-20

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
UG-SCIENCE	BSAT	Problem Solving using Computer	The course is designed to provide Basic knowledge of Python.	Can be used for <ul style="list-style-type: none"> <li>• Web Development</li> <li>• Game Development</li> <li>• Business Applications</li> <li>• CAD Applications</li> </ul>
	BSAP	Practical	Applications of Python programming	Getting practical Knowledge
	BSABT	Database Management Systems	The course emphasizes the understanding of the fundamentals of relational systems including data models, database architectures, and database manipulations.	Develop database for <ul style="list-style-type: none"> <li>• Software Companies</li> <li>• Universities</li> <li>• Telecommunication</li> <li>• Finance</li> </ul>
	BSBP	Practical	Learn to create database	Design to build database for colleges different firms



	BSCT	Object Oriented Programming in C++	Understanding the object oriented programming and C++ concepts. Students are able to explain the difference between object oriented programming and procedural programming.	Get Knowledge of <ul style="list-style-type: none"> <li>• User interface design such as windows, menu.</li> <li>• Real Time Systems.</li> <li>• Object oriented databases.</li> <li>• AI</li> </ul>
	BSCP	Practical	Basic concepts of OOPS	Learn programming concepts and write programs in C++
	BSDT	Data Structures	Students will implement various sorting, searching, and hashing algorithms. Students will build a substantial, complex data structure.	Can be used in Software Companies for <ul style="list-style-type: none"> <li>• Compiler Design</li> <li>• Graphics</li> <li>• Numerical Analysis</li> <li>• Artificial Intelligence</li> </ul>
	BDSP	Practical	Get practical knowledge	Learn programming concepts practically
	BSET	a) Programming in Java b) Computer Networks	Covers software design, implementation, and testing using <b>Java</b> . Introduces object-oriented design techniques and problem solving. Emphasizes development of secure, well-designed software projects that solve practical real-world problems.  b) The <b>course objectives</b> include <b>learning</b> about <b>computer network</b> organization and	<ul style="list-style-type: none"> <li>• Mobile Applications</li> <li>• Web-based Applications</li> <li>• Scientific Applications.</li> <li>• Gaming Applications.</li> </ul> <ul style="list-style-type: none"> <li>• Self-employment in the field of Networking, Assembling Installing and troubleshooting of Networking.</li> </ul>

			implementation, obtaining a theoretical understanding of data	
	BSEP	Practical	Learn java and Networking	Develop programs in java and acquire knowledge of networking.
	BSFT	a)Programming in VB.NET b) Operating System	Students will be exposed to the following concepts and/or skills at an Introductory conceptual level: Design, formulate, and construct applications with VB.NET.  b)A student will be able to understand the basic components of a computer operating system, and the interactions among the various components.	Software Companies <ul style="list-style-type: none"> <li>• Windows console mode applications</li> <li>• Web (ASP.NET) applications</li> <li>• Windows services.</li> <li>• Application programs</li> <li>• Operating System:</li> </ul>
	BSFP	Practical	Practical on VB.NET and Operating System	Get Practical Knowledge


  
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## UG 2018-19

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
UG-SCIENCE	BSAT	Problem Solving using Computer	The course is designed to provide Basic knowledge of Python.	Can be used for <ul style="list-style-type: none"> <li>• Web Development</li> <li>• Game Development</li> <li>• Business Applications</li> <li>• CAD Applications</li> </ul>
	BSAP	Practical	Applications of Python programming	Getting practical Knowledge
	BSABT	Database Management Systems	The course emphasizes the understanding of the fundamentals of relational systems including data models, database architectures, and database manipulations.	Develop database for <ul style="list-style-type: none"> <li>• Software Companies</li> <li>• Universities</li> <li>• Telecommunication</li> <li>• Finance</li> </ul>
	BSBP	Practical	Learn to create database	Design to build database for colleges different firms
	BSCT	Object Oriented Programming in C++	Understanding the object oriented programming and C++ concepts. Students are able to explain the difference between object oriented programming and procedural programming.	Get Knowledge of <ul style="list-style-type: none"> <li>• User interface design such as windows, menu.</li> <li>• Real Time Systems.</li> <li>• Object oriented databases.</li> <li>• AI</li> </ul>

	BSCP	Practical	Basic concepts of OOPS	Learn programming concepts and write programs in C++
	BSDT	Data Structures	Students will implement various sorting, searching, and hashing algorithms. Students will build a substantial, complex data structure.	Can be used in Software Companies for <ul style="list-style-type: none"> <li>• Compiler Design</li> <li>• Graphics</li> <li>• Numerical Analysis</li> <li>• Artificial Intelligence</li> </ul>
	BDSP	Practical	Get practical knowledge	Learn programming concepts practically
	BSET	a)Programming in Java b)Computer Networks	Covers software design, implementation, and testing using <b>Java</b> . Introduces object-oriented design techniques and problem solving. Emphasizes development of secure, well-designed software projects that solve practical real-world problems.  b) The <b>course objectives</b> include <b>learning</b> about <b>computer network</b> organization and implementation, obtaining a theoretical understanding of data	<ul style="list-style-type: none"> <li>• Mobile Applications</li> <li>• Web-based Applications</li> <li>• Scientific Applications.</li> <li>• Gaming Applications.</li> <li>• Self-employment in the field of Networking, Assembling Installing and troubleshooting of Networking.</li> </ul>
	BSEP	Practical	Learn java and Networking	Develop programs in java and acquire knowledge of networking.
	BSFT	a)Programming in VB.NET	Students will be exposed to the following concepts and/or skills at an Introductory conceptual level: Design, formulate, and construct applications with VB.NET.	Software Companies <ul style="list-style-type: none"> <li>• Windows console mode <b>applications</b></li> </ul>

		b) Operating System	b) A student will be able to understand the basic components of a computer operating system, and the interactions among the various components.	<ul style="list-style-type: none"> <li>• Web (ASP.NET) applications</li> <li>• Windows services.</li> <li>• Application programs</li> <li>• Operating System:</li> </ul>
	BSFP	Practical	Practical on VB.NET and Operating System	Get Practical Knowledge

