UNIVERSITY OF DELHI

CNC-II/093/1(22)/2022-23/217
Dated: 07.10.2022

N O T I F I C A T I O N

Sub: Amendment to Ordinance V

[E.C Resolution No. 18-1/(18-1-9 & 18-1-10) dated 18.08.2022]

Following addition be made to Appendix-II-A to the Ordinance V (2-A) of the Ordinances of the University;

Add the following:

Syllabi of Semester-I of the Department of Education under Faculty of Education and Semester-I of Cluster Innovation Centre based on Under Graduate Curriculum Framework -2022 to be implemented from the Academic Year 2022-23.

DEPARTMENT OF EUCATION
BA (Prog.) with Education as Major
***Category* II**

(B.A Programme Courses for Undergraduate Programme of study with Education discipline as one of the Core Disciplines)

DISCIPLINE SPECIFIC CORE COURSE – 1 (DSC-1): Basic Concepts and Ideas in Education

Credit distribution, Eligibility and Prerequisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Basic Concepts and Ideas in Education DSC 1	4	3	1	-	Class XII Pass	NIL

Learning Objectives

The Learning Objectives of this course are as follows:

- This is a discipline course in education, which aims to provide the basics of education and the nature of education (Liberal).
- It establishes the interdisciplinary nature of education by acquainting the student with its interconnectedness with other disciplines: philosophy, psychology, sociology, economics and polity. It intends to clarify the significant concepts in education.
- The students will be able to know and understand how educational aims are framed.
- They will also be able to comprehend the linkages between social institutions and education. Social change and its relationship with education will be understood.
- The students will develop analytical and critical thinking based on the themes and issues in education in a philosophical and social context.

Learning outcomes

The Learning Outcomes of this course are as follows:

- The learners are expected to know the concept of education and its interconnections with other relevant disciplines and its nature.
- The learners are expected to understand various theoretical concepts in education.
- The learners are expected to understand how the aims of education are formulated and how they are influenced by various socio-cultural forces/ aspects.
- The learners will establish the importance of education for all human beings.
- The learners will develop critical thinking and analytical ability to evaluate written texts and formulate their response to reality.
- The learners will understand the role of ethics, morals and values in education.

SYLLABUS OF DSC- 1

Unit 1: Basic Ideas in Education (20 Hours)

- Education: Its meaning, processes, purpose and aims; its liberal and interdisciplinary nature

- Major concepts in Education: Schooling and Education, Teaching, Training, Learning, Indoctrination, and Propaganda.
- Epistemological basis of education: Knowledge, Belief, Inquiry, Reason
- Ethics, values and ideals

Unit 2: Understanding Education and Society (20 Hours)

- Education and Socialisation: Agencies of Socialisation—Home, Family, Community, School and Media.
- Culture and Education: Role of education in preservation, transformation, and promotion of Culture; culture and ideology.
- Constitutional Values: Equality, Freedom, Justice, Secularism, Human Rights
- Bases for formulating Aims of Education: With reference to the constitution and other socio-cultural forces in India.

Unit 3: Thinkers in Education (20 Hours)

Each thinker is to be studied with reference to their perspectives on education

- Sri Aurobindo
- J. Krishnamurti
- John Dewey
- J.J. Rousseau
- Paulo Freire

Practicum/ Suggested Projects / Assignments (Any Two)

- Read the Position Paper titled 'Aims of Education' (NCF 2005 or any recent position paper) and present your understanding.
- Beginning with the Preamble of the Constitution of India, focus on the ideas of Justice, Liberty, Equality, and Secularism and present your understanding of these concepts and how education can help to achieve them.
- Identify any one aim of education and study the current practices of any school to understand how this aim is being realised.
- A detailed study of one educational thinker concerning his ideas on the nature of the child, teacher, and school and their relevance and challenges in the contemporary context.
- Reflective critical essay on one's socialisation with reference to home, school, community and media.

- Interview school teacher(s) and discuss their understanding of the meaning of education.

Note: Based on the above, the teacher may design other relevant projects/ assignments

Essential/ Recommended Readings

- Barrow, R., & Milburn G. (1986) *A critical dictionary of educational concepts: An appraisal of selected ideas and issues in educational theory and practice*. New York. (Concepts: Education; Schooling; Teaching; Ethics; Indoctrination; Knowledge; Learning.)
- Dewey, J. (1916). *Democracy and Education*: *An introduction to the philosophy of education*. New York: MacMillan.
- Freire, P. (2005). *Pedagogy of the oppressed*. Continuum.
- Gore, M.S., Desai, I. P., & Chitnis S. (1967). *Papers in Sociology of Education*. NCERT: New Delhi. Ch 1 pp 1-18; Ch 2 pp33-51; Ch 3 pp 52-74; Ch 5 pp91-106,111-126; Ch 6 pp 133-141.
- Jarvis, P (edited) (2002). *The Theory and Practice of Teaching* (2nd ed) Ch 4 P 39-51; Ch 17 P 237-247.
- Krishnamurti, J. *On Education, Krishnamurti Foundation India*
- Kumar, K. (2004). *What Is Worth Teaching?* India: Orient Blackswan.
- Noddings, N. (1995). *Philosophy of Education*. Westview Press
- Peters, R.S. (1966) *Ethics and Education*, Routledge, p.23-45.
- Rousseau, J. J. (1817). *Emile* (Vol. 2). A. Belin.
- Salamatullah (1979) *Education in the Social Context*. NCERT Ch 1 P 1-8; Ch 2 P 10-12; Sec. 11- Introduction Ch 3 P #0-32, 35-36, 38-40; Ch 4 P 63-74; Ch 5 P 83-85; Ch 9 & 10 P 167-185; Ch 12 P 194-204.
- Schofield, H., *The Philosophy of Education—An Introduction*. Unit -1 The Concept 'Values' P 205-227; The Concept 'Culture' P 107-119.
- Titus H., Smith, M. & Nolan, Richard T. (1975) *Living Issues in Philosophy*. Part 1 P 25-44; Part 2 Chapter 6 P 102-111.

Hindi

- Kumar, K. (1993). *Raj, Samaj aur Shiksha*. New Delhi: Raj Kamal Prakashan.
- Mittal, M.L. (2012). *Shiksha ke Samajshastriya Aadhar*. Delhi: Pearson. Ch 1 P 1-9; Ch 3 P 20-28; Ch 4 P 33-42; Ch 5 P 46-52; Ch 9&10 P 82-91 & 96-111; Ch 11 P 116-119; Ch 14 P 145-151; Ch 18 P 193-199; Ch 19 P ; Ch 20 P 214-224; Ch 23 P 245-254; Ch 24 P 258-282.
- Pandeya, R. S. (1994). *Shiksha Darshan*. Vinod Pustak Mandir, Agra. Ch 2 P 26-34; Ch 3 P 59-61; Ch 4 75-88; Ch 22 P 396-424.

