DOCTOR OF PHILOSOPHY (PH.D.)

(S A N S K R I T)

FULL TIME PH.D. PROGRAMME

REVISED AS PER UNIVERSITY OF DELHI RESEARCH ORDINANCE

RULES, REGULATIONS AND COURSE CONTENTS

DEPARTMENT OF SANSKRIT
FACULTY OF ARTS
UNIVERSITY OF DELHI
DELHI-110007

Revised in Jan-2026 as per University of Delhi Research Ordinance

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DOCTOR OF PHILOSOPHY (PH.D.)
FULL TIME PROGRAMME

AFFILIATION

The proposed Programme for North Campus shall be governed by the Department of Sanskrit, Faculty of Arts, University of Delhi, Delhi-110007.

PROGRAMME STRUCTURE

The Ph.D. coursework must be completed by the research scholar within one year from the date of admission. A research scholar has to complete 4 courses offered by the department. Course 1 and 4 contain 4 credits and course 2 and 3 contain 2 credits; a student will obtain total 12 credits through the 4 courses.

1. All research scholars admitted to Ph.D. Programme shall be required to complete the coursework with in initial l one or two semesters.
2. If a research scholar fails to qualify the coursework, he/she may be allowed to reappear only once, within six months of the declaration of result. If the result is still found unsatisfactory. The DRC may recommend cancellation of his/her registration. This may be reported to the Board of Research Studies in case of Ph.D. scholars.
3. The research scholars shall not be allowed to take up any assignment outside the University during the coursework.
4. Research scholars already holding M.Phil. Degree or equivalent M.Phil. Degree (equivalence to be determined by DRC) and admitted to the Ph.D. programme, or those who have already completed the coursework in M .Phil. of University of Delhi and have been permitted to proceed to the Ph.D. programme, may be exempted by the DRC from the Ph.D. coursework. All other research scholars admitted to the Ph.D. programme shall be required to complete the Ph.D. coursework prescribed by the Department.

There are two types of courses for Ph.D.

1. **Core Course (CC):** This is compulsory course for the Ph.D. (Sanskrit). Department offers three (3) Core courses to fulfill the coursework requirements.
2. **Elective Course (EC):** These are elective courses where research scholars choose any one (1) courses as suggested by research advisory board of the particular scholar. Department offers 11 elective courses in various specialized fields of Sanskrit studies.
   The Research Advisory Committee of the research scholar will identify the course(s) that he/she may have to do as coursework from the pool of the courses offered by the department.
   Each scholar has to be opted four courses.

ATTENDENCE

Research scholars shall be required to attend lectures (coursework) and participate in seminars arranged in the Department during the programme. The minimum percentage of lectures to be attended during the coursework will be 75% of the lectures delivered in all courses individually.

SCHEME OF EXAMINATIONS

1. The medium of instruction and examination shall be either English, or Hindi, or Sanskrit.
2. Examinations shall be conducted at the end of each Semester as per the Academic Calendar notified by the University of Delhi.

3. The system of evaluation shall be as follows:
   3.1 Each course will carry 100 marks.
   3.2 The duration of written examination for each paper shall be three hours.

PASS PERCENTAGE

A Ph.D. scholar has to obtain a minimum of 55% of marks or its equivalent grade in the UGC 7-point scale (or an equivalent grade/CGPA in a point scale wherever grading system is followed) in the course work in order to be eligible to continue in the programme and submit the thesis.

Compulsory Course (CC)

CC101: Advance Research Methodology

		Total Marks 100
[A]	**Prescribed Course:**	**Credits: 04**
	Unit I: Advanced Theoretical Foundations and Research Design Unit II: Survey of Literature Unit III: Research Formulation Unit IV : Research Writing and Presentation	
[B]	**Course Objectives:**	
	This paper intends to provide in-depth exposure to advanced theories, approaches, and techniques in research methodology specifically tailored for Sanskrit studies. The aim is to enable students to engage critically with both classical and contemporary methods, equipping them to design innovative projects with academic rigor. Students will learn how to identify viable research problems, formulate research hypotheses, and construct systematic research frameworks. They will be trained to handle diverse primary and secondary sources, including unpublished manuscripts, and apply advanced textual criticism and philological methods. The curriculum will introduce digital research tools, international standards for transliteration such as IAST, and best practices for managing research data and metadata. Emphasis will also be placed on research ethics, plagiarism prevention, intellectual property rights, patent processes, and open-access publishing. By exploring the global landscape of Sanskrit research (including Scopus, Web of Science, and UGC-CARE), learners will gain the skills to navigate academic publishing, build professional research profiles, and present findings professionally through theses, research papers, and conference presentations.	
[C]	**Learning Outcomes:** Upon completion of this course, students will be able to: • Upon successful completion, students will be able to independently identify, conceptualize, and execute research projects of publishable quality in Sanskrit studies. • They will demonstrate the ability to critically review literature, construct and test hypotheses, and use advanced textual criticism to edit and interpret primary sources. • Graduates will master the use of digital research tools for manuscript digitization, database searches, and computational analysis. • They will be able to prepare research proposals, theses, and articles in accordance with international academic standards, utilizing proper transliteration, bibliographic citation, and digital references. • The course will ensure that students understand research ethics, copyright, and patent norms applicable to scholarly work. • Learners will be adept at managing their academic profiles on global research platforms, avoiding predatory journals, and contributing to open educational resources.	

	• They will possess the confidence and competence to disseminate their research at national and international levels, participate in collaborative projects, and contribute to the evolving landscape of global Sanskrit scholarship, thereby supporting both academic and professional advancement in the field.	
[D]	**Unit Wise Division:**	
	Unit I: Advanced Theoretical Foundations and Research Design	25
	❖ Overview of nature, scope, and philosophy of research in Sanskrit ❖ Critical exploration of types of research: Theoretical, Textual, Historical, Interpretative, Interdisciplinary, Innovative ❖ Understanding Research Methods: Qualitative and Quantitative ❖ Formulation of research problems, hypotheses, and objectives tailored to Sanskrit texts and traditions ❖ Outline of Research Work, Topic Selection and Writing Methods	
	Unit II: Survey of Literature	25
	❖ Importance of literature review in research. ❖ Techniques for surveying classical and contemporary Sanskrit literature. ❖ Locating relevant manuscripts, editions, critical studies, and digital resources. ❖ Use of bibliographic tools, catalogues, and databases such as Google Scholar, Wiki, Shodhganga, Sanskrit-Shodhsindhu (https://cl.sanskrit.du.ac.in), various university libraries, and websites. ❖ Building a framework for identifying research gaps and contextualizing the research problem. ❖ Material Collection: Primary, Secondary and E-Recourses and Research Tools	
	Unit III: Research Formulation	25
	❖ Data collection, corpus management ❖ Academic writing skill refinement: preparation of research papers, theses, and seminar presentations ❖ Abstract: Core Problem, Approach, Key Findings, Impact or conclusion Introduction: Background, summary, key focus, current scenario ❖ Research Gap: Problem, Hypothesis, research question ❖ Research Objective ❖ Literature Review ❖ Research Methodology: Design, approach, Analysis, tools, apparatus ❖ Framework: Theories/models guiding your study ❖ Significance or Importance ❖ Conclusion ❖ References	