  
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### UG 2017-18

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
UG-SCIENCE	BSAT	Computer concepts, MS-office and C-Programming techniques	It will familiarize the students with the preparation of documents and presentations with office automation tools. The main objective of this Office Automation course is to provide basic training of computers and its most common software used	<ul style="list-style-type: none"> <li>• Self-employment in documentation.</li> <li>• Software Companies</li> <li>• Universities</li> <li>• Telecommunication and Finance</li> </ul>

			in office work and also develop basic programming skill	
	BSAP	Practical	Knowing basic fundamental aspects of computers and C Programming	Getting practical knowledge about computers and C programming
	BSABT	Advance C programming, MS-office and Internet tools	Learning advance features of C	Developing coding and programming skills
	BSABP	Practical	Getting Practical knowledge	Learning to write programs
	BSACT	Object Oriented Programming in C++	Understanding the object oriented programming and C++ concepts. Students are able to explain the difference between object oriented programming and procedural programming.	Get Knowledge of <ul style="list-style-type: none"> <li>• User interface design such as windows, menu.and programming skills</li> <li>• Real Time Systems.</li> <li>• Object oriented databases.</li> <li>• AI</li> </ul>
	BSACP	Practical	Basic concepts of OOPS	Learn programming concepts and write programs in C++
		Database Management System	The course emphasizes the understanding of the fundamentals of relational systems including data models, database architectures, and database manipulations.	Develop database for <ul style="list-style-type: none"> <li>• Software Companies</li> <li>• Universities</li> <li>• Telecommunication</li> <li>• Finance</li> </ul>

		Practical	Learn to create database	Design to build database for college
	BSACT	Visual Basic .NET Programming	Students will be exposed to the following concepts and/or skills at an Introductory conceptual level: Design, formulate, and construct applications with VB.NET.	<ul style="list-style-type: none"> <li>• Software Companies</li> <li>• Windows console mode <b>applications</b></li> <li>• Web (ASP.NET) <b>applications</b></li> <li>• Windows services.</li> </ul>
	BSACP	Practical	Learning VB.Net	Getting to know and develop programming in VB
	BSACT	Programming in java	Covers software design, implementation, and testing using <b>Java</b> . Introduces object-oriented design techniques and problem solving. Emphasizes development of secure, well-designed software projects that solve practical real-world problems	<ul style="list-style-type: none"> <li>• Mobile Applications</li> <li>• Web-based Applications</li> <li>• Scientific Applications&amp; Gaming Applications</li> </ul>
	BSACP	Practical	Learning javVB.Net	Getting to know and develop programming in java
	BSACT	Data Structure Using C	Students will implement various sorting, searching, and hashing algorithms. Students will build a substantial, complex data structure.	<p>Can be used in Software Companies for</p> <ul style="list-style-type: none"> <li>• Compiler Design</li> <li>• Graphics</li> </ul>

				<ul style="list-style-type: none"> <li>• Numerical Analysis</li> <li>• Artificial Intelligence</li> </ul>
	BSACP	Practical	Get practical knowledge	Learn programming concepts practically
	BSACT	Web Technology	Students will be able to use a variety of strategies and tools to create websites. You will develop awareness and appreciation of the many ways that people access the web, and will be able to create standards-based websites that can be accessed by the full spectrum of web access technologies	<ul style="list-style-type: none"> <li>• Software Companies</li> <li>• Mobile Applications</li> <li>• Web-based Applications</li> <li>• Scientific Applications.</li> <li>• Gaming Applications.</li> </ul>
	BSACP	Practical	Getting knowledge to create web pages	Students can learn to create web page

  
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## PG 2020-21

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
PG-COM	CSA001	CCT 1.1Digital Computer Fundamentals	*Understand how logic circuits are used to solve engineering problems. *Understand how logic circuits are analyzed, designed, verified, and tested. *Understand the relationship between abstract logic characterizations and practical electrical implementations.	Software Companies *System Development * Architecture and logicdesign, design verification through software developed for component and system simulation, and builds physical devices
	CSA002	CCT 1.2Mathematical Foundation ofComputer Science	An ability to apply knowledge of computing and mathematics appropriate to the discipline. An ability to identify, formulates, and develops solutions to computational challenges. An ability to design, implements, and evaluate a computational system to meet desired needs within realistic constraints.	In software Companies it helps to increase programming skills

	CSA003	CCT 1.3OOP Using C++	Understanding the object-oriented programming and C++ concepts. Students are able to explain the difference between object-oriented programming and procedural programming. Students are able to program using C++ features	Software Companies * User interface design such as windows, menu. * Real Time Systems. * Object oriented databases. * AI and Expert System.
	CSA021	DSET 1.1(a)Operating System Principles	A student will be able to understand the basic components of a computer operating system, and the interactions among the various components. The course will cover an introduction on the policies for scheduling, deadlocks, memory management, synchronization, system calls, and file system	*Windows services. Application programs *Operating System.
	CSA022	DSET 1.1(b)LINUX & SHELL Programming	A student will be able to understand the basic components of a computer operating system, and the interactions among the various components. The course will cover an introduction on the	LINUX & SHELL services. *Application programs *Operating System:

			policies for scheduling, deadlocks, memory management, synchronization, system calls, and file system	
	CSA004	Practical 1.1 OOP Using C++ Lab	Application of C++ in all software skills	Programming knowledge and Logical analysis
	CSA023	Practical 1.2(a) OS Lab	Application of OS in all software skills	Programming knowledge and Logical analysis
	CSA024	Practical 1.2(b) LINUX & SHELL Programming Lab	Application of LINUX & SHELL in all software skills	Programming knowledge and Logical analysis
PG-COM	CSB001	CCT 2.1 Data Structures using C++	<p>The course, Database Management Systems, provides an introduction to the database management.</p> <p>The course emphasizes the understanding of the fundamentals of relational systems including data models, database architectures, and database manipulations.</p>	<p>Software Companies</p> <ul style="list-style-type: none"> <li>* Universities</li> <li>* Telecommunication</li> <li>* Finance</li> </ul>

	CSB002	CCT 2.2 Relational Database Management System	models, database architectures, and database manipulations.	Software Companies * Universities * Telecommunication * Finance
	CSB021	DSET 2.1(a) Data Communications & Networks	The course, Database Management Systems, provides an introduction to the database management. The course emphasizes the understanding of the fundamentals of relational systems including data. The course objectives include learning about computer network organization and implementation, obtaining a theoretical understanding of data.	* Self-employment in the field of Networking, Assembling, Installing and troubleshooting of Networking.
	CSB022	DSET 2.1(b) System Software	The process management and information management via different software tools, by the end of the course students will be able to understand different	Software Companies * User interface design such as windows, menu. * Real Time Systems.

