## Course outcomes year 2021-22

Teachers of the Government degree college Ganderbal have prepared Course outcomes that help the learners to understand the reason for pursuing the course and help him to identify what he/she will be able to do at the end of the course. The teaching faculty members make it sure to communicate course outcomes in the class room before delivering lectures / presentation on topics. The University of Kashmir has also mentioned course outcomes on syllabus in some courses that are discussed with students in class room. A well written course outcomes facilitates teachers in measuring the achievements of the course outcomes at the end of semester.

Department of computer science		Course offered : B.C.A	
Semester	Subjects	Course outcomes	
1 <sup>st</sup>	<ul><li>c/c++</li><li>Computing mathematics</li></ul>	Students will be able to develop logics which will help them to create programs, applications in C. Also by learning the basic programming constructs they can easily switch over to any other language in future.	
2 <sup>nd</sup>	<ul> <li>Discrete Mathematics</li> <li>Computer System         Architecture     </li> </ul>	On completion of the course, student will be able to: Demonstrate computer architecture concepts related to design of modern processors, memories and I/Os. Analyze the performance of commercially available computers	
3 <sup>rd</sup>	<ul> <li>Computer Networks</li> <li>Operating System</li> <li>Elementary computer         Application </li> </ul>	Student will gain valuable skills in computer networks (switching, routing), system and network administration, computer and network security, operating systems, web programming, databases, and project management.	

4 <sup>th</sup>	<ul><li>Algorithms</li><li>Software Engineering</li><li>DBMS</li></ul>	Students will gain an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics. Ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
5 <sup>th</sup>	<ul> <li>Numerical Techniques</li> <li>Data Mining</li> <li>Internet technology</li> <li>Automata</li> </ul>	Students are able to: Design a data mart or data warehouse for any organization. Extract knowledge using data mining techniques. Adapt to new data mining tools. Explore recent trends in data mining such as web mining, multimedia mining.  To develop and deploy real time web applications in web servers and in the cloud.
6 <sup>th</sup>	<ul> <li>Cloud Computing</li> <li>Artificial Intelligence</li> <li>Computer Graphics</li> <li>Project work</li> </ul>	Articulate the main concepts, key technologies, strengths, and limitations of cloud computing and the possible applications for state-of-the-art cloud computing. Identify problems, and explain, analyze, and evaluate various cloud computing solutions.  Be familiarized with contemporary graphics hardware, the actual methodology and techniques to draw computer graphics, animations etc. for the real world presentation and how it is implemented in Computer graphics software. Develop new kinds of graphics and animations.

#### **Department of psychology**

## **1**ST SEMESTER

#### **FOUNDATIONS OF PSYCHOLOGY**

Course Outcome: To understand the basic psychological processes and their applications in everyday life.

#### **2<sup>nd</sup> SEMESTER**

#### **INTRODUCTION TO SOCIAL PSYCHOLOGY**

Course Outcome: To understand the basics of social psychology and to understand the individual in the social world.

#### 3<sup>rd</sup> SEMESTER

#### **PSYCHOLOGICAL DISORDERS**

Course Outcome: To develop an understanding of the various psychological disorders and their treatment.

## 4<sup>th</sup> SEMESTER

#### **RESEARCH METHODS IN PSYCHOLOGY**

Course Outcome: To introduce basic statistical methods, psychological testing and qualitative methods and their uses.

## 5<sup>th</sup> SEMESTER

#### **LIFE SPAN DEVELOPMENT (OPTION I)**

Course Outcome: To understand how human life unfolds from conception to late adulthood and to understand the relationship between theory and applications within each domain of development.

#### 5<sup>th</sup> SEMESTER

#### **ORGANIZATIONAL PSYCHOLOGY(OPTION II)**

Course outcome: To introduce the basic concepts of organizational psychology and to understand the applications of psychology at the workplace.

#### 6<sup>th</sup> SEMESTER

#### **COUNSELING PSYCHOLOGY (OPTION I)**

Course Outcome: To develop an understanding of basic concepts, processes, techniques of counseling.