- Saluja, C. K. (2004) *Shiksha –Ek Vivechan*. Ravi Books (Whole Book)

Suggestive Readings

- Bhogle, S. (1981). Socialisation among different cultures. In Sinha, D. *Socialisation of the Indian Child*. New Delhi: Concept Publishing Co.
- Brint, S. (1998). *Schools and Societies*. California: Pine Forge Press. (Chapters 1 and 5)
- Brubacher, John S. (1969) *Modern Philosophies of Education*. McGraw Hills. 4th edition. Ch -1 P7-9; Ch 5 P95-107; Ch 6 P 109-130; Ch 11 P 221-245; Ch 13 P 278-281; Ch 14 P 297-305; Ch 16 P 362-364.
- Cohen, B. (1969). *Educational Thought- An Introduction.* Britain: MacMillan.
- Dewey, J. (1915). *The School and Society*. USA: The University of Chicago Press.
- Dhankar, R. (2010). *Education in Emerging Indian Society*. New Delhi: APH Publishing Corporation.
- Dubey, S.C. (2001). *Indian Society*. New Delhi: NBT.
- Hamm, C. M. (1999). *Philosophical Issues in Education- An Introduction*. New York: The Falmer Press
- Kumar, K. (2007). Education and Culture: India's Quest for a Secular Policy. In Kumar, K. and J. Oesterheld (Ed) *Education and Social Change in South Asia*. Hyderabad: Orient Longman
- Magee, J. B. (1971). Philosophical Analysis In Education, Harper and Row Publishers Ch 1; Ch 4; Ch 5; Ch 6 .
- Freire P. (1992). *Pedagogy of Hope*. Continuum, London
- Peters, R. S. (2010). *The Concept of Education* (Eds.). London: Routledge and Kegan Paul.
- Saluja, C. K. (2004). *Shiksa, Samaj aur Vikas*. New Delhi: Kanishka Publication.
- Shermis, S. S. (1967). *Philosophical Foundations of Education*. Van Nostrand Reinhold Ch 1 P 1-21; Ch 2 P 26-36; Ch 5 P 111-117; Ch 7 P 160-161; Ch 9 P 205-213, P 222- 225.
- Shukla, S., and Kumar, K. (1987). *Sociological Perspectives in Education*. US: South Asia Books.

Teaching Learning Process:

The course will be taught through interactive pedagogic methods, such as classroom discussion, debates, film discussions, critical media analysis, collaborative learning tasks which enhance reading comprehension of core writings in the area and innovative projects. Reflective expression and learning will be encouraged.

Assessment Method

The assessment will be formative in nature and will include student participation. Individual and group tasks and assignments will be given. Summative evaluation will be done through an end-semester examination.

Keywords

Education, Concepts, Ideas

DISCIPLINE SPECIFIC CORE COURSE (DSC-2): Education in Contemporary India

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Education in Contemporary India DSC 2	4	3	1	-	Class XII Pass	NIL

Learning Objectives

The Learning Objectives of this course are as follows:

- The course aims to acquaint students with modern education in contemporary India.
- It would familiarize them with key debates prevalent during the anti-colonial struggle and subsequent developments in post - independent India.
- The course will introduce education within the framework of constitutional principles and rights - based approach.

Learning outcomes

The Learning Outcomes of this course are as follows:

- The learners are expected to discuss the influence of colonialism on education and the changes that have unfolded.
- The learners will trace the modern education system in India and the expansion of women's education through the experiences of pioneering women.
- The learners will explain the alternatives posited by M.K. Gandhi and Rabindranath Tagore to colonial education.
- The learners will discuss the constitutional provisions relevant to education.
- The learners will exhibit an understanding of India's federal structure and democratic decision- making with reference to education.

SYLLABUS OF DSC-2

Unit 1: Colonialism and Modern Education (24 Hours)

- Modern education in India; Impact of Colonialism on traditional systems of education; Emergence of modern school system and universities
- Women and modern education: educational endeavors of Rokeya Sultana, Pandita Ramabai, Jyotiba and Savitribai Phule
- Aims and purpose of colonial education and alternative visions with reference to Nai Taleem of Gandhi and My school of Tagore

Unit 2: Going to school and college in India (16 Hours)

- Education and Development with reference to Human Development Index, Gender Development Index.
- Factors affecting access to different levels of education; the need for Right to Education.
- Challenges and issues in development of education: regional disparities, gender, religious, class and caste based variations in education based on an introduction to reading of data

Unit 3: Constitution and Education (20 Hours)

- Importance of Constitutional values and their relevance to education
- Provisions in the Constitution relevant to education: Acts and Amendments; religious minority and linguistic minority Rights, Rights against discrimination, Right to equality, and Right to Education
- Education and the role of Center and State: Union, State and Concurrent lists, Panchayati Raj and local bodies
- Role of Judiciary, Legislature and Executive in education with specific reference to RTE Act 2009 (21A) and other amendments

Suggested Projects/ Assignments: Any two

- Review of Swami and Friends by RK Narayan with reference to education in colonial times.
- Essay on Gandhi's ideas of education through handicrafts.
- Review of Jyotirao Phule's Ghulamgiri with reference to education of the caste oppressed.

- Reflective essays/ presentations on student's own schooling and educational experiences
- Preparing educational status reports based on reading of data tables done in class for specific social groups.
- Documenting educational testimonies of family members/migrant workers/ children living on the streets/ child workers/homeless people.
- Case study of the Unnikrishnan Judgement 1993.
- Essay on Ambedkar's idea of education for social transformation.

Note: On the basis of the above, the teacher may design his/her own relevant assignments and projects.

Essential/recommended readings

- *Constitution of India: Preamble, Provisions of the Constitution of India having a bearing on Education* retrieved from http://www.education.nic.in/constitutional.asp and http://education.nic.in/ NatPol.asp
- Ghosh S.C. (2009). *The History of Education in Modern India (1757-2007) - Third Edition.* Hyderabad: Orient Blackswan Private Limited. (Chapter 1- Introduction)
- Govinda, R and M, Bandyopadhyay. (2011). Access to Elementary Education: Analytical Overview (chapter 1) in R, Govinda, *Who Goes to School? Exploring Exclusion in Indian Education,* New Delhi: OUP.(for Disparities and access to elementary education: Issues of Class, gender, caste, region, religion, disability)
- Harriss, J. (2011). Education, Democracy and Development. In K N Panikkar and M Bhaskaran Nair (Eds.) *Emerging Trends in Higher Education in India: Concepts and Practices*.New Delhi: Pearson Education India. (pp3-11) Retrieved from http://www.swaraj.org/shikshantar/tagore_myschool.html
- Human Development Report retrieved from http://hdr.undp.org/en/reports/
- Kumar, K. (1991). *Political Agenda of Education: A Study of Colonialist and Nationalist ideas*. New Delhi, Sage Publications. Chapter 1 (Introduction: Dynamics of colonisation), Chapter 2 (Colonial Citizen as an Educational Ideal),
- Latest Selected Education Statistics, on MHRD website: http://www.education.nic.in