			components of system software.	
	CSB051	GET2.1 (a) Libre Office	It will familiarize the students with the preparation of documents and presentations with office automation tools. The main objective of this is in Office Automation course is to provide basic training of computers and its most common software used in office work.	* Self-employment in documentation
	CSB052	GECT 2.1(b) Computer Fundamentals and C-Programming	The main emphasis of the course will be on problem solving aspect i.e. developing proper algorithms. After completion of the course the student will be able to Develop efficient algorithms for solving a problem.  Use the various constructs of a C programming language viz. conditional, iteration and recursion.	Software Companies * Embedded Systems * New Programming Platforms * Compiler Design
	CSB003	Practical 2.1 - Data Structures using C++ Lab & RDBMS Lab	Application of Data Structures using C++ Lab & RDBMS in all	Programming knowledge and Logical analysis

			software skills	
	CSB023	Practical 2.2–(a)Data Communication & Networks Lab	Application of Data Communication & Networks in all software skills	Programming knowledge and Logical analysis
	CSB024	Practical 2.2(b) - System Software Lab	Application of System Software all software skills	Programming knowledge and Logical analysis
PG-COM	CSC001	CCT3.1 Java Programming	Understanding the object oriented programming and C++ concepts. Students are able to explain the difference between object oriented programming and procedural programming. Students are able to program using C++ features	Software Companies * User interface design such as windows, menu. * Real Time Systems. * Object oriented databases. * AI and Expert System
	CSC002	CCT 3.2C# and.NET programming	The student will use .Net to build Windows applications using structured and object based programming techniques. Students will be exposed to the following concepts and/or skills at an Introductory Conceptual level: Design, formulate, and	Software Companies * Windows console Mode applications * Web (ASP.NET) applications Windows services. * Application programs

			construct applications with .NET.	*Operating System:
	CSC021	DSET 3.1 Computer Graphics	Identify a typical graphics pipeline and apply graphics programming techniques to design and create computer graphics. Create effective OpenGL programs to solve graphics programming issues, including 3D transformation, objects modeling, color modeling, lighting, textures, and ray tracing.	*visualization of measurement data (2D and 3D), *visualization of computer simulations. *medical diagnostics, *drafting and computer design, *preparation of publications, *special effects in movies, *computer games.
	CSC022	DSET 3.1 Data Warehousing and Mining	This course gives an introduction to methods and theory for development of data warehouses and data analysis using data mining. Data quality and methods and techniques for preprocessing of data. Modeling and design of data warehouses. Algorithms for	Software Companies *Universities *Telecommunication * Finance

			classification, clustering and association rule analysis.	
	CSC051	GECT 3.1 E-Commerce and Cyber space	<p>*To equip the students with the emerging trends in business</p> <p>*To equip the students to introduce and explore the use of information technology aspects of business</p> <p>*To familiarize with the students cyber world and cyber regulations</p>	<p>Consumer Protection In <i>Cyberspace</i> E-Consumer Support And Service</p>
	CSC052	GECT 3.1 Web Design Using HTML and Dream Weaver	<p>a) Students will be able to use a variety of strategies and tools to create websites. You will develop awareness and appreciation of the many ways that people access the web, and will be able to create standards-based websites that can be accessed by the full spectrum of web access technologies.</p>	<p>Software Companies</p> <p>*Mobile Applications</p> <p>*Web-based Applications</p> <p>*Scientific Applications.</p> <p>*Gaming Applications.</p>



	CSC003	Practical 3.1Java and C# and.NET Lab	Application JAVA & C# & .NET in all software skills	Programming knowledge and Logical analysis
	CSC023	Practical 3.2 (a)Computer Graphics	Application of Computer Graphics in all software skills	Programming knowledge and Logical analysis
	CSC024	Practical 3.2 (b) Data Warehousing and Mining	Application of Data Warehousing and Mining in all software skills	Programming knowledge and Logical analysis
PG-COM	CSD001	CCT4.1 Web designing using Java Script	Covers software design, implementation, and testing using Java. Introduces object- oriented design techniques and problem solving. Emphasizes development of secure,well-designed software projects that solve practical real- world problems.	Software Companies *Mobile Applications *Web-based Applications *Scientific Applications. *Gaming Applications.
	CSD002	CCT4.2 Software Engineering	Work as an individual and as part of a multidisciplinary team to develop and deliver quality software. Demonstrate an understanding of and apply current theories, models, and techniques that provide a	Software Companies * Embedded Systems * New Programming Platforms * Compiler Design

			basis for the software lifecycle.	
	CSD021	DSET4.1 Digital Image Processing	<p>Develop any image processing application.</p> <p>Understand the rapid advances in Machine vision. Learn different techniques employed for the enhancement of images and understand the need for image compression and to learn the spatial and frequency domain techniques of image compression.</p>	<p>visualization of measurement data (2D and 3D),</p> <p>*visualization of computer</p>
	CSD022	DSET4.1 Software Testing	<p>*To study fundamental concepts in software testing.</p> <p>*To discuss various software testing issues and solutions in software unit test, integration and system testing. *To expose the advanced software testing topics, such as object-oriented software testing methods.</p>	<p>Software Companies</p> <p>* Embedded Systems</p> <p>* New Programming Platforms</p> <p>* Compiler Design</p>
	CSD023	DSET4.1 Cloud Computing.	Information Systems with the comprehensive and in-depth knowledge of Cloud	The benefits of a cloud-based learning and certification help

			Computing concepts, technologies, architecture and applications by introducing and researching state-of-the-art in Cloud Computing fundamental issues, technologies, applications	in gaining industry-recognized credentials that enhance credibility of the technical skills. It increases re-employability and advancement in the career path from beyond the confines of local classrooms and curriculum.
	CSD024	DSET4.1 Problem Solving using Python	The course is designed to provide Basic knowledge of Python. Python programming is intended for software engineers, systemAnalysts, program managers and user support personnel who wish to learn the Python programming language.	Software Companies*Web Development* Game Development*Business Applications*CAD applications
	CSD003	Practical 4.1 Web designing using Java Script and SE Lab	Application of Web designingusing Java Script and SE Lab in all software skills	Programming knowledge and Logical analysis

	CSD004	CCPR 4.1 Project	Application of PROJECT in all software skills	Programming knowledge and Logical analysis
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 PRINCIPAL  
 GOVT. COLLEGE  
 GULBARGA

**PG 2019-20**

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
PG-COM	CSA001	CCT 1.1Digital Computer Fundamentals	*Understand how logic circuits are used to solve engineering problems. *Understand how logic circuits are analyzed, designed, verified, and tested. *Understand the relationship between abstract logic characterizations and practical electrical implementations.	Software Companies *System Development * Architecture and logicdesign, design verification through software developed for component and system simulation, and builds physical devices
	CSA002	CCT 1.2Mathematical Foundation ofComputer Science	An ability to apply knowledge of computing and mathematics appropriate to	In software Companies it helps to increase programming skills