	Unit IV : Research Writing and Presentation	25

	❖ Methodologies for writing dissertations/theses, research papers, book reviews, and articles, and seminar reports
	❖ Various Research Journals and Conferences for Research Paper Publication and Presentation
	❖ Structure of- Theses, Research Papers, Book Reviews
	❖ **Presentation and Writing Skil Development**
	    • Important Points in Presentation
	    • Types of Presentation, Oral, Power Point Presentation
	    • Introduction of Microsoft Power Point	

[E]	**Basic Structure of Question Paper & Division of Marks**	
	i. One long question from each unit ii. One short note from each unit	04x20=80 04x05=20

[F] Recommended Readings:

i. आचार्य:, सत्यनारायण:, संस्कृतशोधप्रविधि:, पुरी, **2005**

ii. नगेन्द्र – अनुसन्धानस्य प्रविधि-प्रक्रिया, राष्ट्रीय संस्कृत संस्थान, नई दिल्ली, **2010**

iii. द्विवेदी, प्रभुनाथ – संस्कृत शोध प्रविधि, शारदा संस्कृत संस्थान, वाराणसी, **2017**

iv. मिश्र, अभिराज राजेन्द्र एवं राजेश कुमारी, शोधप्रविधि एवं पाण्डुलिपि विज्ञान, अक्षयवट प्रकाशन, इलाहाबाद, उत्तर प्रदेश, २००८

v. शर्मा, विनयमोहन – शोधप्रविधि, नेशनल पब्लिशिंग हाउस, दिल्ली, **1977**

vi. Creswell, John W. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*.

vii. Booth, Wayne C., Gregory G. Colomb, Joseph M. Williams. *The Craft of Research*.

viii. Srinivasan, Amrit. *Advanced Textual Analysis in Sanskrit Studies*.

ix. Abbott, C. (2009). MLA Style Manual and Guide to Scholarly Publishing.

x. DE, D. T. (2010). Microsoft Office 2010.

xi. Fletcher, G., & Greenhill, A. (1995, November). Academic referencing of Internet-based resources. In *Aslib Proceedings* (Vol. 47, No. 11/12, pp. 245-252).

xii. Gibaldi, J. (2008). *MLA style manual and guide to scholarly publishing* (No. C10 45).

xiii. GUIDE, M. S. CHICAGO STYLE GUIDE.

xiv. Harvey, G. (2015). *Excel 2016 All-in-one for Dummies*. John Wiley & Sons

xv. http://shodhganga.inflibnet.ac.in/bitstream/10603/29975/12/12_chapter%205.pdf

xvi. http://www.chicagomanualofstyle.org/home.html

xvii. http://www.citethisforme.com/guide

xviii. https://web.library.uq.edu.au/research-tools-techniques/referencing-style-guides

xix. Jafari, J. (1989). An English language literature review. *Tourism as a factor of change: A sociocultural study*, 17-60.

xx. Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.

Compulsory Course (CC)

CC102: Research & Publication Ethics

		Total Marks 50
[A]	**Prescribed Course:**	**Credits: 02**
	Unit I: Research Ethics and Integrity **Unit II: Publication Ethics**	
[B]	**Course Objectives:**	
	The course enables scholars to: • Understand ethical principles in research • Identify misconduct such as plagiarism, data fabrication, and falsification • Avoid plagiarism and research misconduct • Follow ethical authorship and publication practices • Use plagiarism detection and reference management tools responsibly	
[C]	**Learning Outcomes:** Upon completion of this course, students will be able to: • Explain concepts of research integrity and ethics • Identify unethical practices in research publications • Apply ethical standards in manuscript preparation • Evaluate journals and conferences ethically • Demonstrate responsible authorship	
[D]	**Unit Wise Division:**	
	Unit I: Research Ethics and Integrity	25

	❖ Meaning of Research Ethics
	 ❖ Importance of Ethical Conduct in Research
	 ❖ Core values: Honesty, Objectivity, Integrity, Accountability
	 ❖ Ethical dilemmas in Research
	 ❖ **Research Misconduct:**
	      • Fabrication
	      • Falsification
	      • Plagiarism	

	Unit II: Publication Ethics	25
	❖ Definition and Importance of Publication Ethics	

❖ **Authorship Ethics**

- Criteria for Authorship
- Author Responsibilities
- Ethical Issues in Authorship
- Conflicts of Interest

❖ **Redundant Publications**- duplicate and overlapping publications, salami slicing
   - Data manipulation
   - Citation manipulation

❖ **Ethical Guidelines**

- COPE Guidelines
- UGC Plagiarism Regulations

❖ Consequences of Unethical Practices
❖ Retraction of papers
❖ Ethical Use of Open Access Journals
❖ **Tools for Ethical Publishing:**
   - Plagiarism Detection Software like Turnitin, Urkund, Drillbit, and other Open Software Tools
   - Copyright, Creative Commons Licenses

[E]	**Basic Structure of Question Paper & Division of Marks**	
	i. One long question from each unit	02x20=40
	ii. One short note from each unit	02x05=10
[F]	**Recommended Readings:**	

1. Bird, A. (2006). Philosophy of Science, Routledge
2. Maclntyre, Alasdair (1967) A Short History of Ethics, London
3. P. Chaddah (2018) Ethics in Competitive Research: Do not get sooped: do not get plagiarized, ISBN: 978-9387480865
4. National Academy of Sciences, National Academy of Engineering and Institute of Medicine. (2009). On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition. National Academies Press.
5. Resnik, D.B. (2011). What is ethics in research & why is it important. National Institute of Environmental Health Sciences, 1-10. Retrieved from https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm
6. Beall, J. (2012). Predatory publishers are corrupting open access. Nature, 489(7415), 179-179. https://doi.org/10.1038/489179a
7. Indian National Science Academy (INSA), Ethics in Science Education, Research and Governance (2019), ISBN: 978-81-939482-1-7. http://www.insaindia.res.in/pdf/Ethics Book.pdf

Compulsory Course (CC)