- *Buniyadi Shiksha, "The selected works of Gandhi*". *Vol. 6, The Voice of Truth* . Retrieved from http://www.mkgandhi.org/views_edu/chap02.htm.
- National Curriculum Framework (2005). New Delhi: NCERT. Chapter- 1 (for Constitutional values and the curriculum)
- What is RTE: A Handbook for Teachers (2017). New Delhi: NCERT. Chapter 1
- Raina, V. (2006), 'Where do children go after class VIII?', Seminar Volume 563 Retrieved from http://www.indiaseminar.com
- Tagore, R. (1933). *My School*. London: MacMillan retrieved from http://www.swaraj.org/shikshantar/tagore_myschool.html
- Chakravarti, U (2007), *Pandita Rama Bai : A life and a Time*. New Delhi: Critical Quest.
- रामपाल, अ (2008). शिक्षाकाअर्थऔरउद्देश्यहैमानवीयविकास, आजकेसवाल-शिक्षाऔरभूमंडलीकरण,नयीदिल्ली: शब्दसंघनप्रकाशन.

Suggestive readings

- Deshpande , G.P.,2012, Selected Writings of Jotirao Phule, Leftword Book
- Kumar, D., Bara, J., Khadria, N and Gayathri, R. (2013). *Education in Colonial India: Historical Insights*. Delhi, Manohar Books. (Introduction)
- Kumar, K. (1991). *Political Agenda of Education: A Study of Colonialist and Nationalist ideas*. New Delhi: Sage Publications. (Chapter 5- Pursuits of Equality, Chapter 7- Meanings of Progress)
- Kumar, K. (2007). Education and Culture: India's quest for a Secular Policy, In Kumar K and J Oesterheld (Eds.) *Education and Social Change in South Asia,* Hyderabad: Orient Longman.
- Kumar, K. (2008) 'Anusuchit Jatiyon aur Janjatiyon ka Shaekshik Anubhav' In Sureshchandra Shukla and Krishna Kumar (Eds.) *Shiksha ka Samajshastriye Sandarbh*. Delhi: Granth shipli (also available in English Sociological Perspectives in Education: A Reader)
- Natarajan, S. (2011). *A Gardener in the Wasteland: Jotiba Phule's Fight for Liberty*. New Delhi: Navayana Publishing
- Stalin, K. (2007). *India Untouched*. Drishti Media Collective (film).
- Vyam, D B., Natarajan, S. A. and Vyam, S. (2011). *Bhimayana: Experiences of Untouchability.* New Delhi: Navayana Publishing

Teaching Learning Process:

The course will be taught through interactive pedagogic methods, such as classroom discussion, debates, film discussions, critical media analysis, collaborative learning tasks which enhance reading comprehension of core writings in the area and innovative projects. Reflective expression and learning will be encouraged.

Assessment Method

Assessment will be formative in nature and will include student participation. Individual and group tasks and assignments will be given. Summative evaluation will be done through end- semester examination.

Key words

Education, Contemporary India

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

Category III

B.A. Programme Courses for Undergraduate Programme of study with Education discipline as one of the Core Disciplines as non-Major or Minor discipline)

DISCIPLINE SPECIFIC CORE COURSE – 1 (DSC-1): Basic Concepts and Ideas in Education

Credit distribution, Eligibility and Prerequisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Basic Concepts and Ideas in Education DSC 1	4	3	1	-	Class XII Pass	NIL

Learning Objectives

The Learning Objectives of this course are as follows:

- This is a discipline course in education, which aims to provide the basics of education and the nature of education (Liberal).
- It establishes the interdisciplinary nature of education by acquainting the student with its interconnectedness with other disciplines: philosophy, psychology, sociology, economics and polity. It intends to clarify the significant concepts in education.
- The students will be able to know and understand how educational aims are framed.
- They will also be able to comprehend the linkages between social institutions and education. Social change and its relationship with education will be understood.
- The students will develop analytical and critical thinking based on the themes and issues in education in a philosophical and social context.

Learning outcomes

The Learning Outcomes of this course are as follows:

- The learners are expected to know the concept of education and its interconnections with other relevant disciplines and its nature.
- The learners are expected to understand various theoretical concepts in education.
- The learners are expected to understand how the aims of education are formulated and how they are influenced by various socio-cultural forces/ aspects.
- The learners will establish the importance of education for all human beings.
- The learners will develop critical thinking and analytical ability to evaluate written texts and formulate their response to reality.
- The learners will understand the role of ethics, morals and values in education.

SYLLABUS OF DSC- 1

Unit 1: Basic Ideas in Education (20 Hours)

- Education: Its meaning, processes, purpose and aims; its liberal and interdisciplinary nature
- Major concepts in Education: Schooling and Education, Teaching, Training, Learning, Indoctrination, and Propaganda.
- Epistemological basis of education: Knowledge, Belief, Inquiry, Reason
- Ethics, values and ideals

Unit 2: Understanding Education and Society (20 Hours)

- Education and Socialisation: Agencies of Socialisation—Home, Family, Community, School and Media.
- Culture and Education: Role of education in preservation, transformation, and promotion of Culture; culture and ideology.
- Constitutional Values: Equality, Freedom, Justice, Secularism, Human Rights
- Bases for formulating Aims of Education: With reference to the constitution and other socio-cultural forces in India.

Unit 3: Thinkers in Education (20 Hours)

Each thinker is to be studied with reference to their perspectives on education

- Sri Aurobindo
- J. Krishnamurti
- John Dewey
- J.J. Rousseau
- Paulo Freire

Practicum/ Suggested Projects / Assignments (Any Two)

- Read the Position Paper titled 'Aims of Education' (NCF 2005 or any recent position paper) and present your understanding.
- Beginning with the Preamble of the Constitution of India, focus on the ideas of Justice, Liberty, Equality, and Secularism and present your understanding of these concepts and how education can help to achieve them.
- Identify any one aim of education and study the current practices of any school to understand how this aim is being realised.
- A detailed study of one educational thinker concerning his ideas on the nature of the child, teacher, and school and their relevance and challenges in the contemporary context.
- Reflective critical essay on one's socialisation with reference to home, school, community and media.
- Interview school teacher(s) and discuss their understanding of the meaning of education.