### **6<sup>th</sup> SEMESTER**

#### **HEALTH AND WELL-BEING (OPTION II)**

Course Outcome: To develop an understanding of health and how to maintain health and wellbeing.

#### **SKILL COURSE**

## **4<sup>th</sup> SEMESTER**

#### **DEVELOPING EMOTIONAL COMPETENCE**

Course outcome: To help the students learn how to understand and manage their emotions and develop emotional competencies.

#### **GENERIC ELECTIVE COURSES**

## 5<sup>th</sup> SEMESTER

#### **FOUNDATIONS OF PSYCHOLOGY-I**

Course Outcome: To understand the basic psychological processes and their applications in everyday life.

6<sup>th</sup> SEMESTER-FOUNDATIONS OF PSYCHOLOGY-ICourse Outcome:To understand the basic psychological processes and their applications in everyday life

# **Department of Geology**

Govt.Degree College Ganderbal

# **Course Outcomes:**

Semest	CourseTitle	Courseoutcome
er/Cou		
rse		
Code		
II	GEOLOGY: Petrology	The student learns about the different types of rocks, their formation, and their identification. The student will under the different types of rocks, their formation, and their identification. The student will under the different types of rocks, their formation, and their identification. The student will under the different types of rocks, their formation, and their identification. The student will under the different types of rocks, their formation, and their identification. The student will under the different types of rocks, their formation and their identification. The student will under the different types of rocks, their formation and their identification. The student will under the different types of rocks, the different types of rocks and the different types of rocks.
		derstandtheformationofmagma,minerals,andtheirdistinguishingfeatures. The course also
		includes the physical and chemical properties of rocks and theirassociationwithmagma differentiation.
IIIGL321C	GEOLOGY:SEDIMENTO	Thestudentlearnsaboutthesedimentaryrocks, their formation, and their physical and chemical properties.
	LOGY	The student will understandthe various sedimentary features and their role in the recognition
	ANDSTRATIGRAPHY	ofsedimentary environments. The course also includes stratigraphywherestudents
		learnaboutthedifferentrocklayersand their role in geologicalagedetermination.
IVGL421C	GEOLOGY:GEOCHEMIS	The student learns about the concepts of Geochemistry, Geophysics, and Hydrogeology. The student will undersome the concept of the concept
	TRY,GEOPHYSICS,	tandthevariousexploration methods including seismic, magnetic, and gravity.
	ANDHYDROGEOLOGY	Thecoursealsoincludeshydrologicalprospectingandtheunderstanding
		ofsurface andsurface waters.
VGL516DA	GEOLOGY -	The student learns about the earth's structure and different
	STRUCTURALGEOLOGY	forces associated with the earth. The student will understand the basic plate tectonic mechanisms and tectonic plate the student will be a simple of the plate that the student will be a simple of the plate that the
		tesoftheearth.Thecoursealso
		includesthedifferenttypesofstructuralfeaturesincludinggeologicalfoldsand faults.
V-	GEOLOGY:	The student learns about remote sensing and its role in the currentage. The students will understand
BGL5616DB	REMOTESENSING	different types of electromagneticwaves and radiations and their characteristics. The course
		alsoincludesthevariousremotesensingtypesandtheirinvolvementin
		the exploration oftheearth'ssurface.

#### **Department of commerce**

#### **Course outcomes**

Program Name: B.Com. (Hons.)Program Outcomes

- Deep Understanding of Accounting Issues Related to Business
- · Understanding of General Business Functions Impacting Organization
- Interpersonal and Communication Skills
- Understanding Ethical, Social Sustainable Business Issues
- Developing Entrepreneurship Acumen

#### **Program Specification Outcomes**

- Demonstrate Ability to Interpret and Analyze Financial Statements
- Understanding the Rules and Regulation Laid Down by Accounting Body
- Demonstrate Ability to Understand Compliance as per Various Enactment
- Acquiring Conceptual Clarity of Various Functions and Ability to AnalyzeVarious Functional Issues
- Demonstrating Ability to Evolve Strategies for Business
- Demonstrate Effectively Oral and Written Communication
- Demonstrate Ability to work in Groups. Exhibit skills like Empathy, EQ, Managerial and Inter-Personnel Skills
- · Demonstrate understanding of social cues and contexts in social interaction
- Develop Ethical Practices and Imbibe Values for Better Corporate Governance.
   Understand Ethical Challenges and Choices in a Business Setting
- Demonstrate Understanding of Sustainability Related Concerns in VariedAreas
- Understand the Ecosystem of Start up in the Country
- Demonstrate the Ability to Create Business Plans