CC103: Research Tools

		Total Marks 50
[A]	**Prescribed Course:**	**Credit: 02**
	Unit I: Computational Tools for Research Unit II: Sanskrit Transliteration and Tools	
[B]	**Course Objectives:**	
	This course aims to introduce students to the diverse set of digital and traditional tools available for Sanskrit research, equipping them with practical skills to enhance their scholarly investigations. Learners will familiarize themselves with various databases, digital libraries, computational linguistics applications, and software that support text digitization, annotation, and semantic analysis of Sanskrit literature. The course will develop their understanding of natural language processing (NLP) techniques, optical character recognition (OCR) for Devanagari and other scripts, digitization standards, and metadata encoding crucial for corpus development. Students will gain hands-on experience with digital platforms like the Muktabodha Digital Library, SARIT, and Sanskrit Heritage Site, learning how to navigate and utilize these resources effectively. Emphasis will be placed on integrating technological tools with traditional philological methods to foster comprehensive and interdisciplinary research. The course also aims to sensitize students to the challenges of digital Sanskrit scholarship, including script variability, data accuracy, and the ethical handling of ancient manuscripts, thereby preparing them for future research endeavors at the interface of classical studies and digital humanities.	
[C]	**Learning Outcomes:** Upon successful completion of the course, students will be proficient in selecting and applying appropriate digital tools to support Sanskrit research, including accessing and managing digital collections. They will demonstrate competence in using computational linguistics tools for morphological parsing, Sandhi resolution, and semantic tagging of Sanskrit texts. Learners will be able to perform text digitization practices and understand OCR techniques tailored for Indic scripts, ensuring high data quality. They will effectively leverage digital platforms for annotation, textual criticism, and semantic indexing, improving interpretive accuracy and research productivity. Students will also critically evaluate the limitations and ethical considerations of digital tools in Sanskrit studies. The ability to integrate traditional knowledge with modern technology will enable them to contribute innovatively to Sanskrit scholarship. Moreover, they will be prepared to actively participate in collaborative projects that harness technology for manuscript preservation, analysis, and dissemination, thus advancing the field of Sanskrit digital humanities.	

[D]	**Unit Wise Division:**	
	Unit I: Computational Tools for Research	25
	❖ Editing Tools: Word processors (MS word, Google docs) ❖ Digitization techniques: Typing tools, OCR applications for Devanagari ❖ Citation tools: Mendeley, Zotero, EndNote, RefWorks, BibTeX (LaTeX) ❖ Paraphrasing Tools: QuillBot, Grammarly Paraphrasing Tool, Paperpal. Ref-N-Write, Paraphraser.io, Scribbr, Paraphrasing Tool, Writefull, Aithor, ❖ Cfficeomparer Tools: Diffchecker, Draftable, Text Compare, Litera Compare, Online Text Compare, OQuick Diff ❖ Bibliographic tools and reference management software (Mendeley, Zotero) for Sanskrit research	
	Unit II: Sanskrit Transliteration and tools	25
	❖ International Alphabets for Sanskrit Transliterations (IAST) **Open Access Publishing:** ❖ Journal finder/ journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc. **Databases and Research Metrics:** ❖ Indexing databases ❖ Citation databases: Web of Science, Scopus etc. ❖ Impact factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score ❖ Metrics: h index, g index, i10-index, altmetrics.	
[E]	**Basic Structure of Question Paper & Division of Marks**	
	i. One long question from each unit ii. One short note from each unit	02x20=40 02x05=10
[F]	**Recommended Readings:** 1. Abbott, C. (2009). MLA Style Manual and Guide to Scholarly Publishing. 2. DE, D. T. (2010). Microsoft Office 2010. 3. Gibaldi, J. (2008). *MLA style manual and guide to scholarly publishing* (No. C10 45). 4. GUIDE, M. S. CHICAGO STYLE GUIDE. 5. Fletcher, G., & Greenhill, A. (1995, November). Academic referencing of Internet-based resources. In *Aslib Proceedings* (Vol. 47, No. 11/12, pp. 245-252). MCB UP Ltd. 6. http://www.baraha.com/ 7. http://www.chicagomanualofstyle.org/home.html 8. http://www.citethisforme.com/guides 9. https://owl.english.purdue.edu/owl/resource/747/01/ 10. https://reeta-yashvantblog.blogspot.in/2016/03/blog-post.html	

Elective Course

EC102: Research Methods and Survey of Vedic Researches **वैदिक शोध के अनुसंधान क्षेत्र एवं सर्वेक्षण**		
		Total Marks 100
[A]	**Prescribed Course:**	**Credits: 04**
	Unit I: वेदों के अनुसन्धान की प्रविधियाँ (Methods of Vedic Research) **Unit II:** संहिताओं पर हुए शोधकार्यों का सर्वेक्षण (Survey of Researches on Samhitas) **Unit III:** ब्राह्मणग्रन्थ एवं उपनिषद् साहित्य पर हुए शोधकार्यों का सर्वेक्षण (Survey of Researches on Brahmana Texts and Upanishadic Literature) **Unit IV :** वेदांग साहित्य पर हुए शोधकार्यों का सर्वेक्षण (Survey of Researches on Vedanga Literature)	
[B]	**Course Objectives:**	**Credits: 04**
	This course aims to acquire the knowledge of methodology on Vedic Researches. The students will be able to know the researches completed on Samhitas, Brahmana Texts, Upanishads and Vedanga literature.	
[C]	**Unit Wise Division:**	
	Unit I: वेदों के अनुसन्धान की प्रविधियाँ (Methods of Vedic Research)	25
	समीक्षात्मक, विवेचनात्मक, तुलनात्मक	
	Unit II: संहिताओं पर हुए शोधकार्यों का सर्वेक्षण (Survey of Researches on Samhitas)	25
	ऋग्वेद, यजुर्वेद, सामवेद एवं अथर्ववेद	
	Unit III: ब्राह्मणग्रन्थ एवं उपनिषद् साहित्य पर हुए शोधकार्यों का सर्वेक्षण (Survey of Researches on Brahmana Texts and Upanishadic Literature)	25
	ऋग्वेदीय ब्राह्मण, यजुर्वेदीय ब्राह्मण, सामवेदीय ब्राह्मण, अथर्ववेदीय ब्राह्मण एवं उपनिषद् साहित्य	
	Unit IV : वेदांग साहित्य पर हुए शोधकार्यों का सर्वेक्षण (Survey of Researches on Vedanga Literature)	25
	छन्दःशास्त्र, कल्पसूत्र, निरुक्त एवं शिक्षाग्रन्थ	
[D]	**Basic Structure of Question Paper & Division of Marks**	
	i. प्रत्येक अन्विति से एक-एक समीक्षात्मक प्रश्न ii. प्रत्येक अन्विति से एक-एक टिप्पणी	04x20=80 04x05=20

[E]	**Recommended Readings**
	   i. अनुसन्धानस्य प्रविधिप्रक्रिया, डॉ. नगेन्द्र, केन्द्रिय संस्कृत विश्वविद्यालय, नई दिल्ली, २०१०
	  ii. शोधप्रविधि एवं पाण्डुलिपि विज्ञान, प्रो. अभिराज राजेन्द्र मिश्र एवं राजेश कुमारी मिश्र, अक्षयवट प्रकाशन, इलाहाबाद, उत्तर प्रदेश, २००८
	 iii. https://www.sanskrit.nic.in/
	 iv. https://www.slbsrsv.ac.in/
	  v. https://shodhganga.inflibnet.ac.in/	