Note: Based on the above, the teacher may design other relevant projects/ assignments

Essential/ Recommended Readings

- Barrow, R., & Milburn G. (1986) *A critical dictionary of educational concepts: An appraisal of selected ideas and issues in educational theory and practice*. New York. (Concepts: Education; Schooling; Teaching; Ethics; Indoctrination; Knowledge; Learning.)
- Dewey, J. (1916). *Democracy and Education*: *An introduction to the philosophy of education*. New York: MacMillan.
- Freire, P. (2005). *Pedagogy of the oppressed*. Continuum.
- Gore, M.S., Desai, I. P., & Chitnis S. (1967). *Papers in Sociology of Education*. NCERT: New Delhi. Ch 1 pp 1-18; Ch 2 pp33-51; Ch 3 pp 52-74; Ch 5 pp91-106,111-126; Ch 6 pp 133-141.
- Jarvis, P (edited) (2002). *The Theory and Practice of Teaching* (2nd ed) Ch 4 P 39-51; Ch 17 P 237-247.
- Krishnamurti, J. *On Education, Krishnamurti Foundation India*

- Kumar, K. (2004). *What Is Worth Teaching?* India: Orient Blackswan.
- Noddings, N. (1995). *Philosophy of Education*. Westview Press
- Peters, R.S. (1966) *Ethics and Education*, Routledge, p.23-45.
- Rousseau, J. J. (1817). *Emile* (Vol. 2). A. Belin.
- Salamatullah (1979) *Education in the Social Context*. NCERT Ch 1 P 1-8; Ch 2 P 10-12; Sec. 11- Introduction Ch 3 P #0-32, 35-36, 38-40; Ch 4 P 63-74; Ch 5 P 83-85; Ch 9 & 10 P 167-185; Ch 12 P 194-204.
- Schofield, H., *The Philosophy of Education—An Introduction*. Unit -1 The Concept 'Values' P 205-227; The Concept 'Culture' P 107-119.
- Titus H., Smith, M. & Nolan, Richard T. (1975) *Living Issues in Philosophy*. Part 1 P 25-44; Part 2 Chapter 6 P 102-111.

Hindi

- Kumar, K. (1993). *Raj, Samaj aur Shiksha*. New Delhi: Raj Kamal Prakashan.
- Mittal, M.L. (2012). *Shiksha ke Samajshastriya Aadhar*. Delhi: Pearson. Ch 1 P 1-9; Ch 3 P 20-28; Ch 4 P 33-42; Ch 5 P 46-52; Ch 9&10 P 82-91 & 96-111; Ch 11 P 116-119; Ch 14 P 145-151; Ch 18 P 193-199; Ch 19 P ; Ch 20 P 214-224; Ch 23 P 245-254; Ch 24 P 258-282.
- Pandeya, R. S. (1994). *Shiksha Darshan*. Vinod Pustak Mandir, Agra. Ch 2 P 26-34; Ch 3 P 59-61; Ch 4 75-88; Ch 22 P 396-424.
- Saluja, C. K. (2004) *Shiksha –Ek Vivechan*. Ravi Books (Whole Book)

Suggestive Readings

- Bhogle, S. (1981). Socialisation among different cultures. In Sinha, D. *Socialisation of the Indian Child*. New Delhi: Concept Publishing Co.
- Brint, S. (1998). *Schools and Societies*. California: Pine Forge Press. (Chapters 1 and 5)
- Brubacher, John S. (1969) *Modern Philosophies of Education*. McGraw Hills. 4th edition. Ch -1 P7-9; Ch 5 P95-107; Ch 6 P 109-130; Ch 11 P 221-245; Ch 13 P 278-281; Ch 14 P 297-305; Ch 16 P 362-364.
- Cohen, B. (1969). *Educational Thought- An Introduction.* Britain: MacMillan.
- Dewey, J. (1915). *The School and Society*. USA: The University of Chicago Press.
- Dhankar, R. (2010). *Education in Emerging Indian Society*. New Delhi: APH Publishing Corporation.
- Dubey, S.C. (2001). *Indian Society*. New Delhi: NBT.
- Hamm, C. M. (1999). *Philosophical Issues in Education- An Introduction*. New York: The Falmer Press

- Kumar, K. (2007). Education and Culture: India's Quest for a Secular Policy. In Kumar, K. and J. Oesterheld (Ed) *Education and Social Change in South Asia*. Hyderabad: Orient Longman
- Magee, J. B. (1971). Philosophical Analysis In Education, Harper and Row Publishers Ch 1; Ch 4; Ch 5; Ch 6 .
- Freire P. (1992). *Pedagogy of Hope*. Continuum, London
- Peters, R. S. (2010). *The Concept of Education* (Eds.). London: Routledge and Kegan Paul.
- Saluja, C. K. (2004). *Shiksa, Samaj aur Vikas*. New Delhi: Kanishka Publication.
- Shermis, S. S. (1967). *Philosophical Foundations of Education*. Van Nostrand Reinhold Ch 1 P 1-21; Ch 2 P 26-36; Ch 5 P 111-117; Ch 7 P 160-161; Ch 9 P 205-213, P 222- 225.
- Shukla, S., and Kumar, K. (1987). *Sociological Perspectives in Education*. US: South Asia Books.

Teaching Learning Process:

The course will be taught through interactive pedagogic methods, such as classroom discussion, debates, film discussions, critical media analysis, collaborative learning tasks which enhance reading comprehension of core writings in the area and innovative projects. Reflective expression and learning will be encouraged.

Assessment Method

The assessment will be formative in nature and will include student participation. Individual and group tasks and assignments will be given. Summative evaluation will be done through an end-semester examination.

Keywords

Education, Concepts, Ideas

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

CLUSTER INNOVATION CENTRE (CIC)

Category I

B.Tech. (Information Technology and Mathematical Innovations) in four years)

DISCIPLINE SPECIFIC CORE COURSE -1 (DSC-1): Single and Multivariable Calculus

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Single and Multivariable Calculus, DSC-1	**04**	**3**	**0**	**1**	**Class XII pass**	**Mathematics till XII**

Learning Objectives

Calculus is the most powerful tool in mathematics with widespread applications. The goal of this course is for students to gain proficiency in calculus computation. The course builds up on the topics, namely limits and continuity, differentiation and integration. These topics will use to solve application problem in a variety of fields such as physics, biology, business and economics.

Learning outcomes

- A good understanding of basic concepts of limits, derivatives, continuity, asymptotes, sequence and series, integrals, vector valued functions, partial differentiation, multiple integrals, etc.
- Able to find points of discontinuity for functions and classify them and understand the consequences of the intermediate value theorem for continuous functions.
- Able to solve applied problems using basic concepts of calculus.
- Able to explain why calculus is valuable in daily life.
- Create a project using the fundamental knowledge and principle of differential and integral calculus that helps to provide a hands-on experience of the same.
- Able to plot and manipulate the curves appropriately to make various real-life models like studying the projectile motion in firecrackers and the flow of water in fountain.
- Create animations of given problems using MATHEMATICA software.

SYLLABUS OF DSC-1

UNIT – I (12 Hours)

Limits and continuity

Limits at infinity - Indeterminate forms - Special limits involving exponential and logarithmic functions – Asymptotes - Graphs of function and its derivatives - Optimization problems - Fluency in differentiation - Concavity and inflexion points - Sequences, infinite series including Taylor approximations, Power series

UNIT – II (12 Hours)

Integration

Parametric equations of curves, arc length and surface area-Vector valued functions, differentiation and integration of vector valued functions

UNIT – III (12 Hours)

Functions of several variables

Level curves and surfaces - Limits and continuity of functions of two and three real variables - Partial differentiation (two variables), partial derivative as a slope, partial derivative as a rate, Maxima and Minima

UNIT – IV (9 Hours)

Multiple Integrals

Line, surface and volume integrals - Applications of Green's, Stokes and Gauss's Theorem.