Semester	Course Name	Learning Outcome of commerce programme
1 <sup>st</sup>	Financial Accounting - I	Show proficiency in basic accounting concepts, conventions and understanding of the accounting process.  Understand the process and preparation of financial statements for Sole Proprietorship, Departmental and Branch Business Organizations
1 <sup>st</sup>	Business Law	Students will understand the basic provisions of Company and Industrial Law and therein after the completion of the course, Students will be able to - Understand the legal system prevailing into practice.  Develop an understanding of the basic law related to business.
2 <sup>nd</sup>	Corporate law	To know about various company laws regarding formation of company To know about memorandum of association and articles of association. To know about winding up of company and its types and procedures.
2 <sup>nd</sup>	Corporate accounting	To know about final accounts of company like Balance sheet and profit and loss account  To know about concept of goodwill and its valuation '  To know about issue of shares and debenture .  To know about accounts of holding and subsidiary company .
3 <sup>rd</sup>	<b>Business mathematics</b>	To know about matrix, simple interest and linear programming.  To know about differentiation and integration.
3 <sup>rd</sup>	Human resource management	To know about human resource models To know about job analysis, recruitment and selection. To know about performance appraisal methods.
3 <sup>rd</sup>	Management principles and practices	To know about various functions of management.  To know about various motivational theories.  To know about BCG growth matrix.

3 <sup>rd</sup>	E -commerce	To know practical use of various e platforms for business purpose.
		To know about development of website.
4 <sup>th</sup>		To know about cost accounting methods
	Cost accounting	To know about costing system, ABC.
4 <sup>th</sup>	Goods and service tax	To know about various types of GST.
		To know about Input tax credit mechanism and composition levy scheme.
		To know about tax invoice, debit note and credit note, audit in GST.
5 <sup>th</sup>		To provide an understanding of the Indian Banking & Insurance Sector. To
	Banking & Insurance	make the students comprehend, thelatest offerings and the day to day
		operations in Banking & Insurance.
5 <sup>th</sup>	Investment management	To study about various investment opportunities
		To know about national stock exchanges and Bombay stock exchanges
		To know about securities exchange board of India
		To know about mutual funds
		Understanding of fundamental analysis and technical analysis
6 <sup>th</sup>	Consumer protection	Understanding of various consumer protection laws.
		To know about various mechanism for addressing consumer grievance
6 <sup>th</sup>		To know about globalization and various entries into international market
	International business	To know about various international business theories.
		To know about various regional groups like NAFTA & EU
		To know about various international financial institutions like world bank and
		IMF

# **Department of sociology**

Semester	Course Title/Code	Course outcome
<b>1</b> <sup>st</sup>	Introduction to Sociology	This course is a broad introduction to the discipline of Sociology. It familiarizes the students with the history and some of the fundamental concepts and concerns of the discipline.
2 <sup>nd</sup>	Sociological Thought	This course introduces the students to the classical sociological thinkers whose contributions have shaped the discipline of Sociology.
3 <sup>rd</sup>	Indian Society (Structure & Change)	This paper acquaints the students with the structure and change in Indian Society. It also highlights the issues and challenges of the contemporary Indian society.
4 <sup>th</sup>	Research Methodology	The course is a general introduction to the methodology of social research. It will also provide the student with some elementary knowledge of the complexities and philosophical underpinnings of research.
5 <sup>th</sup>	Marriage Family and Kinship	To acquaint the students with the fundamental knowledge of structure, development and changes in the basic institutions of the society.
6 <sup>th</sup>	Social Stratification	To acquaint the students with the concept and nature of social stratification and social mobility.