EC102:Research Trend and Survey of Indian Philosophy
भारतीय दर्शन की अनुसन्धान प्रवृत्ति एवं सर्वेक्षण

		Total Marks 100
[A]	**Prescribed Course:**	**Credits: 04**
	Unit I: भारतीय दर्शन में अनुसन्धान-प्रकृति और आधार (Nature and Foundations of Research in Indian Philosophy)	
	Unit II: दर्शनशास्त्रीय सर्वेक्षण (Philosophical Survey)	
	Unit III: आस्तिक दर्शन पर हुए शोधकार्यों का सर्वेक्षण (Survey of Researches on Āstika Darśana)	
	Unit IV : नास्तिक दर्शन पर हुए शोधकार्यों का सर्वेक्षण (Survey of Researches on Nāstika Darśana)	
[B]	**Course Objectives:**	
	This course aims to acquire the knowledge of research trends of Indian Philosophy. In this course, the focus will be on the research methodologies used in the researches in Indian Philosophy.	
[C]	**Unit Wise Division:**	
	Unit I: भारतीय दर्शन में अनुसन्धान-प्रकृति और आधार (Nature and Foundations of Research in Indian Philosophy) ❖ दार्शनिक शोध: अर्थ, स्वरूप एवं उद्देश्य (Philosophical Research: Meaning, Nature and Scope) ❖ भारतीय दर्शन में शोध की परम्परा (Tradition of Research in Indian Philosophy) ❖ दार्शनिक शोध का आधार : प्रमाण, वाद एवं तर्क (Basis of Philosophical Research: Pramāṇa, Vāda & Tarka) ❖ अनुसन्धान प्रविधि एवं दृष्टिकोण (Research Methods and Approaches) ❖ भारतीय दर्शन में समकालीन शोध प्रवृत्तियाँ एवं-अन्तर्विषयी दृष्टिकोण (Contemporary Trends and Interdisciplinary Research in Indian Philosophy)	25
	Unit II: दर्शनशास्त्रीय सर्वेक्षण (Philosophical Survey) ❖ सर्वेक्षण-प्रविधि (Methods of Survey) ❖ भारतीय दर्शन का ऐतिहासिक एवं सैद्धान्तिक सर्वेक्षण (Historical & Theoretical Survey of IP)	25
	Unit III: आस्तिक दर्शन पर हुए शोधकार्यों का सर्वेक्षण (Survey of Researches on Āstika Darśana) ❖ सांख्य, योग, न्याय, वैशेषिक, मीमांसा, वेदान्त, शैव	25
	Unit IV: नास्तिक दर्शन पर हुए शोधकार्यों का सर्वेक्षण (Survey of Researches on Nāstika Darśana) ❖ चार्वाक, जैन, बौद्ध	25
[D]	**Basic Structure of Question Paper & Division of Marks**	
	i. प्रत्येक अन्विति से एक-एक समीक्षात्मक प्रश्न ii. प्रत्येक अन्विति से एक-एक टिप्पणी	04x20=80 04x05=20

[E]	**Recommended Readings**
	   i. आचार्यः, सत्यनारायणः - संस्कृतशोधप्रविधिः, पुरी, 2005
	   ii. दास, पिताम्बर – दार्शनिक शोध एक अन्तर्क्रियात्मक अध्ययन, भारती प्रकाशन, वाराणसी, 2017
	   iii. द्विवेदी, प्रभुनाथ – संस्कृत शोध प्रविधि, शारदा संस्कृत संस्थान, वाराणसी, 2017
	   iv. नगेन्द्र – अनुसन्धानस्य प्रविधि-प्रक्रिया, राष्ट्रीय संस्कृत संस्थान, नई दिल्ली, 2010
	   v. शर्मा, विनयमोहन – शोधप्रविधि, नेशनल पब्लिशिंग हाउस, दिल्ली, 197	

Note :	Teachers are free to recommend any relevant books/articles/e-resource.	

EC103: Research in Sanskrit Poetics and Literature and Brief Survey
संस्कृत साहित्यशास्त्र तथा साहित्य में अनुसंधान एवं संक्षिप्त सर्वेक्षण

<div align="right">

Total Marks 100
</div>

[A]	**Prescribed Course:**	**Credits: 04**
	Unit I: नाट्यशास्त्रीय शोधप्रविधि एवं नाट्यशास्त्रीय परम्परा पर हुए शोधकार्यों का सर्वेक्षण	
	Unit II: रस एवं अलङ्कार सिद्धान्त पर हुए शोधकार्यों का सर्वेक्षण	
	Unit III: रीति एवं ध्वनि सिद्धान्त पर हुए शोधकार्यों का सर्वेक्षण	
	Unit IV : वक्रोक्ति एवं औचित्य सिद्धान्त पर हुए शोधकार्यों का सर्वेक्षण	
[B]	**Course Objectives:**	
	This course aims to acquire the knowledge of brief introduction of Sanskrit Poetics. In this course, the focus will be on development of different social institutions in the context of historical perspectives.	
[C]	**Unit Wise Division:**	
	Unit I:	**25**
	नाट्यशास्त्रीय शोधप्रविधि एवं नाट्यशास्त्रीय परम्परा पर हुए शोधकार्यों का सर्वेक्षण	
	Unit II:	**25**
	रस एवं अलङ्कार सिद्धान्त पर हुए शोधकार्यों का सर्वेक्षण	
	Unit III:	**25**
	रीति एवं ध्वनि सिद्धान्त पर हुए शोधकार्यों का सर्वेक्षण	
	Unit IV :	**25**
	वक्रोक्ति एवं औचित्य सिद्धान्त पर हुए शोधकार्यों का सर्वेक्षण	
[D]	**Basic Structure of Question Paper & Division of Marks**	
	i. प्रत्येक अन्विति से एक-एक समीक्षात्मक प्रश्न ii. प्रत्येक अन्विति से एक-एक टिप्पणी	04x20=80 04x05=20
[E]	**Recommended Readings**	
Note:	Teachers are free to recommend any relevant books/articles/e-resource.	

