BACHELOR'S DEGREE PROGRAMME (SYLLABUS OF FIRST 4 SEMESTER)

First Year-Semester-I				
Semester-I				
Major Subjects	Credits		***	Syllabus
Total credits of Major Papers = 12 credits	6	Major Paper-I Geography)	(Physical	1. Physical Geography (Core, 4 Credits)
- 12 creates		Geography)		Unit I Meaning Nature and Scope of Physical Geography. Approaches to study Physical Geography
				Unit II Origin of the Earth; Components of Earth System Interior of the Earth; Plate Tectonics, Rocks. Weathering Work of river, wind, glacier and underground water and its associated features. Cycle of Erosion – Davis and Penck
				Unit III Atmosphere – Heat Balance; Wind types and pressure; Cyclone; Monsoon- jet streams; Climatic Classification (Koppen).
				Unit IV Hydrosphere –Hydrological Cycle; Ocean Botton Relief Features; Tides; Currents and Salinity, Coral reef.
				Recommended Books
				 Conserve H. T., 2004: Illustrated Dictionary of Physica Geography, Author House, USA. Gabbler R. E., Petersen J. F. and Trapasso, L. M., 2007 Essentials of Physical Geography (8th Edition), Thompson Brooks/Cole, USA. Garrett N., 2000: Advanced Geography, Oxford University Press.
				4. Goudie, A., 1984: The Nature of the Environment: A Advanced Physical Geography, Basil Blackwell Publisher Oxford.

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5. Hamblin, W. K., 1995: Earth's Dynamic System,
Prentice Hall, N.J.
6. Husain M., 2002: Fundamentals of Physical Geography,
Rawat Publications, Jaipur.
7. Monkhouse, F. J. 2009: Principles of Physical
Geography, Platinum Publishers, Kolkata.
8. Strahler A. N. and Strahler A. H., 2008: Modern
Physical Geography, John Wiley &Sons, New York.
Savindra Singh: Physical Geography (Hindi, English)

	Major Paper-I	2. Practical Geography
6	(Practical Geography)	
		a. Scale: Simple, comparative and diagonal scale.
		b.Toposheets: introduction, indexing, interpretation and
		conventional signs.
		c. Landform features based on contours.
		d. General introduction and interpretation of Aerial Photographs.
		Recommended Books
		1. Dent B. D., 1999: Cartography: Thematic Map Design,
		(Vol. 1), McGraw Hill.
		2. Gupta K. K and Tyagi V. C., 1992: Working with Maps,
,		Survey of India, DST, New Delhi.
		3. Mishra R. P. and Ramesh A., 1989: Fundamentals of
		Cartography, Concept Publishing.
		4. Robinson A., 1953: Elements of Cartography, John
		Wiley.
		5. Sharma J. P., 2010: Prayogic Bhugol, Rastogi
		Publishers.
		6. Singh R. L. and Singh R. P. B., 1999: Elements of
		Practical Geography, Kalyani Publishers
		7. Singh R. L., 1998: <i>Prayogic Bhoogol Rooprekha</i> , Kalyani Publications.
		8. Steers J. A., 1965: An Introduction to the Study of Map
		Projections, University of London.
		1 rojections, Oniversity of London.

Unit IV Industries and Trade: Iron & Steel, Textiles, Petro chemicals, Automobiles and Major trade Blocks of the World Recommended Books 1. Agyeman, Julian, Robert D. Bullard and Bob Evans (Eds.) (2003) Just Sustainabilities: Development in an Unequal World. London: Earthscan (Introduction and conclusion.). 2. Ayers, Jessica and David Dodman (2010) "Climate change adaptation and development I: the state of the debate". Progress in Development Studies 1: (2): 161-168. 3. Baker, Susan (2006) Sustainable Development. Milto Park, Abingdon, Oxon; New York, N.Y.: Routledge. (Chapter 2, "The concept of sustainable development"). 4. Brosius, Peter (1997) "Endangered forest, endangere people: Environmentalist representations of indigenous knowledge", Human Ecology 25: 47-69. 5. Lohman, Larry (2003) "Re-imagining the population debate". Corner House Briefing 28.	chemicals, Automobiles and Major trade Blo	es and al regions;
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			6. Martínez-Alier, Joan et al (2010) "Sustainable degrowth: Mapping the context, criticisms and future prospects of an emergent paradigm" Ecological Economics 69: 1741-1747. 7. Merchant, Carolyn (Ed.) (1994) Ecology. Atlantic Highlands, N.J: Humanities Press. (Introduction, pp 1-25.) 8. Osorio, Leonardo et al (2005) "Debates on sustainable development: towards a holistic view of reality". Environment, Development and Sustainability 7: 501-518. 9,Robbins, Paul (2004) Political Ecology: A Critical Introduction. Blackwell Publishing
Extracurricular Courses/CC	2	1- Understanding and connecting with Environment	University will prepare a course with focus on connecting student with environment. To make student more environment sensitive.