# Syllabus of Water Management for UG programmes Natural Sciences Major Discipline Core WATER MANAGEMENT (1<sup>ST</sup> SEMESTER)

Course outcome: Students opting water management as undergraduate course will get an insight and understanding of water as an essential component of life on planet Earth. The curriculum is designed to understand the importance, relevance and most importantly the threats to water and need for its conservation and management. On one hand, students will get an acquaintance and knowledge regarding water resources and systems, water treatment technology and process, and on the other hand, helps them to identify the grim picture of pollution load and impacts of climate change on water resources due to man-made activities. The course has been developed in such a way that aspirants not only develop academic excellence but will grow as professionals in catering water related issues. Therefore, a vast scope and ample opportunities exist both in government and private sectors for water management degree holders. Besides, teaching, they can also apply in Pollution control boards, water authority, Jal shakti etc.

**Department of Islamic Studies** 

**GDC Ganderbal** 

**Course outcomes:** 

Semester	Course Title	Course Outcome
I	Introduction to Muslim Civilization.	The students learn in detail about the Islamic civilization. They come
		to know about the history of the Arab before the advent of Islam.
		They also learn about the life and teachings of the Holy Prophet of
		Islam (SAAS). Besides the period of pious caliphate of Islam (Al-
		Khilāfah al Rāshīdah) the students also became acquainted with the
		ummayad dynasty.
II	Islamic Civilization under the	The students learn in detail about the glorious Islamic civilization
	Abbasids and the Muslim Spain.	that prospered under the Abbasid rule in Baghdad and Ummayad
		rule in Spain. They also come to know about the marvelous
		contribution of Muslims in different branches of knowledge.
III	Islamic Religious Sciences	The students learn about various Islamic sciences like <i>Ulūm al-</i>
		Qur'ān, Ulūm al-Hadīth, Principles of Islamic Jurisprudence (Usūl)
		al-Fiqh) and different schools of Islamic law like Hanafī, Mālikī,
		Shāfi'ī, Hanbalī and Jā'firī school.
IV	Muslim Philosophy Tasawwuf.	The students learn about different scholastic schools of Islamic
		history. They also come to know about the contribution of some
		prominent Muslin Philosophers and their seminal works. They also
		learn about Tasawwuf, some prominent Sūfī's and their
		contribution. They also learn about different Sūfī orders (Salāsil).

## **Department of Arabic**

## **GDC Ganderbal**

Semester	Course Title	Course outcomes
I	Arabic Text & Grammar - I	• To make the students aware of the unique nature and function of various Arabic
II	Arabic Text & Grammar – II	<ul> <li>Structures.</li> <li>To understand Arabic grammatical concepts through practical lessons.</li> </ul>
III	Arabic Text & Grammar – III	<ul> <li>To introduce the morphology lessons in a innovative approach.</li> <li>To learn the grammatical concept as elaborated in various chapters of the prescribed</li> </ul>
IV	Arabic Text & Grammar – IV	textbook, sequentially from chapter to chapter  To focus on the four language skills (listening, speaking, reading and writing) through
IV	SEC- Spoken Arabic -I	<ul> <li>To teach the students the basics of interpersonal interaction in Arabic.</li> <li>To train the students to communicate in Arabic in selected situations.</li> <li>To enable the students to understand and respond to basic forms of conversations.</li> <li>Students will acquire the ability to speak, read and write in Modern Standard Arabic.</li> </ul>
III	MIL - Reading and Writing Arabic-I	Students will acquire the ability to speak, read and write in Modern Standard     Arabic.
IV	MIL - Reading and Writing Arabic-II	• To enrich the students with the art of writing Arabic sentences.  To develop the reading skills.

# **Department of statistics**

## **Course outcomes**

01	Students will formulate complete, concise and correct mathematical proofs. Students will frame problems using multiple mathematical and statistical presentation of relevant structures and relationships and solve using standard techniques.
02	Under successful completion of the course ,students will be able to organize ,manage and present data .analyze frequency distributions and cumulative frequency distributions . analyze statistical data using measures of central tendency ,dispersion and location.