	EC104: Research in Sanskrit Grammatical and Linguistic Traditions **संस्कृत व्याकरण एवं भाषाविज्ञान में अनुसन्धान**	
		Total Marks 100
[A]	**Prescribed Course:**	**Credits: 04**
	Unit I: संस्कृत व्याकरण में अनुसन्धान में प्रयुक्त शोधविधियों का सामान्य परिचय **Unit II:** संस्कृत साहित्य का भाषावैज्ञानिक अध्ययन में प्रयुक्त शोधविधियों का सामान्य परिचय **Unit III:** संस्कृत व्याकरण में हुए शोधकार्यों सर्वेक्षण **Unit IV :** संस्कृत साहित्य का भाषावैज्ञानिक अध्ययन में हुए शोधकार्यों सर्वेक्षण	
[B]	**Course Objectives:**	
	Objective of the course is to introduce the Indian Grammatical Tradition. In this course, the focus will be on the history of Sanskrit Grammar, special focus on the structure of the Ashtadhayayi and its commentaries, the basic knowledge of philosophy of grammar and survey of modern grammatical research.	
[C]	**Unit Wise Division:**	
	Unit I: संस्कृत व्याकरण में अनुसन्धान में प्रयुक्त शोधविधियों का सामान्य परिचय	**25**
	संस्कृत व्याकरण में अनुसंधान में प्रयुक्त शोधविधियों का सामान्य परिचय	
	Unit II: संस्कृत साहित्य का भाषावैज्ञानिक अध्ययन में प्रयुक्त शोधविधियों का सामान्य परिचय	**25**
	संस्कृत साहित्य का भाषावैज्ञानिक अध्ययन में प्रयुक्त शोधविधियों का सामान्य परिचय	
	Unit III: संस्कृत व्याकरण में हुए शोधकार्यों सर्वेक्षण	**25**
	संस्कृत व्याकरण में हुए शोधकार्यों सर्वेक्षण	
	Unit IV : संस्कृत साहित्य का भाषावैज्ञानिक अध्ययन में हुए शोधकार्यों सर्वेक्षण	**25**
	संस्कृत साहित्य का भाषावैज्ञानिक अध्ययन में हुए शोधकार्यों सर्वेक्षण	
[D]	**Basic Structure of Question Paper & Division of Marks**	
	i. प्रत्येक अन्विति से एक-एक समीक्षात्मक प्रश्न ii. प्रत्येक अन्विति से एक-एक टिप्पणी	04x20=80 04x05=20
[E]	**Recommended Readings** 1. मीमांसक, युधिष्ठिर –संस्कृतव्याकरणशास्त्र का इतिहास, 3 भाग, सोनीपत, 1974 2. वर्मा, सत्यकाम –संस्कृतव्याकरण का उद्भव एवं विकास, दिल्ली 3. Belvalkar, S.K. Systems of Sanskrit Grammar, Delhi. 4. Cardona, George. Panini: A Survey of Research, Delhi, 1980 5. Ray, Bidyut Lata. Panini to Patanjali: A Grammatical March, Delhi, 2004 6. Various Dissertation and Theses from the department of Sanskrit, University of Delhi.	
Note:	Teachers are free to recommend any relevant books/articles/e-resource.	

	EC105: **Trends of Dharmashastric Research** धर्मशास्त्रीय शोध की प्रवृत्तियां	
		Total Marks 100
[A]	**Prescribed Course:**	**Credits: 04**
	Unit I: धर्मशास्त्रीय पारम्परिक शोधक्षेत्र Unit II: धर्मशास्त्रीय समसामयिक शोधक्षेत्र Unit III: धर्मशास्त्रीय अन्तर्विषयक शोधक्षेत्र Unit IV : धर्मशास्त्रीय अध्ययन की शोधप्रविधियाँ एवं शोधसर्वेक्षण	
[B]	**Course Objectives:**	
	This course aims to acquire the knowledge of brief introduction of Dharmashastra. In this course, the focus will be on development of different social institutions in the context of historical perspectives.	
[C]	**Unit Wise Division:**	
	Unit I: धर्मशास्त्रीय पारम्परिक शोधक्षेत्र	**25**
	धर्मशास्त्रीय पारम्परिक शोधक्षेत्र एवं शोधकार्यों का सर्वेक्षण जैसे वर्ण व्यवस्था, आश्रम व्यवस्था पुरुषार्थ, संस्कार आचार, व्यवहार, प्रायश्चित्त, धर्म (कर्त्तव्य) आदि अन्य विषय	
	Unit II: धर्मशास्त्रीय समसामयिक शोधक्षेत्र	**25**
	धर्मशास्त्रीय पारम्परिक विषयों का आधुनिक विषयों से तुलनात्मक एवं समीक्षात्मक शोध जैसे न्याय, दण्ड, राजनीति, प्रशासन, समाज, दायभाग, कर आदि अन्य विषय	
	Unit III: धर्मशास्त्रीय अन्तर्विषयक शोधक्षेत्र	**25**
	धर्मशास्त्रकालीन पर्यावरण प्रबन्धन, धर्मशास्त्रकालीन चिकित्सा, बालसंरक्षण/बालविकास (संस्कार) धर्मशास्त्रीय अवधारणाओं का संगणकीय अनुप्रयोग, धर्मशास्त्रकालीन विधि आदि अन्य विषय	
	Unit IV : धर्मशास्त्रीय अध्ययन का शोधसर्वेक्षण	**25**
	धर्मशास्त्रीय अनुसंधानों का संक्षिप्त सर्वेक्षण: प्राचीन भारतीय सामाजिक संस्थाओं पर हुये शोधकार्यों का सर्वेक्षण, अन्य विषयों पर हुए शोधकार्य	
[D]	**Basic Structure of Question Paper & Division of Marks**	
	i. प्रत्येक अन्विति से एक-एक समीक्षात्मक प्रश्न ii. प्रत्येक अन्विति से एक-एक टिप्पणी	04x20=80 04x05=20
[E]	**Recommended Readings:**	
	1. काणे, प.व. (1992). धर्मशास्त्र का इतिहास. उत्तर प्रदेश हिन्दी संस्थान. 2. Dhole, S.S. (2017). Evolving rile of employement legal leadership incorporate governance and management. .International Journal of LAw and Management 4(2), 107-128 3. Nigam, Arooshi. (2022). **Development of Concept Mining and Online Indexing System for Manusmṛiti**. M.Phil. Dissertation, Department of Sanskrit, University of Delhi. 4. Nigam, Arooshi and **Chandra Subhash**. (2022). धर्मशास्त्रीय अवधारणाओं के शोधकार्यों का सर्वेक्षण. ज्ञान गरिमा सिंधु, Vol. 75, 2022, ISSN 2311-0443, pp.-58-68: **http://www.cstt.education.gov.in/file/2005** 5. Nigam, Arooshi and **Chandra Subhash**. (2022). **Environmental Awareness and Protection in Ancient Bharat based on Dharmaśāstric Literature**. *Zeichen Journal*, Volume 8 Issue 3, ISSN 0932-4747, pp.-354-366. URL: http://www.ezeichen.com/gallery/2480.pdf	
Note:	Teachers are free to recommend any relevant books/articles/e-resource.	