			The stage of Charles and Paris
SKILL (GEOGRAPHY)-1	2	SKILL (GEOGRAPHY)-1	BASICS OF GEOGRAPHY
			Unit-I Meaning and Scope of Geography, Solar System,
			Rotation and Revolution of Earth, International Date Line
			(IDL), Latitude and Longitude, Calculation of Time.
			Unit-II Lithosphere-Structure of Earth, Types of rocks-
			Igneous rock, Metamorphic rock and sedimentary rock and
			their importance.
			•
			Recommended Books
			1. Majid Hussain, Fundamentals of Physical Geography,
	2		Rawat Publication, New Delhi.
			2. Goh Cheng Leong, Certificate of Physical and Human
			Geography.
		,	3. D.R. Khullar, India- A Comprehensive Geography.
			4. D.R. Khullar, Practical Geography.
			i. Diki ikitalia, Hacicai Geography.
Total	20 credits		

Note: Each additional/multidisciplinary course will only be of two semesters. The course opted by a student in first semester will be continued in the second semester. The student will have the choice to select another Multidisciplinary course in third semester which will again be continued in fourth semester.

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First Year-Semester-II

Semester-II		
Major Subjects	Credits	

6	Major Paper-I (Human Geography)	Human Geography
		Unit I Definition, nature, scope, branches and contemporary relevance.
		Unit II Cultural Regions; Race; Religion and Languages Population: Population Growth; Migration- Definition and types.
		Unit III World Population Distribution and Composition. Settlements: Types and Patterns of Rural Settlements; Classification of Urban Settlements; Trends and Patterns of World Urbanization
		Unit IV Tribes of India: Bheel, Gond, Santhal and Naga.
		Recommended Books 1. Chandna, R.C. (2010) Population Geography, Kalyani Publisher. 2. Daniel, P.A. and Hopkinson, M.F. (1989) The Geography of Settlement, Oliver & Boyd, London. 3. Johnston R; Gregory D, Pratt G. et al. (2008) The Dictionary of Human Geography, Blackwell Publication. 4. Jordan-Bychkov et al. (2006) The Human Mosaic: A Thematic Introduction to Cultural Geography. W. H. Freeman and Company, New York

		 Kaushik, S.D. (2010) Manav Bhugol, Rastogi Publication, Meerut. Maurya, S.D. (2012) Manav Bhugol, Sharda Pustak Bhawan. Allahabad. Ghosh, S. (2015) Introduction to settlement geography. Orient Black Swan Private Ltd., Kolkata Hussain, Majid (2012) Manav Bhugol. Rawat Publications, Jaipur
,	Major Paper-I (Practical Geography)	Practical
6		Unit I Map Projection: Classification; Conical Projection with one and two standard parallel,
		Unit II Bonne's; Cylindrical Equal Area; Mercator's; and Polar Zenithal Equal Area map projection
		Unit III Use and handling of meteorological instruments and interpretation of Indian Daily Weather Reports
		Unit IV Distribution Map: Isopleth, Choropleth, and Dot method
		Recommended Books
		 Dent B. D., 1999: Cartography: Thematic Map Design, (Vol. 1), McGraw Hill. Gupta K. K and Tyagi V. C., 1992: Working with