			<p>the discipline. An ability to identify, formulates, and develops solutions to computational challenges.</p> <p>An ability to design, implements, and evaluate a computational system to meet desired needs within realistic constraints.</p>	
	CSA003	CCT 1.3OOP Using C++	<p>Understanding the object-oriented programming and C++ concepts.</p> <p>Students are able to explain the difference between object-oriented programming and procedural programming. Students are able to program using C++ features</p>	<p>Software Companies</p> <ul style="list-style-type: none"> <li>* User interface design such as windows, menu.</li> <li>* Real Time Systems.</li> <li>* Object oriented databases.</li> <li>* AI and Expert System.</li> </ul>
	CSA021	DSET 1.1(a)Operating System Principles	<p>A student will be able to understand the basic components of a computer operating system, and the interactions among the various components. The course will cover an introduction on the policies for scheduling, deadlocks, memory</p>	<ul style="list-style-type: none"> <li>*Windows services.</li> <li>Application programs</li> <li>*Operating System.</li> </ul>

			management, synchronization, system calls, and file system	
	CSA022	DSET 1.1(b)LINUX & SHELL Programming	A student will be able to understand the basic components of a computer operating system, and the interactions among the various components. The course will cover an introduction on the policies for scheduling, deadlocks, memory management, synchronization, system calls, and file system	LINUX & SHELL services. *Application programs *Operating System:
	CSA004	Practical 1.1 OOP Using C++ Lab	Application of C++ in all software skills	Programming knowledge and Logical analysis
	CSA023	Practical 1.2(a) OS Lab	Application of OS in all software skills	Programming knowledge and Logical analysis
	CSA024	Practical 1.2(b) LINUX & SHELL Programming Lab	Application of LINUX & SHELL in all software skills	Programming knowledge and Logical analysis
PG-COM	CSB001	CCT 2.1 Data Structures using C++	The course, Database Management Systems, provides an introduction to	Software Companies *Universities

			<p>the database management.</p> <p>The course emphasizes the understanding of the fundamentals of relational systems including data models, database architectures, and database manipulations.</p>	<p>* Telecommunication</p> <p>* Finance</p>
	CSB002	CCT 2.2 Relational Database Management System	<p>models, database architectures, and database manipulations.</p>	<p>Software Companies</p> <p>* Universities</p> <p>* Telecommunication</p> <p>* Finance</p>
	CSB021	DSET 2.1(a) Data Communications & Networks	<p>The course, Database Management Systems, provides an introduction to the database management. The course emphasizes the understanding of the fundamentals of relational systems including data. The course objectives include learning about computer network organization and implementation, obtaining a theoretical understanding of data.</p>	<p>* Self-employment in the field of Networking, Assembling, Installing and troubleshooting of Networking.</p>

	CSB022	DSET 2.1(b)System Software	The process management and information management via different software tools, by the end of the course students will be able to understand different components of system software.	Software Companies * User interface design such as windows, menu. * Real Time Systems.
	CSB051	GET2.1 (a)Libre Office	It will familiarizethe students with the preparation of documents and presentationswith officeautomation tools.The main objective of this is in Office Automation course is toprovidebasic training of computers and its most common software usedin office work.	* Self-employment in documentation
	CSB052	GECT 2.1(b)Computer Fundamentals and C-Programming	The main emphasis of the course will be onproblem solving aspect i.e. developing proper algorithms. After completion ofthe course the student will be able to Develop efficient algorithms for solving aproblem.	Software Companies * Embedded Systems * New Programming Platforms * Compiler Design



			Use the various constructs of a C programming language viz. conditional, iteration and recursion.	
	CSB003	Practical 2.1 - Data Structures using C++ Lab & RDBMS Lab	Application of Data Structures using C++ Lab & RDBMS in all software skills	Programming knowledge and Logical analysis
	CSB023	Practical 2.2–(a)Data Communication & Networks Lab	Application of Data Communication & Networks in all software skills	Programming knowledge and Logical analysis
	CSB024	Practical 2.2(b) - System Software Lab	Application of System Software all software skills	Programming knowledge and Logical analysis
PG-COM	CSC001	CCT3.1 Java Programming	Understanding the object oriented programming and C++ concepts. Students are able to explain the difference between object oriented programming and procedural programming. Students are able to program using C++ features	Software Companies * User interface design such as windows, menu. * Real Time Systems. * Object oriented databases. * AI and Expert System
	CSC002	CCT 3.2C# and.NET programming	The student will use .Net to build Windows applications using structured and object	Software Companies * Windows

			<p>based programming techniques. Students will be exposed to the following concepts and/or skills at an Introductory Conceptual level:</p> <p>Design, formulate, and construct applications with .NET.</p>	<p>console Mode applications</p> <p>* Web (ASP.NET) applications</p> <p>Windows services.</p> <p>* Application programs</p> <p>* Operating System:</p>
	CSC021	DSET 3.1 Computer Graphics	<p>Identify a typical graphics pipeline and apply graphics programming techniques to design and create computer graphics. Create effective OpenGL programs to solve graphics programming issues, including 3D transformation, objects modeling, color modeling, lighting, textures, and ray tracing.</p>	<p>* visualization of measurement data (2D and 3D),</p> <p>* visualization of computer simulations.</p> <p>* medical diagnostics,</p> <p>* drafting and computer design,</p> <p>* preparation of publications,</p> <p>* special effects in movies,</p> <p>* computer games.</p>
	CSC022	DSET 3.1 Data Warehousing and Mining	<p>This course gives an introduction to methods and theory for development of data warehouses and data</p>	<p>Software Companies</p> <p>* Universities</p>


			analysis using data mining. Data quality and methods and techniques for preprocessing of data. Modeling and design of data warehouses. Algorithms for classification, clustering and association rule analysis.	*Telecommunication * Finance
	CSC051	GECT 3.1 E-Commerce and Cyber space	*To equip the students with the emerging trends in business *To equip the students to introduce and explore the use of information technology aspects of business *To familiarize with the students cyber world and cyber regulations	Consumer Protection In <i>Cyberspace</i> E- Consumer Support And Service
	CSC052	GECT 3.1 Web Design Using HTML and Dream Weaver	b) Students will be able to use a variety of strategies and tools to create websites. You will develop awareness and appreciation of the many ways that people access the web, and will be able to create standards-based websites that can be accessed by the full spectrum	Software Companies *Mobile Applications *Web- based Applications *Scientific Applications. *Gaming Applications.