EC106: Study of Inscriptions and Survey of Researches	
अभिलेखों का अध्ययन और शोधकार्यों का सर्वेक्षण	
	Total Marks 100

[A]	**Prescribed Course:**		**Credits: 04**
	Unit I: Girnar First Rock-Edict of Ashoka Unit II: Prayag Pillar Edict of Samudragupta Unit III: Mehrauli Iron - Pillar Inscription of Chandra Unit IV: Survey of Researches		
[B]	**Course Objectives:**		**Credits:04**
	The objective of this course is to know historical, religious, Political and Literary significance of these inscriptions and the survey researches done in the field of Epigraphy.		
[C]	**Unit Wise Division:**		
	Unit I: Girnar First Rock-Edict of Ashoka		25
	Critical analysis of the Girnar First Rock-Edict of Ashoka		
	Unit II: Prayag Pillar Edict of Samudragupta		25
	Critical analysis of the Prayag Pillar- Edict of Samudragupta		
	Unit III: Mehrauli Iron - Pillar Inscription of Chandra		25
	Critical analysis of the Mehrauli Iron- Pillar Inscription of Chandra		
	Unit IV: Survey of Researches		25
	Survey of Researches done in the field of epigraphy		
[D]	**Basic Structure of Question Paper & Division of Marks**		
	i. प्रत्येक अन्विति से एक-एक समीक्षात्मक प्रश्न ii. प्रत्येक अन्विति से एक-एक टिप्पणी		04x20=80 04x05=20
[E]	**Recommended Readings:**		
	1. पाण्डेय, राजबली - अशोक के अभिलेख, मुंशीराम मनोहरलाल, भारतीय कला प्रकाशन, दिल्ली, 1992. 2. ओझा, गौरीशंकर - अशोककालीन धार्मिक अभिलेख, भारतीय कला प्रकाशन- दिल्ली - 2002 3. उपाध्याय, वासुदेव - गुप्त अभिलेख, पटना- 2000 4. राणा, एस. एस - भारतीय अभिलेख, भारतीय विद्याप्रकाशन दिल्ली-1978. 5. सैनी, रणजीतसिंह-अभिलेख मञ्जूषा, न्यू भारतीय बुक कार्पोरेशन, दिल्ली 2000 6. Bhandarkar, D. R- Ashoka (Also in Hindi) Calcutta, 1925 7. Banerji, H. - A study of important Gupta Inscriptions. Calcutta, 1974. 8. Goyal, S.R- A History of the Imperial Guptas, Kusumanjali, Book World, Jodhpur 2005. 9. दुबे, सीताराम - अभिलेखिक अध्ययन की प्रविधि एवं इतिहास लेख, प्रतिभा प्रकाशन, दिल्ली, 2004		
Note:	Teachers are free to recommend any relevant books/articles/e-resource.		

EC107: Introduction of Modern Sanskrit Literature and Survey
आधुनिक संस्कृत साहित्य का संक्षिप्त परिचय एवं सर्वेक्षण

		Total Marks 100
[A]	**Prescribed Course:**	**Credits: 04**
	Unit I: Concept and Definitions of Modernity Unit II: New Trends in Sanskrit Drama, Prose and Poetry Unit III: Special Features of Modern Sanskrit Poetics Unit IV : Survey of Researches done in Modern Sanskrit Literature	
[B]	**Course Objectives:**	
	Sanskrit is a language having glorious and ancient traditions with a modern outlook. This has also been included in the eighth schedule of Indian constitution as modern Indian language. Presently there has been many significant changes and new experiments in its literary creations. Therefore the objective of the present course is to introduce with various new trends and research aspects in the field of modern Sanskrit literature and further explore about new dimensions of its research studies.	
[C]	**Unit Wise Division:**	
	Unit I: Concept and Definitions of Modernity	**25**
	Concept of modernity in the field of literature and divisions of Period of Modern Sanskrit literature	
	Unit II: New Trends in Sanskrit Drama, Prose and Poetry	**25**
	New trends in plot, characters, Language and literary forms of Sanskrit drama, prose and poetry	
	Unit III: Special Features of Modern Sanskrit Poetics	**25**
	Definitions (Kāvya lakṣaṇa), objectives (prayojana) and causes (Hetu), Soul of Poetry (kāvyātmā).	
	Unit IV : Survey of Researches done in Modern Sanskrit Literature	**25**
	Survey of researches done in the field of modern Sanskrit literature	
[D]	**Basic Structure of Question Paper & Division of Marks**	
	i. प्रत्येक अन्विति से एक-एक समीक्षात्मक प्रश्न ii. प्रत्येक अन्विति से एक-एक टिप्पणी	04x20=80 04x05=20
[E]	**Recommended Readings**	

1. मुसलगांवकर, केशव राव, आधुनिक संस्कृत काव्यपरम्पराएं, चौखम्बा विद्याभवन, वाराणसी, 2004

2. मिश्र, राजेन्द्र, विंशतिशताब्दीसंस्कृतकाव्यामृतम्, दिल्ली संस्कृत अकादमी, दिल्ली

3. उपाध्याय, रामजी खण्ड) आधुनिक संस्कृत नाटकः नये तथ्य नया इतिहास -1,2) चौखम्बा संस्कृत प्रतिष्ठान, दिल्ली

4. मीरा द्विवेदी -,आधुनिक संस्कृत महिला नाटककार,परिमल पब्लिकेशन्स,दिल्ली 2000-

5. वीरबाला शर्मासंस्कृत में एकांकी रूपक -, मध्यप्रदेश हिन्दी ग्रन्थ अकादमी,भोपाल,1972

6. उपाध्याय, रामजी, आधुनिकसंस्कृतनाटक, चौखम्बासुरभारती प्रकाशन,वाराणसी, 1996.

7. त्रिपाठी, राधावल्लभ, संस्कृतसाहित्यः बीसवीं शताब्दी, राष्ट्रीय संस्कृत संस्थान, दिल्ली,1999.

8. भार्गव, दयानन्द, आधुनिकसंस्कृतसाहित्य, राजस्थानी, ग्रन्थागार, जोधपुर, 1987.

9. रुचि कुलश्रेष्ठ, बीसवीं शताब्दी का संस्कृतलघुकथासाहित्य, राष्ट्रीय संस्कृत संस्थान, दिल्ली, 2008.

10. शास्त्री, कलानाथ,आधुनिक काल काल का संस्कृत गद्यसाहित्य, राष्ट्रीय संस्कृत संस्थान, दिल्ली, 1995.

11. शुक्ल, हीरालाल, आधुनिकसंस्कृतसाहित्य, रचनाप्रकाशन, इलाहाबाद,1971.

12. संस्कृत साहित्य का बृहद् इतिहास(सप्तम, आधुनिक खण्ड) सं.जगन्नाथपाठक, लखनऊ संस्कृत संस्थान,2000

13. त्रिपाठी, राधावल्लभ संपा. ,आधुनिकसंस्कृतसाहित्य सन्दर्भसूची-, संस्थान राष्ट्रिय संस्कृत संस्थान, दिल्ली 2012

14. आनन्दकुमार,श्रीवास्तव,आधुनिक संस्कृत काव्यशास्त्र,ईस्टर्न बुक लिंकर्स, दिल्ली,1990

15. यादव, राजमंगल, संस्कृत काव्यशास्त्र की अर्वाचीन परम्परा,प्रतिभाप्रकाशन,दिल्ली,2011

16. Raghavam, V., Bibliography of Modern Sanskrit Plays.

17. Satyavrat, Usha - Sanskrit Dramas of the 20th Century, Mehar Chand Lakshman Das, Delhi, 1971

18. Jha, V.N - Sanskrit Writings in Independent India, Poona

19. Joshi, K.R.& S. M. Ayachit - Post Independence Sanskrit Literature, Nagpur, 1991

20. Prajapati, Manibhai K., Post Independence Sanskrit Literature: A critical survey, Poona, 2005.

Note:	Teachers are free to recommend any relevant books/articles/e-resource.