da

			Maps, Survey of India, DST, New Delhi. 3. Mishra R. P. and Ramesh A., 1989:
			Fundamentals of Cartography, Concept Publishing.
,			 Robinson A., 1953: Elements of Cartography, John Wiley. Sharma J. P., 2010: Prayogic Bhugol, Rastogi
			Publishers.
			6. Singh R. L. and Singh R. P. B., 1999: Elements of Practical Geography, Kalyani Publishers
			7. Singh R. L., 1998: Prayogic Bhoogol Rooprekha,
			Kalyani Publications.
			8. Steers J. A., 1965: An Introduction to the Study of
			Map Projections, University of London
, 4	Additional	Course-	Geography of World Unit I
	II (multidisciplinary)		Concepts, bases and characteristics of
			developed and developing countries; Indicators and
			Levels of development: Developed,
			Developing, Under-developed, and Least-
			developed worlds. Unit II Physical resource base: landforms, climate, soils,
			vegetation, power, mineral and water resources
			Unit III
			World population: growth, causes and
			consequences; Urbanization: trends and pattern
			Unit IV
			Concept and methods of industrial regionalization; Major industrial regions of the world;
			Mid -Atlantic coastal region of USA, Rühr
			Industrial region, Mumbai -Ahmedabad industrial

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·	region.
	Recommended Books
	1. di Blij, H. and Muller, O. (1993): Geography: Regions and Concepts. John Wiley and Sons, New York. 2. Jackson, R. H. and Husman, L. E. (1991): World Regional Geography: Issues for Today. John Wiley and Sons, New York. 3. Jones, P. and Bryan, P. (1954): North America: An Historical, Economic and Regional Geography, Methuen and Company. Ltd, London. 4. Kolb, A. (1971): East Asia, China, Japan, Korea, Vietnam, Methuen, London. 5. Rai, Gayatri (2007): Vishwa Ka Pradeshik Bhugol, Mishra Trading Corporation, Varanasi 6. Sharma, P. R. (ed.) (1991): Perspectives on Third World Development. Rishi Publication, Varanasi. 7. Stamp, L. D. (1976): Asia: A Regional and Economic Geography, Methuen, London.

SKILL -2	2	SKILL (GEOGRAPHY)-2	Regional Development and Planning with Special Reference to Uttarakhand
			Unit- I Definition, need and types of regional Planning. Unit-II Delineation of Planning Region, Planning Regions of Uttarakhand
			Participatory, Micro Planning Survey Techniques and field study project report of 30 Pages should have at least 5 Maps, 10 Photographs and 5 Tables)
			Recommended Books 1. Blij H. J. De, 1971: Geography: Regions and Concepts, John Wiley and Sons.
			2. Claval P.I, 1998: An Introduction to Regional Geography, Blackwell Publishers, Oxford and Massachusetts.
			3. Friedmann J. and Alonso W. (1975): Regional Policy - Readings in Theory and Applications, MIT Press, Massachusetts.
			4. Gore C. G., 1984: Regions in Question: Space, Development Theory and Regional Policy, Methuen, London.
			5. Gore C. G., Köhler G., Reich U-P. and Ziesemer T., 1996: Questioning Development;
			Essays
			on the Theory, Policies and Practice of Development Intervention, Metropolis- Verlag, Marburg. 6. Haynes J., 2008: Development Studies, Polity Short Introduction Series.
			7. Johnson E. A. J., 1970: The Organization of Space in Developing Countries, MIT Press, Massachusetts.
		Head Department of Geography School of Earth Science	8. Peet R., 1999: <i>Theories of Development</i> , The Guilford Press, New York.
		Moon H.N.B. Garhwal University Sring, a (Unarakhand)	9. UNDP 2001-04: Human Development Report,

Life Skills and	2	Life Skills	and	personality	development	University will prepare a bouquet of courses
personality				-		which will focus on developing life skills such as
development /CC						stress management through Yoga, teamwork,
						cooperation, work ethics etc
<u>Total</u>	20 credits					
Note:	In case of exit aft	er completio	n of fi	rst year/seco	nd semester, s	tudent will be awarded Certificate on the basis of
	Core.					