			of web access technologies.	
	CSC003	Practical 3.1Java and C# and.NET Lab	Application JAVA & C# & .NET in all software skills	Programming knowledge and Logical analysis
	CSC023	Practical 3.2 (a)Computer Graphics	Application of Computer Graphics in all software skills	Programming knowledge and Logical analysis
	CSC024	Practical 3.2 (b) Data Warehousing and Mining	Application of Data Warehousing and Mining in all software skills	Programming knowledge and Logical analysis
PG-COM	CSD001	CCT4.1 Web designing using Java Script	Covers software design, implementation, and testing using Java. Introduces object- oriented design techniques and problem solving. Emphasizes development of secure,well-designed software projects that solve practical real- world problems.	Software Companies *Mobile Applications *Web-based Applications *Scientific Applications. *Gaming Applications.
	CSD002	CCT4.2 Software Engineering	Work as an individual and as part of a multidisciplinary team to develop and deliver quality software.	Software Companies * Embedded Systems

			Demonstrate an understanding of and apply current theories, models, and techniques that provide a basis for the software lifecycle.	* New Programming Platforms * Compiler Design
	CSD021	DSET4.1 Digital Image Processing	Develop any image processing application. Understand the rapid advances in Machine vision. Learn different techniques employed for the enhancement of images and understand the need for image compression and to learn the spatial and frequency domain techniques of image compression.	visualization of measurement data (2D and 3D),  *visualization of computer
	CSD022	DSET4.1 Software Testing	*To study fundamental concepts in software testing. *To discuss various software testing issues and solutions in software unit test, integration and system testing. *To expose the advanced software testing topics, such as object-	Software Companies * Embedded Systems * New Programming Platforms * Compiler Design

			oriented software testing methods.	
	CSD023	DSET4.1 Cloud Computing.	Information Systems with the comprehensive and in-depth knowledge of Cloud Computing concepts, technologies, architecture and applications by introducing and researching state-of-the-art in Cloud Computing fundamental issues, technologies, applications	<p>The benefits of a cloud-based learning and certification help in gaining industry-recognized credentials that enhance credibility of the technical skills.</p> <p>It increases re-employability and advancement in the career path from beyond the confines of local classrooms and curriculum.</p>
	CSD024	DSET4.1 Problem Solving using Python	The course is designed to provide Basic knowledge of Python. Python programming is intended for software engineers, systemAnalysts, program managers and user support personnel who wish to learn the Python programming language.	<p>Software Companies*Web Development* Game Development*Business Applications*CAD applications</p>

	CSD003	Practical 4.1 Web designing using Java Script and SE Lab	Application of Web designing using Java Script and SE Lab in all software skills	Programming knowledge and Logical analysis
	CSD004	CCPR 4.1 Project	Application of PROJECT in all software skills	Programming knowledge and Logical analysis

  
 ಪ್ರಾಂಶುಪಾಲರು  
 ಸರ್ಕಾರಿ ಮಹಾವಿದ್ಯಾಲಯ  
 ಕಲಬುರಗಿ-587105

**PG 2018-19**

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
PG-COM	CSA001	CCT 1.1 Digital Computer Fundamentals	*Understand how logic circuits are used to solve engineering problems. *Understand how logic circuits are analyzed, designed, verified, and tested. *Understand the relationship between abstract logic characterizations and practical electrical implementations.	Software Companies *System Development * Architecture and logic design, design verification through software developed for component and system simulation, and builds physical devices

	CSA002	CCT 1.2Mathematical Foundation ofComputer Science	<p>An ability to apply knowledge of computing and mathematics appropriate to the discipline. An ability to identify, formulates, and develops solutions to computational challenges.</p> <p>An ability to design, implements, and evaluate a computational system to meet desired needs within realistic constraints.</p>	In software Companies it helps to increase programming skills
	CSA003	CCT 1.3OOP Using C++	<p>Understanding the object-oriented programming and C++ concepts.</p> <p>Students are able to explain the difference between object-oriented programming and procedural programming. Students are able to program using C++ features</p>	<p>Software Companies</p> <ul style="list-style-type: none"> <li>* User interface design such as windows, menu.</li> <li>* Real Time Systems.</li> <li>* Object oriented databases.</li> <li>* AIand Expert System.</li> </ul>
	CSA021	DSET 1.1(a)Operating System Principles	A student will be able to understand the basic components of a computer operating system, and the interactions amongthe various components. The course will cover an	<ul style="list-style-type: none"> <li>*Windows services. Application programs</li> <li>*Operating System.</li> </ul>



			introduction on the policies for scheduling, deadlocks, memory management, synchronization, system calls, and file system	
	CSA022	DSET 1.1(b)LINUX & SHELL Programming	A student will be able to understand the basic components of a computer operating system, and the interactions among the various components. The course will cover an introduction on the policies for scheduling, deadlocks, memory management, synchronization, system calls, and file system	LINUX & SHELL services. *Application programs *Operating System:
	CSA004	Practical 1.1 OOP Using C++ Lab	Application of C++ in all software skills	Programming knowledge and Logical analysis
	CSA023	Practical 1.2(a) OS Lab	Application of OS in all software skills	Programming knowledge and Logical analysis
	CSA024	Practical 1.2(b) LINUX & SHELL Programming Lab	Application of LINUX & SHELL in all software skills	Programming knowledge and Logical analysis

PG-COM	CSB001	CCT 2.1Data Structures using C++	<p>The course, Database Management Systems, provides an introduction to the database management.</p> <p>The course emphasizes s the understanding of the fundamentals of relational systems including data models, database architectures,and database manipulations.</p>	<p>Software Companies</p> <p>*Universities</p> <p>* Telecommunicate ation</p> <p>* Finance</p>
	CSB002	CCT 2.2Relational Database Management System	models, database architectures,and database manipulations.	<p>Software Companies</p> <p>*Universities</p> <p>*Telecommunicate action</p> <p>* Finance</p>
	CSB021	DSET 2.1(a)Data Communications & Networks	<p>The course, Database Management Systems, provides an introduction tothe database management.The course emphasize s the understanding of the fundamentals of relational systems including dataThe course objectives include learning about computernetwork</p>	<p>* Self- employment in the field of Networking, Assembling Installing and troubleshooting of Networking.</p>

			organization and implementation, obtaining a theoretical understanding of data.	
	CSB022	DSET 2.1(b) System Software	The process management and information management via different software tools, by the end of the course students will be able to understand different components of system software.	Software Companies * User interface design such as windows, menu. * Real Time Systems.
	CSB051	GET 2.1 (a) Libre Office	It will familiarize the students with the preparation of documents and presentations with office automation tools. The main objective of this is in Office Automation course is to provide basic training of computers and its most common software used in office work.	* Self-employment in documentation
	CSB052	GECT 2.1(b) Computer Fundamentals and C-Programming	The main emphasis of the course will be on problem solving aspect i.e. developing proper algorithms. After completion of the course	Software Companies * Embedded Systems * New Programming