Practical component – 30 Hours

Engineering Kitchen Activity (Symbolic Mathematics Software) [Laboratory]

- Introduction of basic functions
- Plotting of graphs of functions and their derivatives
- Manipulating the parameters in a graph
- Fitting of a curve
- Parametric plot of curves (Eg. Trochoid, Cycloid, Epicycloid)
- Obtaining surfaces of revolution of curves
- Plotting functions of two variables and their level curves
- Graphical illustration of limits for functions of two variables
- Innovation Project

Essential/recommended readings

1. *Calculus*, T. M. Apostol, Volumes 1 and 2, Wiley Eastern, 1980.
2. *Calculus - Single and Multivariable*, Hughes-Hallett et al., John-Wiley and Sons, 2003.
3. *Calculus*, James Stewart, Thomson, 2003.
4. *Calculus and Analytic Geometry*, G. B. Thomas and R. L. Finney, Addison-Wesley, 1998.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

DISCIPLINE SPECIFIC CORE COURSE – 2 (DSC-2): Discrete Mathematics and its Applications

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Discrete Mathematics and its Applications, DSC-2	04	3	1	0	Class XII pass	Mathematics till XII

Learning Objectives

The objective of this paper is to familiarize the student with basic concepts of logic and combinatorics. The aim of the paper is also to conceptualize the terminologies of graph theory, isomorphism, paths, cycles, circuits, graph coloring in various physical situations. Throughout this paper, students will be encouraged to develop their own algorithms and to analyze their computational complexities. Further, students may develop codes in any of the programming language for implementation of various algorithms.

Learning outcomes

After completing this course, student should be able to;

- Familarize with basic concepts of logic
- Understand combinatorics principles: sets, permutations, combinations, recurrence relations etc.
- Conceptualize basic terminologies of graph theory, isomorphism, connectivity etc
- Understand concepts of paths, cycles, circuits and their applications in various fields
- Learn different shortest path algorithms, their computational complexities, implementation & programming
- Understand travelling salesman problem and its importance
- Understand the concept of graph coloring with real applications, planar graphs and algorithms
- Conceptualize trees, spanning trees and algorithms

SYLLABUS OF DSC-2

UNIT – I (16 Hours)

Logic and Combinatorics

Propositional Logic; Truth tables; Conditional statements; Logic and Bit operations; Propositional and logical equivalences; De Morgan's law; Applications of propositional logic. Sets, counting of sets - Permutation - Combination - Inclusion - exclusion - Generating functions - Recurrence relations

UNIT – II (16 Hours)

Graph Theory

Introduction - Basic terminologies - Graph representation - Euler relation Isomorphism- Connectivity - Cut vertices and edges - Covering - Euler and Hamilton paths and circuits

UNIT – III (16 Hours)

Applications of Graph Theory

Shortest Path Algorithms: Dijkstra's algorithm -Travelling salesman problem - Scheduling problems - Matching - Independent sets - Coloring - *Planar graph*: idea of region - Euler formula - Kuratowski theorem and application

UNIT – IV (12 Hours)

Tree

Basic terminology, traversal, Prefix code - Idea of data compression: Huffman code - Spanning tree - Minimum spanning tree: Prim's and Kruskal method.

Practical component – NIL

Essential/recommended readings

1. *Discrete and Combinatorial Mathematics,* Ralph Grimaldi, International Edition, 2003.
2. *Discrete Mathematical Structures,* Bernard Kolman, Robert Busby, Sharon Ross, International Edition, 2008.
3. *Discrete Mathematics and Its Applications,* K. H. Rosen, McGraw-Hill, 2008.

DISCIPLINE SPECIFIC CORE COURSE– 3 (DSC-3): Programming Fundamentals

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Programming Fundamentals, DSC-3	04	3	0	1	Class XII pass	Mathematics till XII

Learning Objectives

This course aims at providing the fundamental knowledge of programming. This course trains students to design code, write programs to instruct computer systems. In addition, the course objective is to give an understanding of real-world data, tasks and their representation in terms of programs.

Learning outcomes

After completing this course, students will have:

- understanding of Programming Concepts
- understanding of real-world applications development through programs
- understanding of independent data and collection of data and their organization

- understanding of memory allocation on runtime
- understanding of the program life cycle
- understanding of testing, coding guidelines, debugging and integration.

SYLLABUS OF DSC-3

UNIT – I (12 Hours)

Philosophy of programming and algorithm

Algorithm and its characteristics-Programming philosophy-Problem solving process-Programming language concepts-Program life cycle

UNIT – II (12 Hours)

Data representation and storage

Data definition structures such as types-constants-variables-Expressions such as arithmetic-logical-Precedence and associative rules-Control Structures-Functions-Variable scope

UNIT – III (9 Hours)

Multiple data item and processing

Preprocessing - Arrays, Structures – Strings - Pointers - Memory allocation

UNIT – IV (12 Hours)

Permanent storage and information handling

Files handling – Coding guidelines - testing & debugging-System testing & Integration

Practical component – 30 Hours

Engineering Kitchen Activity [Laboratory]

- User input and output programs having mathematical operations
- Pattern printing programs
- Programs for operators implementation
- Programs to implement function
- Programs to implement collection such as Array and String
- Programs to implement structure
- Innovation Project

Essential/recommended readings

1. *C++: The Complete Reference, Fourth Edition*, Herbertz Schildt, McGraw Hill, 2015.
2. *The C++ Programming Language, 4th Edition*, Bjarne Stroustrup, Addison-Wesley, 2013.
3. *Computer Science: A Structured Approach Using C++ 2nd Edition*, Behrouz A. Forouzan, Richard F. Gilberg, 2004
4. *The C Programming Language (Ansi C Version)*, Brian W. Kernighan, Dennis M. Ritchie, 1990.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

COMMON POOL OF GENERIC ELECTIVES (GE) COURSES

NOTE: The core papers offered in the B.Tech. Course at CIC are Mathematics and Information Technology. Therefore, the students will choose GE offered by Physics and Chemistry faculty members of CIC.

GENERIC ELECTIVES (GE-1): Engineering Physics I

Credit distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course	Department offering the course
		Lecture	Tutorial	Practical/ Practice			
Engineering Physics I, GE-1	4	2	0	2	Class XII pass	Science Till Class X	Physics Faculty of CIC

Learning Objectives

This interactive learning module intends to provide basic theoretical understanding of Classical Mechanics with special emphasis on learning how these theoretical concepts are applied in designing mechanical and energy efficient systems etc.

Learning outcomes

- Understanding of physics principles in machines.
- Ability to conceptualize and build machines for real life use.
- Reverse engineering of mechanical devices and redesigning of such objects.
- Practical hands-on skills and understanding of simple engineering concepts derived from Mechanics.