Second Year-Semester-III

Second Year-Se	mester-III		
Semester-III			
<u>Major</u>	Credits		
<u>Subjects</u>		Major Paper-I (Geography	
	6	of India)	Geography of India
			Unit I Physiographic Regions, Geological Structure, Drainage, Climate, Natural Vegetation and Soil.
			Unit II Population – Size and growth since 1901; Population Distribution Density; Literacy; Sex Ratio Rural and Urban Settlements: Types and patterns.
			Unit III Resource Base – Livestock (cattle and fisheries); Power (coal, and hydroelectricity); Minerals (iron ore, petroleum and bauxite).
			Unit IV
			Economy- Agriculture, Industries, Transportation and Trades
			Recommended Books
			Hussain M., 1992: Geography of India, Tata McGraw Hill Education. Mamoria C. B., 1980: Economic and Commercial Geography of India, Shiva Lal Agarwala.
			3. Miller F. P., Vandome A. F. and McBrewster J., 2009: Geography of India: Indo-Gangetic
			Plain, Thar Desert, Major Rivers of India, Climate of India, Geology of

		India, Alpha script Publishing. 4. Nag P. and Sengupta S., 1992: Geography of India, Concept Publishing. 5. Pichamuthu C. S., 1967: Physical Geography of India, National Book Trust. 6. Sharma T. C. and Coutinho O., 1997: Economic and Commercial Geography of India, Vikas Publishing. 7. Singh Gopal, 1976: A Geography of India, Atma Ram. 8. Spate O. H. K. and Learmonth A. T. A., 1967: India and Pakistan: A General and Regional Geography, Methuen.
6	Major Paper- (Practical Geography)	Unit I Primary and secondary data and their sources; Methods of primary data collection; Classification of statistical data and tabulation. Unit II Frequency curve, histogram and polygon; Measures of Central Tendency-Mean, Median, Mode. Unit III Measures of dispersion- Quartile, Standard Deviation and Coefficient of Variation. Unit IV Coefficient of Correlation- Karl Pearson's and Spearman's methods, Scatter Diagrams. Introductory knowledge of SPSS. Recommended Books
1		Head Department of Geography School of Earth Science H.N.B. Garhwal University Srinagar (Uttarakhand)

Additional Course	4	Additional Course (Multidisciplinary)-I	1. Dent B. D., 1999: Cartography: Thematic Map Design, (Vol. 1), McGraw Hill. 2. Gupta K. K and Tyagi V. C., 1992: Working with Maps, Survey of India, DST, New Delhi. 3. Mishra R. P. and Ramesh A., 1989: Fundamentals of Cartography, Concept Publishing. 4. Robinson A., 1953: Elements of Cartography, John Wiley. 5. Sharma J. P., 2010: Prayogic Bhugol, Rastogi Publishers. 6. Singh R. L. and Singh R. P. B., 1999: Elements of Practical Geography, Kalyani Publishers 7. Singh R. L., 1998: Prayogic Bhoogol Rooprekha, Kalyani Publications. 8. Steers J. A., 1965: An Introduction to the Study of Map Projections, University of London. Geography of India (4 Credits) Unit II Physical Setting – Location, Structure and Relief, Drainage, Climate. Unit III Settlement System - Rural Settlement Types and Patterns, Urban Pattern Unit IV Resource Base – Livestock (cattle and fisheries), Power (coal, and hydroelectricity) and Minerals (iron ore, coal and petroleum and bauxite). Recommended Books
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Molera

1. Hussain M., 1992: Geography of India, Tata McGraw Hill Education. 2. Mamoria C. B., 1980: Economic and Commercial Geography of India, Shiva Lal Agarwala. 3. Miller F. P., Vandome A. F. and McBrewster J., 2009: Geography of India: Indo- Gangetic Plain, Thar Desert, Major Rivers of India, Climate of India, Geology of India, Alpha script Publishing. 4. Nag P. and Sengupta S., 1992: Geography of India, Concept Publishing. 5. Pichamuthu C. S., 1967: Physical Geography of India, National Book Trust. 6. Sharma T. C. and Coutinho O., 1997: Economic and Commercial Geography of India, Vikas Publishing. 7. Singh Ğopal, 1976: A Geography of India, Atma Ram. 8. Spate O. H. K. and Learmonth A. T. A., 1967: India and Pakistan: A General and Regional Geography, Methuen.