# **Department of mathematics**

Course outcomes	Course outcomes
01	Apply concepts of functions to help solve applications problems
02	Solve algebraic equations or simply expressions that contain composition of functions
03	Apply concepts of analytic geometry to help solve application problems
04	Evaluate functions at numerical values and simplify algebraic expressions with functions evaluated at symbolic values and analyze and simplify compositions of functions .
05	Formulate models for various real world phenomena using first order ,second order and systems of differential equations .

## **Course outcomes**

## **Modern Indian language**

Urdu	Understanding of language
Kashmiri	
Persian	
Arabic	
Hindi	

# **Department of physics**

1 <sup>st</sup> semester	Course Specific Objectives	<ul> <li>Thorough awareness about vector algebra and its applications to Physics.</li> <li>Centre of mass and Dynamics of multi-particle system.</li> <li>Angular Momentum concepts and discussion about conservation laws and Rocket Systems.</li> <li>Introduction of special theory of relativity, frames of reference, relativistic velocity addition.</li> <li>Gravitation and its laws.</li> <li>Simple and damped Harmonic Motion, treatment with differential calculus</li> <li>Elasticity, Stretching and twisting of a wire, twisting of solid and Hallow cylinders</li> </ul>
	Course Supplific Outroons	> Fluid Mechanics.
	Course Specific Outcome	Declar gratema
		<ul> <li>Rocket systems</li> <li>Geostationary satellites and GPS</li> </ul>
		<ul> <li>Geostationary saterities and GPS</li> <li>Understanding of Space time concept</li> </ul>
		> Ideal supports for concrete structures
		> Blowing up of roofs
		<ul> <li>Domestic water distribution supply systems, Laminar and turbulent water flow in rivers.</li> </ul>
		> Relative velocity of two photons moving parallel and antiparallel to each other.
2 <sup>nd</sup> semester	Course Specific Objectives	<ul> <li>Understanding electricity and Magnetism through vectors, Guass's divergence theorem and its practical applications to electric fields</li> <li>Understanding magnetism through Biot-Savarts and ampere's circuital theorem.</li> <li>Faraday's law and Lenz's law for understanding electromagnetic induction</li> </ul>
	Course Specific Outcome	
		Maxwell's equations for understanding the electromagnetic waves
		Electric field and magnetic fields as sources of energy Light is an electromagnetic ways.
		<ul> <li>Light is an electromagnetic wave</li> <li>Transformer working principle and construction</li> </ul>
		<ul> <li>Ferromagnetic materials and their alloys, which can be used to make bar magnets and transformer cores</li> </ul>
		<ul> <li>Idea about transmission and reception of electromagnetic waves</li> </ul>

3 <sup>rd</sup> semester	Course Specific Objectives	<ul> <li>Zeroth, 1st, 2nd and 3rd law of thermodynamics and their application</li> <li>Carnot's cycle and attainability of absolute zero temperature and forms of heat engines</li> <li>Maxwell's, Joule Thomson effect, Critical temperature and liquefaction of gases</li> <li>Claussius Claperon equation and its application to melting wax, ghee, freezy water etc.</li> <li>Specific heat for mono, di, tri and poly atomic gases</li> <li>Black body radiation, Spectral distribution</li> <li>Distribution laws, Maxwell's, Fermi-Dirac and Bose-Einstein's</li> </ul>
	Course Supplifie Outcome	7 Distribution laws, Maxwell s,i erini Dirac and Dose Emstein's
	Course Specific Outcome	<ul> <li>Working principle's of clinical thermometer</li> <li>Idea about Ideal engine, petrol engine and diesel engine</li> <li>Applications of Fermi-Dirac Statistics in the field of Physics</li> <li>Bose-Einstein condensation</li> </ul>
4 <sup>th</sup> semester	Course Specific Objectives	<ul> <li>Superposition principle and its consequences, Beats, Interference</li> <li>Lissajous figures, travelling and standing waves in a string</li> <li>Phase velocity and group velocity, concept of wave packet, group velocity in a dispersive medium</li> <li>Plane waves and spherical waves their attenuation and linearity, Wave front, spherical and cylindrical etc.</li> <li>Interference, diffraction, polarization of light, Hardinger-Fizeau fringes, zone plates, Newton rings, Michelson Interferometer</li> <li>Sabine reverberation formula and its applications</li> </ul>
	Course Specific Outcome	
		<ul> <li>Musical Scale and notes, bel, decibles</li> <li>Difference between bee buzzing and fly buzzing, Noise and music</li> </ul>