			<p>the student will be able to Develop efficient algorithms for solving aproblem.</p> <p>Use the various constructs of a C programming language viz. conditional, iteration and recursion.</p>	<p>Platforms</p> <ul style="list-style-type: none"> <li>* Compiler Design</li> </ul>
	CSB003	Practical 2.1 - Data Structures using C++ Lab & RDBMS Lab	Application of Data Structures using C++ Lab & RDBMS in all software skills	Programming knowledge and Logical analysis
	CSB023	Practical 2.2–(a)Data Communication & Networks Lab	Application of Data Communication & Networks in all software skills	Programming knowledge and Logical analysis
	CSB024	Practical 2.2(b) - System Software Lab	Application of System Software all software skills	Programming knowledge and Logical analysis
PG-COM	CSC001	CCT3.1 Java Programming	<p>Understanding the object oriented programming and C++ concepts.</p> <p>Students are able to explain the difference between object oriented programming and procedural programming. Students are able to program using C++ features</p>	<p>Software Companies</p> <ul style="list-style-type: none"> <li>* User interface design such as windows, menu.</li> <li>* Real Time Systems.</li> <li>* Object oriented databases.</li> <li>* AI and Expert System</li> </ul>

	CSC002	CCT 3.2C# and.NET programming	The student will use .Net to build Windowsapplications using structured and object based programming techniques. Students will be exposed to the following concepts and/or skills at an IntroductoryConceptuallevel: Design, formulate, and construct applications with .NET.	Software Companies *Windows console Mode applications * Web (ASP.NET) applications Windows services. *Application programs *Operating System:
	CSC021	DSET 3.1 Computer Graphics	Identify a typical graphics pipeline and apply graphics programming techniques to design and create computer graphics. Create effective OpenGL programs to solve graphics programming issues, including 3D transformation, objects modeling, color modeling, lighting, textures, and ray tracing.	*visualization of measurement data (2D and 3D), *visualization of computer simulations. *medical diagnostics, *drafting and computer design, *preparation of publications, *special effects in movies, *computer games.

	CSC022	DSET 3.1 Data Warehousing and Mining	<p>This course gives an introduction to methods and theory for development of data warehouses and data analysis using data mining. Data quality and methods and techniques for preprocessing of data. Modeling and design of data warehouses. Algorithms for classification, clustering and association rule analysis.</p>	<p>Software Companies</p> <p>*Universities</p> <p>*Telecommunication</p> <p>* Finance</p>
	CSC051	GECT 3.1 E-Commerce and Cyber space	<p>*To equip the students with the emerging trends in business</p> <p>*To equip the students to introduce and explore the use of information technology aspects of business</p> <p>*To familiarize with the students cyber world and cyber regulations</p>	<p>Consumer Protection</p> <p>In <i>Cyberspace</i> E-Consumer Support And Service</p>
	CSC052	GECT 3.1 Web Design Using HTML and Dream Weaver	<p>c) Students will be able to use a variety of strategies and tools to create websites. You will develop awareness and appreciation of the many ways that people access</p>	<p>Software Companies</p> <p>*Mobile Applications</p> <p>*Web-based Applications</p> <p>*Scientific</p>


			the web, and will be able to create standards-based websites that can be accessed by the full spectrum of web access technologies.	Applications. *Gaming Applications.
	CSC003	Practical 3.1Java and C# and.NET Lab	Application JAVA & C# & .NET in all software skills	Programming knowledge and Logical analysis
	CSC023	Practical 3.2 (a)Computer Graphics	Application of Computer Graphics in all software skills	Programming knowledge and Logical analysis
	CSC024	Practical 3.2 (b) Data Warehousing and Mining	Application of Data Warehousing and Mining in all software skills	Programming knowledge and Logical analysis
PG-COM	CSD001	CCT4.1 Web designing using Java Script	Covers software design, implementation, and testing using Java. Introduces object- oriented design techniques and problem solving. Emphasizes development of secure,well-designed software projects that solve practical real- world problems.	Software Companies *Mobile Applications *Web-based Applications *Scientific Applications. *Gaming Applications.

	CSD002	CCT4.2 Software Engineering	<p>Work as an individual and as part of a multidisciplinary team to develop and deliver quality software.</p> <p>Demonstrate an understanding of and apply current theories, models, and techniques that provide a basis for the software lifecycle.</p>	<p>Software Companies</p> <ul style="list-style-type: none"> <li>* Embedded Systems</li> <li>* New Programming Platforms</li> <li>* Compiler Design</li> </ul>
	CSD021	DSET4.1 Digital Image Processing	<p>Develop any image processing application.</p> <p>Understand the rapid advances in Machine vision.</p> <p>Learn different techniques employed for the enhancement of images and understand the need for image compression and to learn the spatial and frequency domain techniques of image compression.</p>	<p>visualization of measurement data (2D and 3D),</p> <p>*visualization of computer</p>
	CSD022	DSET4.1 Software Testing	<p>*To study fundamental concepts in software testing.</p> <p>*To discuss various software testing issues and solutions in software unit test, integration and system testing. *To expose the</p>	<p>Software Companies</p> <ul style="list-style-type: none"> <li>* Embedded Systems</li> <li>* New Programming Platforms</li> <li>* Compiler</li> </ul>



			advanced software testing topics, such as object-oriented software testing methods.	Design
	CSD023	DSET4.1 Cloud Computing.	Information Systems with the comprehensive and in-depth knowledge of Cloud Computing concepts, technologies, architecture and applications by introducing and researching state-of-the-art in Cloud Computing fundamental issues, technologies, applications	<p>The benefits of a cloud-based learning and certification help in gaining industry-recognized credentials that enhance credibility of the technical skills.</p> <p>It increases re-employability and advancement in the career path from beyond the confines of local classrooms and curriculum.</p>
	CSD024	DSET4.1 Problem Solving using Python	The course is designed to provide Basic knowledge of Python. Python programming is intended for software engineers, systemAnalysts, program managers and user support personnel who wish to learn the Python programming language.	<p>Software Companies*Web Development* Game Development*Business Applications*CAD applications</p>

	CSD003	Practical 4.1 Web designing using Java Script and SE Lab	Application of Web designing using Java Script and SE Lab in all software skills	Programming knowledge and Logical analysis
	CSD004	CCPR 4.1 Project	Application of PROJECT in all software skills	Programming knowledge and Logical analysis