EC108: Survey of Researches on Itihāsa–Purāṇic Literature

		Total Marks 100
[A]	**Prescribed Course**	**Credits: 04**
	Unit 1. Review of Itihāsa–Purāṇic Literature Unit 2. Survey of Researches on Rāmāyaṇa Unit 3. Survey of Researches on Mahābhārata Unit 4. Survey of Researches on Purāṇic Literature	
[B]	**Course Objectives:**	
	1. To introduce students to the contemporary research trends in the study of Rāmāyaṇa, Mahābhārata and Purāṇic literature. 2. To analyze the methodological innovations and interdisciplinary approaches used in current scholarship.	
[C]	**Learning Outcomes:**	
	By the end of the course, students will be able to: 1. Identify key areas of modern research on Rāmāyaṇa, Mahābhārata and Purāṇas. 2. Evaluate traditional and modern methodologies in Itihāsa–Purāṇa studies.	
[D]	**Unit Wise Division:**	
	Unit I – Review of Itihāsa–Purāṇic Literature	**25**
	❖ Overview of Itihāsa–Purāṇa literature: origin, development, and classification. ❖ Traditional commentaries and interpretations. ❖ Historical development of research on Itihāsa–Purāṇa literature. ❖ Itihāsa–Purāṇa literature as a resource of Historical, Cultural, Philosophical, Epigraphical and Archaeological researches.	
	Unit II – Survey of Researches on Rāmāyaṇa	**25**
	❖ Survey of editions on Rāmāyaṇa. ❖ Survey of commentaries and translations on Rāmāyaṇa. ❖ Survey of thesis, dissertations and research papers on Rāmāyaṇa. ❖ Survey of independent research work on Rāmāyaṇa.	
	Unit III – Survey of Researches on Mahābhārata	
	❖ Survey of editions on Mahābhārata. ❖ Survey of commentaries and translations on Mahābhārata. ❖ Survey of thesis, dissertations and research papers on Mahābhārata. ❖ Survey of independent research work on Mahābhārata.	
	Unit IV – Survey of Researches on Purāṇic Literature	**25**
	❖ Survey of editions on Purāṇic literature. ❖ Survey of commentaries and translations on Purāṇic literature. ❖ Survey of thesis, dissertations and research papers on Purāṇic literature. ❖ Survey of independent research work on Purāṇic literature.	
[E]	**Basic Structure of Question Paper & Division of Marks**	
	i. प्रत्येक अन्विति से एक-एक समीक्षात्मक प्रश्न ii. प्रत्येक अन्विति से एक-एक टिप्पणी	04x20=80 04x05=20
[F]	**Recommended Readings:**	
	1. **A. A. Macdonell** – *A History of Sanskrit Literature* 2. **M. Winternitz** – *A History of Indian Literature*, Vol. I & II 3. **P. V. Kane** – *History of Dharmaśāstra* (for Purāṇic references)	

	4. **V. S. Sukthankar et al.** – *The Critical Edition of the Mahābhārata* (Bhandarkar Oriental Research Institute) 5. **G. H. Bhatt et al.** – *The Critical Edition of the Vālmīki Rāmāyaṇa* (Baroda) 6. **Sheldon Pollock (ed.)** – *Rāmāyaṇa and Political Imagination in India* 7. **Wendy Doniger** – *The Purāṇas and Hindu Mythology* 8. **S. N. Dasgupta** – *A History of Indian Philosophy* (relevant volumes) 9. **A. K. Ramanujan** – *Three Hundred Rāmāyaṇas: Five Examples and Three Thoughts on Translation* 10. **Ludo Rocher** – *The Purāṇas* (A History of Indian Literature Series) 11. **V. Raghavan** – *The Great Epics of India: Character and Culture* 12. **R. N. Dandekar (ed.)** – *The Mahābhārata Reinterpreted: Essays on Its Growth and Meaning*
Note:	Teachers are free to recommend any relevant books/articles/e-resource.

EC109: Research trend in Indian Astrology & Architecture
भारतीय ज्योतिषशास्त्र एवं वास्तुशास्त्र में अनुसन्धान प्रवृत्ति

Total Marks 100

[A]	**Prescribed Course:**	**Credits:04**
	Unit 1. ज्योतिषशास्त्र का विषय एवं क्षेत्र, ज्योतिषशास्त्र का काल वर्गीकरण एवं उसकी महत्ता	
	Unit 2. ज्योतिषशास्त्र का स्वरूप,उसका विकास-क्रम एवं ज्योतिषशास्त्रीय अनुसन्धान	
	Unit 3. वास्तुशास्त्र का विषय-क्षेत्र एवं वास्तुशास्त्र की महत्ता	
	Unit 4. वास्तुशास्त्र के प्रकार, भूमि चयन,भूमि परीक्षा एवं वास्तुशास्त्रीय अनुसंधान	
[B]	**Course Objectives:**	
	This course aims to acquire the knowledge of brief introduction of Jyotishshastra and Vastushastra. In this course, the focus will be on development of Jyotishshastra and Vastushastra and its importance in human life.	
[C]	**Unit Wise Division:**	
	Unit 1. ज्योतिषशास्त्र का विषय एवं क्षेत्र, ज्योतिषशास्त्र का काल वर्गीकरण एवं उसकी महत्ता	**25**
	ज्योतिष शब्द का अर्थ एवं व्युत्पत्ति, ज्योतिषशास्त्रीय प्रमुख ग्रन्थ एवं उसके प्रवर्त्तक आचार्य, ज्योतिषशास्त्र का कालगत विकास, ज्योतिषशास्त्र की मानव जीवन में उपयोगिता, ज्योतिषशास्त्र की वैज्ञानिक पृष्ठभूमि	
	Unit 2. ज्योतिषशास्त्र का स्वरूप, विकास-क्रम एवं ज्योतिषशास्त्रीय अनुसन्धान	
	सिद्धांत, संहिता, होरा, प्रश्न, शकुन एवं नष्टजातक, ज्योतिषशास्त्रीय अध्ययन की शोधप्रविधियाँ, शोधसर्वेक्षण	
	Unit 3. वास्तुशास्त्र का विषय-क्षेत्र एवं वास्तुशास्त्र की महत्ता	**25**
	वास्तुशास्त्र शब्द का अर्थ एवं व्युत्पत्ति, वास्तुशास्त्रीय प्रमुख ग्रन्थ एवं उसके प्रवर्त्तक आचार्य वास्तुशास्त्र की मानव जीवन में उपयोगिता एवं वास्तुशास्त्र की वैज्ञानिक पृष्ठभूमि	
	Unit 4. वास्तुशास्त्र के प्रकार, भूमि चयन एवं भूमि परीक्षा एवं वास्तुशास्त्रीय अनुसंधान	**25**
	भूमि के प्लवत्व के और रचना के आधार पर वास्तुशास्त्र के प्रकार-सर्वतोभद्र, नन्द्यावर्त, वर्धमान, स्वस्तिक, रुचक, हिरण्य और त्रिशाल, पितामहवास्तु, सुपथवास्तु, दीर्घायु वास्तु, पुण्यकवास्तु, अपथवास्तु, रोगकरवास्तु, अर्गलावास्तु, भूमि चयन एवं भूमि परीक्षा, वास्तुशास्त्रीय अध्ययन की शोधप्रविधियाँ, शोधसर्वेक्षण	
[D]	**Basic Structure of Question Paper & Division of Marks**	
	i. प्रत्येक अन्विति से एक-एक समीक्षात्मक प्रश्न ii. प्रत्येक अन्विति से एक-एक टिप्पणी	04x20=80 04x05=20
[E]	**Recommended Readings:**	