SYLLABUS OF GE-1

UNIT – I (8 Hours)

Classical mechanics at work

Newtonian Mechanics (Kinematics & Dynamics) - Classical Mechanics at work - deconstructing mechanical systems - Universal Gravitation

UNIT – II (8 Hours)

Oscillation & Rotation

Oscillations - Inertial & Non-inertial frames - Central force motion - Understanding rotational dynamics

UNIT – III (8 Hours)

Machines

Efficiency and mechanical advantage in simple and complex machines: Levers, Pulley, Wheel & Axles, Gear systems, Hydraulic systems

UNIT – IV (6 Hours)

Energy Applications

Forms of energy and conversion between different forms of energy.

Practical component – 60 Hours

Engineering Kitchen Activities [Laboratory]

- Concepts of measurement, error, precision, accuracy. Concept of scale. Understanding Measuring Instruments
- Understanding oscillation using simple and compound pendulums
- Mechanics system with 850 Universal Interface – understanding Newtonian Dynamics
- Measurement of Moment of inertia from rotational dynamics
- Roller coaster dynamics – computer simulation and physical verification
- Coupled pendulum motion – using webcam and image analysis
- Ballistic Pendulum
- Understanding physics of complex machines – one implementation of "Tod-Phod-Jod" concept.
- Visualization in 3D and understand how things work – Building a CAD model in 3D to trace the flow of power, energy, information and material.
- Innovation project – designing instruments, machines, prototypes, applets

Essential/recommended readings

1. *Classical Mechanics*. Herbert Goldstein, Pearson Education, 2011.
2. *A Textbook of Machine Design*. R. S. Khurmi, and J. K. Gupta, S. Chand Publishing, 2005.

GENERIC ELECTIVES (GE-2): Engineering Chemistry I

Credit distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course	Department offering the course
		Lecture	Tutorial	Practical/ Practice			
Engineering Chemistry I, GE-2	04	2	0	2	Class XII pass	Science Till Class X	Chemistry Faculty of CIC

Learning Objectives

This course is designed in such way, so that it provides a flavor of interesting, innovative, programmable and multifunctional materials of chemistry. Students will be exposed to a lot of applications of materials from various walks of our day to day life. Different forms of materials (Biomolecules, drugs, nanomaterials, environment friendly materials etc.) will be discussed at length. Innovative applications of these extremely important materials for drug development, electronic material development, biosensing (like glucose monitoring / disease detection) and environmental remediation etc. will be elaborated, so that students become more aware of the useful materials, which may further be designed, developed and utilized by society as a whole.

Learning outcomes

- Students will be exposed to important aspects related to biomolecules, which are one of the most important constituents of our life.
- Students will get basic knowledge about programmable and multifunctional materials, which are being used in various walks of life nowadays.
- Students will be aware of the basic and advanced forms of nanomaterials and their applications in different fields.
- Importance of green chemistry will be understood through related examples.
- Students will be able to understand the importance of designing drugs and their development through various concepts of marketing.

SYLLABUS OF GE-2

UNIT – I (8 Hours)

Programmable and Multifunctional Materials

Basic features and properties of Biomolecules (Carbohydrates, Proteins, Nucleic Acids and Fats) along with their applications in our day to day life as food, medicine, drugs, enzymes for catalysis etc.; Programmable and Multifunctional DNA-Based Materials for various Applications; Chemical and Biological sensors.

UNIT – II (8 Hours)

Nanochemistry and Nanoscience in our day to day life

Synthesis of Nanoparticles (Green and Chemical Methods; Bottom up and Bottom down approach), Various kinds of nanomaterials and nanostructures (Nanoparticles, Nanoclusters, Nanorods, Quantum dots, Nanotubes, Nanorobots etc.) and their applications in various fields like biomedical, electronics, and environment etc.

UNIT – III (8 Hours)

Green Chemistry and it's applications in various fields

Green Chemistry, it's principles and applications in day to day life, Twelve Principles of Green Chemistry; Use of green chemistry for producing environmentally benign chemical products for varied applications.

UNIT – IV (6 Hours)

Designing of Drugs and their development

Discovery and designing of drugs (from concept to marketing); Organic therapeutic agents used in various diseases, their management and economics in market.

Practical component –60 Hours

1. Three-dimensional modelling of DNA structure using various open access softwares available in public domain; Molecular Dynamics simulation of DNA (very simple and rudimentary coarse grained (CG) models, where DNA can be simulated as rods and proteins as ovoids/ spheres)
2. Understanding of principle, designing, fabrication and application of a nano-biosensor (Examples like glucose biosensors or diagnostic kits for COVID-19 etc. can be studied at length).
3. Simulation of a single nano-particle for understanding it's physical and chemical properties in solution
4. Practical assignments on computer-aided drug design/ In-silico drug designing using databases (like Pubchem, zinc database, drug bank etc.), ligand designing softwares, 2D and 3D structure making open access softwares like chem-draw, chimera, pymol etc. and ligand-target interaction (using various molecular docking softwares).

Essential/recommended readings

1. DNA Beyond Genes: From Data Storage and Computing to Nanobots, Nanomedicine, and Nanoelectronics by Vadim V. Demidov
2. Templated DNA Nanotechnology Functional DNA Nanoarchitectonics, 2019, by Govindraju, T.
3. DNA: The Secret of Life by James Watson
4. Structural DNA Nanotechnology by Nedrian Seeman
5. Nanotechnology: Importance and Applications, January 2019, by M.H. Fulekar
6. Scalable Green Chemistry: Case Studies from the Pharmaceutical Industry, by Stefan Koenig

BA (Hons.) Humanities & Social Sciences

Category II

(UG Courses for Undergraduate Programme of study with Humanities & Social Sciences discipline as one of the Core Disciplines)

DISCIPLINE SPECIFIC CORE COURSE -1 (DSC-01) –: Humanities & Social Sciences: Concepts & Scope

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Humanities & Social Sciences: Concepts & Scope (DSC-01)	**4**	**3**	**1**	**0**	**Class XII pass**	**Nil**

Learning Objectives

The Learning Objectives of this course are as follows:

- Students will be exposed to fundamental and methodological issues in Humanities & Social Sciences.
- Students will be introduced to the expanse of the field of Humanities andSocial Sciences.

Learning Outcomes

The Learning Outcomes of this course are as follows:

- The students will be able to appreciate the concepts of multidisciplinarity, interdisciplinarity and transdisciplinarity.

- The students will develop critical thinking with respect to identifying interlinkages between various disciplines of social sciences and humanities.
- The students will be able to apply a variety of disciplines to find a solution to social problems.