Skill Course	2	SKILL -1	BASICS OF GEOGRAPHY
			Unit-I Atmosphere- Structure and Composition of Atmosphere, Wind System
			Cyclone and Anticyclone, Jet Stream, Monsoon, El-Nino, La-Nina, Global
			Warming.
			Unit-II Hydrosphere - Hydrological Cycle, Ocean Current, Tide, Waves,
			Tsunami.
			Unit-III Biosphere- Biosphere as an Ecosystem, Biogeochemical Cycle, Bio-
			diversity and its importance, Forest conservation and Management, National
			Forest Policy.
			Recommended Books
			1. Majid Hussain, Fundamentals of Physical Geography, Rawat Publication, New
			Delhi.
			2. Goh Cheng Leong, Certificate of Physical and Human Geography.
			3. D.R. Khullar, India- A Comprehensive Geography.
, "			4. D.R. Khullar, Practical Geography.

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IKS-1	2	1-Indian Knowledge System (National)-I	Compulsory for all U.G. students
Total	20 credits		tors. The course onted by a student in first semester will be continued in

Note: Each multidisciplinary course will only be of two semesters. The course opted by a student in first semester will be continued in the second semester. The student will have the choice to select another Multidisciplinary course in third semester which will again be continued in fourth semester.

Second Year-Semester-IV

Semester-IV	7			
Major	Credits			
Subjects	6	Major I (Geographical Thought)	Paper-	Geographical Thought
		Thought		Unit-I Definition, nature and scope of Geography, Branches and sub branches of Geography; Basic concepts of Geography Unit-II Contribution of Greek and Roman Geographers-Ptolemy and Strabo. Arab Geographers Unit-III Contribution of Geographical knowledge in ancient, medieval and modern India; Renaissance in Geography, Discoveries and inventions; Contribution of Varenius and Immanuel Kant Unit-IV German and French School of Geography: Humbodlt ,Ritter,Ratzel, Hattner, Hartshorne ,Blache and Brunhes; Anglo-American School of Geography- Davis, EC. Semple, Huntington, Isaiah Bowman, Mackinder, Herbertson, and Stamp.
				Recommended Books
				 Dickenson. R. E. – The Makers of Modern Geography, Rutledge and Kegan London Freeman . T.W. – A Hundred Years of Geography, London. Jones and Martin – All Possible World – A History of Geographical Idias. Odessey, Indianapolis (USA) Halt Jensen A. – Geography- Its History and Concepts, Harper and Raw London. Dixit R.D. – Geographical Thought – A Contextual History of Ideas .Prentice Hall, New Delhi Kaushik S.D. – Bhaugolik Vichardharayen (Hindi) – Sahitya Bhawan Pub. Agra. Hussain Majid – Evolution of Geographical Thought (English And Hindi)Rawat Publication jaipur. Taylor. G. Geography in Twentieth Century; London.

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			9. Jagdish Singh - Bhaugolik Chintan ka Kram vikas (Hindi) Gyanodaya , Gorakhpur
=			
		Major Paper-I (Practical	Practical Geography
	6	Geography)	 a. Statistical Diagrams- Compound and Multiple Bar Diagram; Ring or Circle diagram; Simple and Polyline graph, Hyther - graph and Climograph. b. Geological Map :Identification of rock outcrops, bedding panes, determinants of dip and thickness- simple and folded.
			Recommended Books
			1. Dent B. D., 1999: Cartography: Thematic Map Design, (Vol. 1), McGraw Hill.
			2. Gupta K. K and Tyagi V. C., 1992: Working with Maps, Survey of India, DST, NewDelhi.
			3. Mishra R. P. and Ramesh A., 1989: Fundamentals of Cartography, Concept Publishing. 4. Robinson A., 1953: Elements of Cartography, John Wiley.
			5. Sharma J. P., 2010: <i>Prayogic Bhugol</i> , Rastogi Publishers.
			6. Singh R. L. and Singh R. P. B., 1999: <i>Elements of Practical Geography</i> , Kalyani Publishers
			7. Singh R. L., 1998: Prayogic Bhoogol Rooprekha, Kalyani Publications.
			8. Steers J. A., 1965: An Introduction to the Study of Map Projections, University of London.
Additional Course	4	Additional Cours	Geography of India Unit I
Course	7	e (Multidisciplinary)-	Minerals and power resources (iron ore, and coal); Multipurpose projects: Damodar
		II "	Valley,
			and Bhakhra Nangal; Irrigation; Major industries (iron and steel, cotton textile, and sugar). Unit II
			Meso-regions of India (Karnataka plateau, and chhota Nagpur plateau) and their characteristics;