  
 ಪ್ರಾಂಶುಪಾಲರು  
 ಸರ್ಕಾರಿ ಮಹಾವಿದ್ಯಾಲಯ  
 ಕಲಬುರಗಿ-587105

**PG 2017-18**

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
PG-COM		MSC 1.1HCDigital Logic and ComputerDesign	*Understand how logic circuits are used to solve engineering problems. *Understand how logic circuits are analyzed, designed, verified, and tested. *Understand the relationship between abstract logic characterizations and	Software Companies *System Development * Architecture and logicdesign, design verification through software developed for component and system simulation, and builds physical devices

			practical electrical implementations.	
		MSC 1.2HC Mathematical Foundation of Computer Science	<p>An ability to apply knowledge of computing and mathematics appropriate to the discipline. An ability to identify, formulates, and develops solutions to computational challenges.</p> <p>An ability to design, implements, and evaluate a computational system to meet desired needs within realistic constraints.</p>	In software Companies it helps to increase programming skills
		MSC 1.3HC Data Structures using C++	<p>The course, Database Management Systems, provides an introduction to the database management.</p> <p>The course emphasizes the understanding of the fundamentals of relational systems including data models, database architectures, and database manipulations.</p>	<p>Software Companies</p> <ul style="list-style-type: none"> <li>*Universities</li> <li>* Telecommunication</li> <li>* Finance</li> </ul>

		MSC 1.4SC Operating System Principles	A student will be able to understand the basic components of a computer operating system, and the interactions among the various components. The course will cover an introduction on the policies for scheduling, deadlocks, memory management, synchronization, system calls, and file system	*Windows services. Application programs *Operating System.
		MSC Practical I PROLOG AND DIGITAL LOGIC LAB	Application of PROLOG in all software skills	Programming knowledge and Logical analysis
		MSC Practical II C++ Lab	Application of C++ in all software skills	Programming knowledge and Logical analysis
		MSC Practical III DATA STRUCTURE LAB	Application of DS in all software skills	Programming knowledge and Logical analysis
		MSC Practical IV LINUX &UNIX Lab	Application of LINUX &UNIX in all software skills	Programming knowledge and Logical analysis
PG-COM		MSC 2.1HC Design and Analysis of Algorithms	The course, Design and Analysis of Algorithms, provides an introduction to The Algorithms.	Software Companies *Universities * Telecommunication * Finance


			The course emphasizes s the understanding of the fundamentals of Design and Analysis of Algorithmsincluding data models, database architectures,and database manipulations.	
		MSC 2.2 HC Database Management System	Database architectures,and database manipulations.	Software Companies *Universities *Telecommunicate action * Finance
		MSC 2.3SC System Software	The process management and information management via different software tools, by the end of the course students will be able to understand different components of system software.	Software Companies
		MSC 2.4 OE Introduction to Computers and C-Programming	The main emphasis of the course will be onproblem solving aspect i.e. developing proper algorithms. After completion ofthe course the student will be able to Develop efficient algorithms for solving	Software Companies * Embedded Systems * New Programming Platforms * Compiler Design

			<p>aproblem.</p> <p>Use the various constructs of a C programming language viz. conditional, iteration and recursion.</p>	
		MSC Practical I Algorithms Lab	Application of Algorithms in all software skills	Programming knowledge and Logical analysis
		MSC Practical II DBMS Lab	Application of DBMS in all software skills Programming knowledge and Logical analysis	Programming knowledge and Logical analysis
		MSC Practical III Visual Programming Lab	It will familiarize the students with the preparation of VB applications. The main objective of this is in application development.	* Self-employment in Applications development
		MSC Practical IV (OE) Office Packages and C-Programming	Application of Office Packages and C-Programming in all software skills	Programming knowledge and Logical analysis
		MSC 3.1 HC Programming Java	<p>Understanding the object oriented programming and C++ concepts.</p> <p>Students are able to explain the</p>	<p>Software Companies</p> <ul style="list-style-type: none"> <li>* User interface design such as windows, menu.</li> <li>* Real Time Systems.</li> <li>* Object oriented databases.</li> </ul>

			<p>difference between object oriented programming and procedural programming.</p> <p>Students are able to program using C++ features</p>	<p>* AI and Expert System</p>
		MSC 3.2 HC Data Communication & Computer Networks	Application of Data Communication & Networks in all software skills	Programming knowledge and Logical analysis
		MSC 3.3 SC Computer Graphics	<p>Identify a typical graphics pipeline and apply graphics programming techniques to design and create computer graphics. Create effective OpenGL programs to solve graphics programming issues, including 3D transformation, objects modeling, color modeling, lighting, textures, and ray tracing.</p>	<p>*visualization of measurement data (2D and 3D),</p> <p>*visualization of computer simulations.</p> <p>*medical diagnostics,</p> <p>*drafting and computer design,</p> <p>*preparation of publications,</p> <p>*special effects in movies,</p> <p>*computer games.</p>
		MSC 3.4 OE Information Technology	Application of Information Technology in all software skills	<p>Software Companies</p> <p>*Universities</p> <p>* Telecommunication</p> <p>* Finance</p>

		MSC 3.5 Practical I Java Prog Lab	Application of Java in all software skills	Programming knowledge and Logical analysis
		MSC 3.6 Practical I Computer Networks Lab	Application of Computer Networks in all software skills	Programming knowledge and Logical analysis
		MSC 3.7 Practical I Computer Graphics Lab	Application of Computer Graphics in all software skills	Programming knowledge and Logical analysis
		MSC 3.8 Practical IV (OE) Internet tools and Web design Lab	Application of Internet tools in all software skills	Programming knowledge and Logical analysis
		MSC 4.1 HC Internetworking and Web design	d) Students will be able to use a variety of strategies and tools to create websites. You will develop awareness and appreciation of the many ways that people access the web, and will be able to create standards-based websites that can be accessed by the full spectrum of web access technologies.	Software Companies *Mobile Applications *Web-based Applications *Scientific Applications. *Gaming Applications.
		MSC 4.2 HC Software Engineering	Work as an individual and as part of a multidisciplinary team to	Software Companies



			develop and deliver quality software. Demonstrate an understanding of and apply current theories, models, and techniques that provide a basis for the software lifecycle.	
		MSC 4.3 SC Digital Image Processing	Develop any image processing application. Understand the rapid advances in Machine vision. Learn different techniques employed for the enhancement of images and understand the need for image compression and to learn the spatial and frequency domain techniques of image compression.	visualization of measurement data (2D and 3D),  ಪ್ರಾಂಶುಪಾಲರು ಸರಕಾರಿ ಮಹಾವಿದ್ಯಾಲಯ ಕಲಬುರಗಿ-೫೮೬೧೦೨
		MSC 4.5 Practical I SC Lab	Application of Digital Image Processing in all software skills	Programming knowledge and Logical analysis
		MSC 4.6 Practical II Web design Lab	Application of Web design in all software skills	Programming knowledge and Logical analysis
		MSC 4.7 Practical III Project Work Lab	Application of PROJECT in all software skills	Programming knowledge and Logical analysis