SYLLABUS OF DSC-1

UNIT – I: Concepts and Scope (16 Hours)

- Understanding Humanities & Social Sciences
- Approaches to studying Humanities & Social Sciences
- Emergence & growth of Humanities and Social-sciences
- Multidisciplinarity, interdisciplinarity & transdisciplinarity – scope &impediments
- Knowledge creation- Subjectivity versus Objectivity

UNIT – II: Humanities & Social Sciences, perspectives of Cultural Studies

(16 Hours)

- Cultural Studies – Language and cultural studies
- Meaning formation and meaning creation
- Culture and identity; multiculturalism

UNIT – III: Understanding Religion (12 Hours)

- Religion, culture & society – construction of religion
- Religion as an institution
- Religion & Secularism

UNIT – IV: Human Rights (16 Hours)

- Concept of Human Rights; universalism vs relativism
- Universal Declaration of Human Rights 1948; Constitution of India (Part III-IV);Protection of Human Rights Act 1993
- Rights of Vulnerable Groups (children, women, elderly, PwD, other marginalised population)

Suggestive readings

- Allen F. Repko, William H. Newel & Rick Szostak (2012). Case Studies in Interdisciplinary Research. Sage Publications.
- Allen F. Repko (2008). Interdisciplinary Research: Process and Theory.

- Dennis J. Sporre (2011). Perceiving the Arts: An Introduction to the Humanities, 10th Edition.
- Frank J. Zulke & Jacqueline P. Kirley (2002). Through the Eyes of SocialSciences
  (6th ed). Waveland Press
- Hunt, E. F. & Colander, D. C. (2016). Social science: An introduction to thestudy of
  society (14th ed.). Boston: Pearson/Allyn and Bacon.
- Richard Paul Janaro & Thelma C. Altshuler (2011). The Art of Being Human: Humanities as a Technique for Living Person. Pearson Publication.
- Alvin Gouldner- coming crises of western sociology – last chapter is on reflexivity

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

DISCIPLINE SPECIFIC CORE COURSE – 2 (DSC-02): Technology and Society

Credit distribution, Eligibility and Prerequisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Technology and Society (DSC-02)	**4**	**3**	**1**	**0**	**Class XII pass**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- To analyse the fundamental questions, concepts and development of technology.
- To explore the way technology works to shape human experience and wellbeing.
- To acquire the critical understanding of ethical and social implications of scienceand technology.

Learning Outcomes

The Learning Outcomes of this course are as follows:

- Students will be acquainted with the basic knowledge of the development oftechnology over time.
- Students will acquire the knowledge of technology society relationship.
- Students will be skilled to comment on the practical ethics in various aspects oftechnology-society interaction.

SYLLABUS OF DSC- 2

UNIT – I Concept and History of Technology (16 Hours)

- Meaning, Concept and Nature of Technology
- History of Science & Technology
- Technological Process - Invention, Innovation and Diffusion
- Technological Development and Progress
- Approaches to Technology
- Limits of Science & Technology

UNIT – II Technology and Social Change (12 Hours)

- Human-Technology Relationship
- Technology and Social Change
- Gender, Science and Technology
- Technology and Inequality
- Technology & Human Well-being
- Technology and Environmental Change

UNIT – III Philosophical and Ethical Implications of Technology (16 Hours)

- Philosophy of Technology - Humanities & Analytical Philosophies ofTechnology
- Technoethics: History and Development
- Current Issues: Cybercrimes, Privacy, Citizen Journalism
- Emerging Issues: Artificial Intelligence, Bioinformatics, Genetic Engineering,Nanotechnology,
- Virtual Worlds and Metaverse

UNIT – IV Alternate and Responsible Technologies (16 Hours)

- Technology and the Future of Humanity
- Technology for Sustainable Energy and Ecology
- Technology Policies
- Laws and Regulations

Suggestive readings (if any)

• Albert Borgmann. Technology and the Character of Contemporary Life. University ofChicago Press, 1984

• Andrew Feenberg. Questioning Technology. Routledge, 1999

• Bryan Bunch. The History of Science and Technology. Houghton Mifflin Company,2004

• James Smith. Science and Technology for Development: Development Matters.

ZedBooks, 2009.
• Don Ihde. Ironic Technics. Automatic Press, 2008
• Jacques Ellul. The Technological Society. Vintage Books, 1904
• Neil Postman. Technopoly: The Surrender of Culture to Technology. Vintage Books,1993
• Nick Bostrom & Milan M. Cirkovic. Global Catastrophic Risks. Oxford UniversityPress, 2008
• Noah Yuval Harari. Homo Deus: A Brief History of Tomorrow. Vintage, 2016
• R.V.G. Menon. Technology and Society. Pearson, 2011
• Rocci Luppicini. Technoethics and the Evolving Knowledge Society. InformationScience Reference, 2010
• Rohan Dsouza. Environment, Technology and Development. Orient Blackswan, 2012.
• Sven Ove Hansson. The Ethics of Technology: Methods and Approaches. Rowman &Littlefield International, 2017.
• Val Dusek. Philosophy of Technology: An Introduction. Blackwell Publishing, 2006

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

DISCIPLINE SPECIFIC CORE COURSE– 3 (DSC-03): Qualitative and Quantitative Social Inquiry

Credit distribution, Eligibility and Prerequisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Qualitative and Quantitative Social Inquiry (DSC-03)	**4**	**3**	**1**	**0**	**Class XII pass**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- To introduce students to the fundamentals of social science inquiry.
- To acquaint students with knowledge on undergraduate research.

Learning Outcomes

The Learning Outcomes of this course are as follows:

- Students will be able to examine issues for research in Humanities & Social Sciences.

- Students will acquire basic skills of research.
- Students will acquire skills of scientific communication.

SYLLABUS OF DSC- 03

UNIT – I: Examining issues in Humanities & Social Sciences (12 Hours)

Identifying areas to examine; sources of idea generation; arriving at an idea; social examination and ethical concerns; drafting of research project/proposal.

UNIT – II: Using data in social inquiry (16 Hours)

Descriptive and inferential statistics; Quantitative and qualitative statistical variables; Introduction to spreadsheet; Graphical presentation of data through frequency curve, histogram, bar graphs and pie chart.

UNIT – III: Collecting and analysing data (16 Hours)

Identification of appropriate sample in social inquiry; Understanding the need of a proper questionnaire to collect primary data; Constructing a questionnaire; Analysingthe responses of a questionnaire graphically.

UNIT – IV: Presenting findings (16 Hours)

Discussing quantitative and qualitative findings; Report writing; Communicating findings - poster presentation, academic writing, seminar presentation, popular writing.

Suggestive readings (if any)

1. *Statistics for the Social Science ,* R. Mark Sirkin, Sage Publishing, 2005.
2. *Applied Statistics for Social and Management Science,* Abdul Qauder Miah,Springer, 2016.
3. *Statistics Without Tears: An Introduction for Non-Mathematicain,* Derek Rowntree, Penguin Mathematics, 2018.
4. Few, Stephen (2012). *Show Me the Numbers. Designing Tables and Graphs toEnlighten* (Second Edition). Analytics Press.
5. Kieran Healey (2018). *Data Visualization: A Practical Introduction*
6. Gary King, Robert Keohane and Sidney Verba (1994). *Designing Social Inquiry:Scientific Inference in Qualitative Research.*

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

COMMON POOL OF GENERIC ELECTIVES (GE) COURSES

GENERIC ELECTIVES (GE-01A): Fundamentals of Cognition and Emotions

Credit distribution, Eligibility and Pre-requisites of the Course

Course title &Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
Fundamentals of Cognition and Emotions (GE-01A)	4	3	1	0	Class XII pass	Nil

Learning Objectives

The Learning Objectives of this course are as follows:

- The course is aimed at giving students a basic understanding of human behaviourand factors determining individual differences.
- The course will introduce students to the impact of culture on human behaviour.
- The course is aimed at strengthening critical executive function skills in students.