Transport and communication; Trade: composition and recent changes.

Unit III

Economy – Agriculture (Rice, Wheat, Sugarcane, Tea, Cotton); Industries (Cotton Textile, Iron-Steel, Automobile); Modes of Transportation

Unit IV

Uttarakhad Geographical Setting-Physical Setting(Relief, Drainage, Population Structure, Resource, Uttarakhand - Forest, Minerals), Economy.

Recommended Books

- 1. Hussain M., 1992: Geography of India, Tata McGraw Hill Education.
- 2. Mamoria C. B., 1980: *Economic and Commercial Geography of India*, Shiva Lal Agarwala.
- 3. Miller F. P., Vandome A. F. and McBrewster J., 2009: Geography of India: Indo-Gangetic

Plain, Thar Desert, Major Rivers of India, Climate of India, Geology of India, Alpha script Publishing.

- 4. Nag P. and Sengupta S., 1992: Geography of India, Concept Publishing.
- 5. Pichamuthu C. S., 1967: Physical Geography of India, National Book Trust.
- 6. Sharma T. C. and Coutinho O., 1997: Economic and Commercial Geography of India, Vikas

Publishing.

- 7. Singh Gopal, 1976: A Geography of India, Atma Ram.
- 8. Spate O. H. K. and Learmonth A. T. A., 1967: India and Pakistan: A General and Regional

Geography, Methuen.

Skill	2	One	Regional Development and Planning with Special Reference to Uttarakhand
	2		Regional Development and Planning with Special Reference to Ottarakhand
Course		Skill/Vocationa	TI to I D C to a land to a functional Diagrams
		l Course-II	Unit-I Definition, need and types of regional Planning.
			Unit-II Delineation of Planning Region, Planning Regions of Uttarakhand
			Participatory, Micro Planning Survey Techniques and field study project report (Report of
			30 Pages should have at least 5 Maps, 10 Photographs and 5 Tables)
			Recommended Books
			1. Blij H. J. De, 1971: Geography: Regions and Concepts, John Wiley and Sons.
			2. Claval P.I, 1998: An Introduction to Regional Geography, Blackwell Publishers, Oxford
			and
			Massachusetts.
			3. Friedmann J. and Alonso W. (1975): Regional Policy - Readings in Theory and
			Applications,
			MIT Press, Massachusetts.
			4. Gore C. G., 1984: Regions in Question: Space, Development Theory and Regional Policy,
			Methuen, London.
			5. Gore C. G., Köhler G., Reich U-P. and Ziesemer T., 1996: Questioning Development;
			Essays Description Metapolis
			on the Theory, Policies and Practice of Development Intervention, Metropolis-
			Verlag, Marburg.
			6. Haynes J., 2008: Development Studies, Polity Short Introduction Series.
			7. Johnson E. A. J., 1970: The Organization of Space in Developing Countries, MIT Press,
			Massachusetts.
			8. Peet R., 1999: Theories of Development, The Guilford Press, New York.
			9. UNDP 2001-04: Human Development Report, Oxford University Press.
			10. World Bank 2001-05: World Development Report, Oxford University Press, New

		,	
IKS-1	2	1-Indian Knowledge	Compulsory for all U.G. students
		System (National)-II	
Total	20		
	credits		