## PG 2016-17

Program Name	Course Code	Course Name	Course Out Come	Specific Course Out come
PG-COM		MSC 1.1HCDigital Logic and ComputerDesign	*Understand how logic circuits are used to solve engineering problems. *Understand how logic circuits are analyzed, designed, verified, and tested. *Understand the relationship between abstract logic characterizations and practical electrical implementations.	Software Companies *System Development * Architecture and logicdesign, design verification through software developed for component and system simulation, and builds physical devices
		MSC 1.2HC Mathematical Foundation ofComputer Science	An ability to apply knowledge of computing and mathematics appropriate to the discipline. An ability to identify, formulates, and develops solutions to computational challenges. An ability to design, implements, and evaluate a	In software Companies it helps to increase programming skills

			computational system to meet desired needs within realistic constraints.	
		MSC 1.3HC Data Structures using C++	<p>The course, Database Management Systems, provides an introduction to the database management.</p> <p>The course emphasizes the understanding of the fundamentals of relational systems including data models, database architectures, and database manipulations.</p>	<p>Software Companies</p> <ul style="list-style-type: none"> <li>*Universities</li> <li>* Telecommunication</li> <li>* Finance</li> </ul>
		MSC 1.4SC Operating System Principles	<p>A student will be able to understand the basic components of a computer operating system, and the interactions among the various components.</p> <p>The course will cover an introduction on the policies for scheduling, deadlocks, memory management, synchronization, system calls, and file system</p>	<ul style="list-style-type: none"> <li>*Windows services.</li> <li>Application programs</li> <li>*Operating System.</li> </ul>

		MSC Practical I PROLOG AND DIGITAL LOGIC LAB	Application of PROLOG in all software skills	Programming knowledge and Logical analysis
		MSC Practical II C++ Lab	Application of C++ in all software skills	Programming knowledge and Logical analysis
		MSC Practical III DATA STRUCTURE LAB	Application of DS in all software skills	Programming knowledge and Logical analysis
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PG-COM		MSC 2.1HC Design and Analysis of Algorithms	The course, Design and Analysis of Algorithms, provides an introduction to The Algorithms. The course emphasizes the understanding of the fundamentals of Design and Analysis of Algorithms including data models, database architectures, and database manipulations.	Software Companies *Universities * Telecommunication * Finance
		MSC 2.2 HC Database Management System	Database architectures, and database manipulations.	Software Companies *Universities *Telecommunicate action * Finance

		MSC 2.3SC System Software	The process management and information management via different software tools, by the end of the course students will be able to understand different components of system software.	Software Companies
		MSC 2.4 OE Introduction to Computers and C-Programming	<p>The main emphasis of the course will be on problem solving aspect i.e. developing proper algorithms. After completion of the course the student will be able to Develop efficient algorithms for solving a problem.</p> <p>Use the various constructs of a C programming language viz. conditional, iteration and recursion.</p>	Software Companies * Embedded Systems * New Programming Platforms * Compiler Design
		MSC Practical I Algorithms Lab	Application of Algorithms in all software skills	Programming knowledge and Logical analysis
		MSC Practical II DBMS Lab	Application of DBMS in all software skills Programming knowledge and Logical	Programming knowledge and Logical analysis


			analysis	
		MSC Practical III Visual Programming Lab	It will familiarizethe students with the preparation of VB applications.The main objective of this is in application development.	* Self-employment in Applications development
		MSC Practical IV (OE) Office Packages and C-Programming	Application of Office Packages and C-Programming in all software skills	Programming knowledge and Logical analysis
		MSC 3.1HC Programming Java	Understanding the object oriented programming and C++ concepts. Students are able to explain the difference between object oriented programming and procedural programming. Students are able to program using C++ features	Software Companies * User interface design such as windows, menu. * Real Time Systems. * Object oriented databases. * AI and Expert System
		MSC 3.2 HC Data Communication & Computer Networks	Application of Data Communication & Networks in all software skills	Programming knowledge and Logical analysis

		MSC 3.3 SC Computer Graphics	Identify a typical graphics pipeline and apply graphics programming techniques to design and create computer graphics. Create effective OpenGL programs to solve graphics programming issues, including 3D transformation, objects modeling, color modeling, lighting, textures, and ray tracing.	*visualization of measurement data (2D and 3D), *visualization of computer simulations. *medical diagnostics, *drafting and computer design, *preparation of publications, *special effects in movies, *computer games.
		MSC 3.4 OE Information Technology	Application of Information Technology in all software skills	Software Companies *Universities * Telecommunication * Finance
		MSC 3.5 Practical I Java Prog Lab	Application of Java in all software skills	Programming knowledge and Logical analysis
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		MSC 3.7 Practical I Computer Graphics Lab	Application of Computer Graphics in all software skills	Programming knowledge and Logical analysis

		MSC 3.8 Practical IV (OE) Internet tools and Web design Lab	Application of Internet tools in all software skills	Programming knowledge and Logical analysis
		MSC 4.1 HC Internetworking and Web design	e) Students will be able to use a variety of strategies and tools to create websites. You will develop awareness and appreciation of the many ways that people access the web, and will be able to create standards-based websites that can be accessed by the full spectrum of web access technologies.	Software Companies *Mobile Applications *Web- based Applications *Scientific Applications. *Gaming Applications.
		MSC 4.2 HC Software Engineering	Work as an individual and as part of a multidisciplinary team to develop and deliver quality software. Demonstrate an understanding of and apply current theories, models, and techniques that provide a basis for the software lifecycle.	Software Companies



		MSC 4.3 SC Digital Image Processing	Develop any image processing application. Understand the rapid advances in Machine vision. Learn different techniques employed for the enhancement of images and understand the need for image compression and to learn the spatial and frequency domain techniques of image compression.	visualization of measurement data (2D and 3D),
		MSC 4.5 Practical I SC Lab	Application of Digital Image Processing in all software skills	Programming knowledge and Logical analysis
		MSC 4.6 Practical II Web design Lab	Application of Web design in all software skills	Programming knowledge and Logical analysis
		MSC 4.7 Practical III Project Work Lab	Application of PROJECT in all software skills	Programming knowledge and Logical analysis

  
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 ಕಲಬುರಗಿ-585105