1. भारतीय ज्योतिषशास्त्र का इतिहास-गोरखप्रसाद, हिन्दी संस्थान, लखनऊ, 2010
2. भारतीय ज्योतिषशास्त्र का इतिहास - नेमीचन्द शास्त्री, भारतीयज्ञानपीठ, नई दिल्ली, 1970
3. भारतीय ज्योतिषशास्त्र का इतिहास - (अनु.), शिवनाथ झारखण्डी, हिन्दी संस्थान, लखनऊ,1957
4. बृहद्वास्तुमाला- ब्रह्मानन्द त्रिपाठी द्वारा संशोधित व सम्पादित, चौखम्बा सुरभारती प्रकाशन, वाराणसी, 1987
5. वास्तुरत्नाकर, श्री विन्ध्येश्वरी प्रसाद द्विवेदी, चौखम्बा संस्कृत सीरीज ऑफिस वाराणसी,1997
6. बृहत्संहिता -आचार्य वराहमिहिर, व्याख्याकार - अच्युतानन्द झा, चौखम्बा विद्याभवन, वाराणसी, 1983
7. समराङ्गणसूत्रधार: (Ed) Prof. Pushpendra Kumar, New Bharatiya Book Corporation, 2004

EC110: Basics of Sanskrit Computational Linguistics
संस्कृत संगणकीय भाषाविज्ञान की सामान्य अवधारणा

			Total Marks 100
[A]	**Prescribed Course:**		**Credits: 04**
	Unit: I. Areas of Sanskrit Computational Linguistics Unit: II. Areas of Sanskrit Computational Linguistics Unit: III. Webpage Development Unit: IV. Survey of Related Research done in the field of CL		
[B]	**Course Objectives:**		
	This course will introduce the basic concepts of Sanskrit computational linguistics and prepare the students for the next level. After covering topics in computational linguistics, the students will be able to learn the tools and techniques of computational linguistics and do further research and development in the field.		
[C]	**Unit Wise Division:**		
	Unit-I: Areas of Sanskrit Computational Linguistics		**25**

	Speech Technology:
	    Speech Recognition, Speaker recognition, Speech Synthesis, Text to speech, Methodology and Approaches, Applications of Speech Technology
	Language Analysis/Text Processing:
	    Language Analysis, Language Understanding, Language Generation, Text Processing		

	Unit-II: Areas of Sanskrit Computational Linguistics		**25**

	Text Preservation and Search:
	    Text Preservation Techniques, Text Files / Databases, Search/Mining Methodology and Approaches, Sanskrit e-corpora development
	Machine Translation:
	    Source Language, Target Language, Methodology and Approaches, Lexicon, Corpora Types of MT and Major MT Systems		

	Unit-III: Webpage Development		**25**
	Web Page Development: Basics of Hyper Text Markup Language (HTML), Basics of Cascading Style Sheet (CSS) Java Script (JS)		
	Unit-IV: Survey of Related Research done in the field of SCL		**25**
	Survey of Related Researches done in the field of SCL		
[D]	**Basic Structure of Question Paper & Division of Marks**		
	i. Four (4) Long Answer Type (One (1) from each Unit)		**04x20=80**
	ii. Four (4) Short Notes (one (1) from each Unit)		**04x05=20**
[E]	**Recommended Readings**		
	1. Beighley, L. (2007). *Head First SQL: Your Brain on SQL--A Learner's Guide*. "O'Reilly Media, Inc.". 2. Beighley, L., & Morrison, M. (2008). *Head First PHP & MySQL*. "O'Reilly Media, Inc.". 3. Bird, S., Klein, E., & Loper, E. (2009). *Natural language processing with Python: analyzing text with the natural language toolkit*. "O'Reilly Media, Inc.". 4. Chandra Subhash & Jha Girish Nath (2011). *Computer Processing of Sanskrit Nominal Inflections: Methods and Implementation*. Cambridge Scholars Publishing (CSP), 12 Back Chapman Street, Newcastle upon Tyne.		

5. Chandra Subhash (2016). *Knowledge Representation for Sanskrit Verb Argument Valence Authentication: An Ontological Approach*. Scholars' Press, Heinrich-Böcking-Str. 6-8, 66121, Saarbrücken, Germany.

6. Chandra Subhash (March, 2017). *मशीनी अनुवाद (Machine Translation) यूजीसी सीबीसीएस स्कीम के तहत बीए (संस्कृत) के एईईसी (AEEC)-3 के पाठ्यक्रम पर आधारित*. Vidyanidhi Prakashana, New Delhi.

7. http://spyce.sourceforge.net/

8. http://www.cs.sfu.ca/CourseCentral/354/zaiane/material/notes/contents.html

9. Jurafsky, D. (2000). Speech and language processing: An introduction to natural language processing. *Computational linguistics, and speech recognition*.

10. Lutz, M. (2013). *Learning Python: Powerful Object-Oriented Programming*. "O'Reilly Media, Inc."

11. Mitkov, R. (Ed.). (2005). *The Oxford Handbook of Computational Linguistics*. Oxford University Press.

12. Robson, E., & Freeman, E. (2005). *Head First Html with CSS & XHTML*. "O'Reilly Media, Inc.".

13. Ullman, J. D. (1982). *A first course in database systems*. Pearson Education India.

14. Xue, N., & Bird, E. (2011). Natural Language Processing with Python. *Natural Language Engineering*, *17*(3), 419.

Note:	Teachers are free to recommend any relevant books/articles/e-resource.