		Basic musical instruments like flute, violin, guitar etc.
		Acoustic effect in halls and auditoriums
		Application of LASERS in Medical, Scientific and defense fields
5 <sup>th</sup> semester	Course Specific Objectives	Black body radiation and Planck' s law
		Photoelectric effect, Compton effect and pair production
		Concept of wave packets and group velocity
		Uncertainty principle, Schrodinger wave equation and its applications.
		Electron spin and fine structure of spectral lines
		Spin-orbit coupling, J-J Coupling and hyperfine spectroscopy
		Rotational and vibrational spectra
		> Tunnel effect
		Liquid drop model for fission
		> Shell model for nuclear radiations
		Quark theory of elementary particles
	Course Specific Outcome	
		Understanding nuclear forces, Alpha and Beta decay
		Understanding of emission of gamma rays from nucleus
		Understanding nuclear watch dogs like G. M counter, Scintillation counters
		> Understanding nuclear fission and fusion
		Understanding of interaction of em waves of different wavelengths with matter
·	1	

6 <sup>th</sup> semester	Course Specific Objectives	<ul> <li>Einstein's and Debey's model of specific heats of solids</li> <li>Periodic potential in crystals and Kroning Penny Model</li> <li>Band Structure of metals</li> <li>Intrinsic and extrinsic semiconductors</li> <li>Transistors</li> <li>Rectifiers, amplifiers and oscillators, voltage regulator</li> <li>Zener diode, tunnel diode</li> <li>Hall effect, h-parameters</li> <li>FET, MOSFET</li> </ul>
	Course Specific Outcome	<ul> <li>Understanding crystals and creating electrical properties in them</li> <li>Understanding band theory of solids based on Kroning Penny Model</li> <li>Specific heats and its applications</li> <li>Applications of Oscillators</li> <li>Importance of Hall effect in solids state Physics</li> <li>Zener diode used as a voltage regulator</li> <li>Use of tunnel diode as fast switch in computers</li> <li>Applications of transistor as an amplifier</li> <li>Use of MOSFET as a signal Mixer (Carrier wave and program signal)</li> <li>h-parameters for transistor amplifier</li> </ul>

## Department of zoology

#### learning outcomes of zoology

#### L-01

- learning about the diversity of non chordates and chordates
- animal architecture and function through the course of evolution
- significance economic importance and medical importance of the various phyla L02
- understanding the comparative anatomy of various vertebrate classes
- evolution of complex forms from the simpler ones
- an understanding of basics of developmental biology

#### L03

- An understanding of various physiological process of the animals
- Chemical coordination and role played by hormones
- understanding about the metabolism of carbohydrates, proteins and fats

#### L04

- understanding of concepts of heredity, variations, chromosomal and genetic mutations
- learning of flow of information from DNA to protein product
- understanding of evidences, theories and mechanism of evolution

#### L05

- understanding pathology, symptoms, prevention and control of various parasitic diseases
- economic and medicinal importance of various insect vectors and pests
- methods and benefits of aquaculture

#### L06

- basic understanding of insect taxonomy and characteristics
- insects as vectors of various diseases pathology, symptoms, prevention and control of various insect borne diseases

#### **Department of Botany**

#### **Learning outcomes:**

The students after acquiring the graduate degree in the subject of Botany will be able to understand its different branches like systematic, evolution, ecology, developmental biology, genetics, plant Physiology, biochemistry, Cell and Molecular Biology, Economic Botany, Morphology, anatomy, Plant Interactions etc.

Students should be able to qualify the higher examinations like Entrance test for masters, Civil services, forest services in the subject of Botany and related subjects.

A student should be able to set up entrepreneur units in the applied botany.