Learning Outcomes

The Learning Outcomes of this course are as follows:

- Students will develop insight on how behaviour functions and what influencesbehaviour.
- Students will develop more effective problem solving behaviour and decisionmaking skills.
- Students will be able to negotiate the complexities of emotional development.

SYLLABUS OF GE-01A

UNIT – I: What is Human Behaviour? (16 Hours)

- Defining Human Behaviour; Behaviour and Cognition, Behaviour and Affectand Behaviour and Action

- Genes, Evolution and Behaviour
- Measuring Human Behaviour
- Complexities of defining Human Behaviour
- Consciousness and Conscious Experience

UNIT – II: Learning and Behaviour (12 Hours)

- Theories of Learning
- Culture, Learning and Behaviour

UNIT – III: Language and Thinking (16 Hours)

- Functions, Properties and Production of Language
- Why do we think? Problem Solving & Decision Making

UNIT – IV: Emotions and Behaviour (16 Hours)

- Characteristics of emotions - biology, cognition, affect & action
- Theories of Emotions
- Assessing emotions
- Culture and emotions

Essential/recommended readings

- Baron, R. & Misra.G. (2013). Psychology. New Delhi: Pearson.
- Cacioppo (2013). Discovering Psychology: The Science Of Mind, 1st Edition.USA: Cengage Learning.
- Ciccarelli, S. K., & Meyer, G. E. (2010). Psychology: South Asian Edition. NewDelhi: Pearson Education.
- Passer, M.W. & Smith, R.E. (2010). Psychology: The science of mind and Behaviour. New Delhi: Tata McGraw-Hill.
- Kalat, J. W. (2011). Introduction to Psychology (9th Ed). USA: Cengage Learning

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

GENERIC ELECTIVES (GE-01B): Fundamentals of Tourism

Credit distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course	Department offering the course
		Lecture	Tutorial	Practical/ Practice			
Fundamentals of Tourism (GE-01B)	4	3	1	0	Class XII Pass	Nil	Faculty of History of CIC

Learning Objectives

The Learning Objectives of this course are as follows:

- To acquaint students with the basics of tourism industry.
- To expose students to the wealth of natural and cultural tourism resources of India.
- To encourage students to find innovative ways for the designing and promotion ofsustainable tourism.

Learning Outcomes

The Learning Outcomes of this course are as follows:

- Students will be able to appreciate the relevance and role of tourism.
- Students will gain awareness of the rich natural and cultural wealth of India.
- Students will be skilled to design new tourism products to tap the untappedtourism capacity of the country.

SYLLABUS OF GE-01B

UNIT – I: Understanding Tourism (16 Hours)

Definitions and Concept of Tourism; History and Development; Forms and Types ofTourism; Tourism Purposes and Motivations

UNIT – II: Tourism Resources and Products (16 Hours)

A's of Tourism; Characteristics and Types of Tourism Products; Natural and CulturalTourism Products; Tourism Resources and Products of India

UNIT – III: Tourism Impacts (12 Hours)

Economic Impacts; Socio-cultural and Political Impacts; Environmental Impacts

UNIT – IV: Towards Sustainable Tourism Practices (16 Hours)

Principles and Dimensions of Sustainable Tourism; Tourism Planning and Policies; New Tourism Policy of India; Sustainable Entrepreneurship in Tourism

Practical component (if any) - NIL

Essential/recommended Readings

- Michael Luck, Peter Robinson, and Stephen L. J. Smith (2013). Tourism, CABI Publishing
- Howell, David W. (1989). Passport: An Introduction to the Travel and Tourism, Ohio.
- WTO (2011). Handbook on Tourism Product Development
- Chopra, Suhita. (1991). Tourism Development in India, Ashish Publishing House,New Delhi.
- Ministry of Tourism, Govt. of India. India Tourism Statistics. 2014
- IGNOU Material for Tourism Studies (TS-1, TS-3, TS-6)
- Ratten, V. et.al. (2020), Tourism Innovation: Technology, Sustainability and Creativity, Routledge
- Eric Zeulow (2015). A History of Modern Tourism. Red Globe Press

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

GENERIC ELECTIVES (GE-01C): Communication: Concepts and Processes

Credit distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course	Department offering the Course
		Lecture	Tutorial	Practical/ Practice			
Communication: Concepts and Processes (GE-01C)	4	3	1	0	Class XII Pass	Nil	Faculty of Media & Communication of CIC

Learning Objectives

The Learning Objectives of this course are as follows:

- To help students understand the relation between thought, language and communication.
- To encourage students to identify the construction and deconstruction of meaning in the process of communication.
- To motivate students to recognise the importance of different elements of a communication process.
- To let students discover and employ different forms of communication.

Learning Outcomes

The Learning Outcomes of this course are as follows:

- The students will be able to identify and appreciate the nature of the relationshipbetween thought, language and communication.
- The students will be able to critically engage with the construction and deconstruction of meaning in the process of communication.
- The students will be able to apply different forms of communication in theireveryday personal and professional context.

SYLLABUS OF GE-01C

UNIT – I: Thought and Language (16 Hours)

Thought and cognitive process of language
Universal Grammar and basic structure of communication Language as a system of signs

UNIT – II: Interpretation, Language and Communication (12 Hours)

Human thought process and the construction of meaning Deconstruction of meaning
Basic argumentation and its implications

UNIT – III: Elements and Process of Communication (16 Hours)

Source, Message, Sender, Receiver, Context, Environment
Noise - Linguistic, Geographical, Psychological, Cultural, Ideological

UNIT – IV Forms of Communication (16 Hours)

Verbal and Non-verbal communication
Intrapersonal communication
Interpersonal communication
Group communication
Mass Communication

Practical component (if any) - NIL

Essential/recommended readings -

NIL

Suggestive readings

- Vakyapadiya by K A Subramania Iyer
- Syntactic Structures by Noam Chomsky
- General Linguistics by Ferdinand de Saussure

- Levi Straus, Tristes Trotiques
- The death of the Author- Ronald Barth
- Of Grammatology by Jacque Derrida
- Media and Communication by Paddy Scannel
- Communication of Innovations: A Journey with Ev Rogers Edited by ArvindSinghal and James W Dearing
- Nonverbal Communication: An Applied Approach by Jonathan M Bowman
- Communication in Everyday Life: The Basic Course Edition With Public Speaking

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

REGISTRAR