

**DRAFT**

**NATIONAL EDUCATION POLICY-2020**

**COMMON MINIMUM SYLLABUS FOR  
ALL UTTARAKHAND STATE  
UNIVERSITIES AND COLLEGES FOR  
FIRST THREE YEARS OF HIGHER  
EDUCATION**

**PROPOSED CO-CURRICULAR  
SYLLABUS**

**2022**

## EXPERT COMMITTEE

S.N.	Name	Designation	Department	Affiliation
1.	Prof P C Kavidayal	Director, Sir J.C Bose Campus, Bhimtal	Management	Kumaun University, Nainital
2.	Prof Rajeev Upadhyay	Director IQAC	Geology	Kumaun University, Nainital
3.	Prof Atul Joshi	Head/ Dean	Commerce	Kumaun University, Nainital
4.	Prof Divya Upadhyay	Director	UGC HRDC	Kumaun University, Nainital
5.	Dr Bhaskar Chaudhary	Assistant Professor	Education	SSJ University, Almora
6.	Dr Ashutosh Bhatt	Assistant Professor	Computer Science	UOU
7.	Dr Jitendra Pandey	Assistant Professor	Computer Science	UOU
8.	Dr. Mahendra Rana	Assistant Professor	Pharmaceutical Sciences	Kumaun University, Nainital
9.	Dr. Nandan Singh Bisht	Assistant Professor	Economics	Kumaun University, Nainital
10.	Dr. Ritesh Sah	Assistant Director	UGC-HRDC	Kumaun University, Nainital
11	Dr. Sparsh Bhatt	Assistant Professor	Statistics	Kumaun University, Nainital

## SYLLABUS PREPARATION COMMITTEE

S.N	Name	Designation	Department	Affiliation
1.	Prof Rajeev Upadhyay	Professor	Geology	Kumaun University, Nainital
2.	Dr. Mahendra Rana	Assistant Professor	Pharmaceutical Sciences	Kumaun University, Nainital
3.	Dr. Nandan Singh Bisht	Assistant Professor	Economics	Kumaun University, Nainital
4.	Dr. Reetesh Sah	Assistant Director	UGC-HRDC	Kumaun University, Nainital
5.	Dr. Sparsh Bhatt	Assistant Professor	Statistics	Kumaun University, Nainital
6.	Dr. Deepakshi Joshi	Assistant Professor	Law	Kumaun University, Nainital
7.	Dr Ashutosh Kumar Bhatt	Assistant Professor	Computer Science	Uttarakhand Open University, Haldwani
8.	Dr Manish Tripathi	Assistant Professor		S.S.J Campus, S.S. J University, Almora
9.	Dr. Jetendra Pnde	Assistant Professor	Computer Science	Uttarakhand Open University, Haldwani
10.	Dr. Bhaskar Chudhary	Assistant Professor	Education	S.S.J Campus, S.S. J University, Almora
11.	Dr. Archana Sah Negi	Assistant Professor	Pharmaceutical Sciences	Kumaun University, Nainital

# VEDIC MATHEMATICS

<b>Programme: Under Graduation</b>	<b>Year:2</b>	<b>Semester: 4</b>
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**Subject: Co-curricular Course**

<b>CourseCode: CCS 05</b>	<b>Course Title: Vedic Mathematics</b>
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Vedic Mathematics is a super-fast way of calculation there are just 16 Sutras or Word Formulae which solve all known mathematical problems in the branches of Arithmetic, Algebra, Geometry and Calculus. They are easy to understand, easy to apply and easy to remember.

**Objectives:**

- To enable the learners to explore the power of Vedic Maths.
- To make learners strong in Numerical Maths.
- To enable learners to recognize and understand simple techniques of Arithmetic Calculations.
- To train learners to use the ideas of Vedic Maths in daily calculations and make those calculations with accuracy and speed.

**Course Outcomes:**

1. By successfully completing this course, the learner will be able to:
2. Perform simple arithmetic calculations with speed and accuracy
3. Will be able to generate tables of any number
4. To perform products of large numbers quickly
5. Develop confidence in calculating square roots and cube roots of integers
6. Perform difficult calculations speedily.
7. Face Numerical Aptitude part of any Competitive Examination confidently.

<b>Credits: Nil</b>	<b>Core Compulsory</b>
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<b>Max. Marks: 100</b>	<b>Min. Passing Marks:40</b>
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**Total No. of Lectures-Tutorials-Practical (in hours per week): 4-0-0**

Unit	Topic	No. of Lectures
<b>Unit I</b>	<b>Introduction to Vedas, History of Vedas History and Evolution of Vedic Mathematics</b> Introduction of Basic Vedic Mathematics Techniques in Multiplication (Special Case, Series of 9, Series of 1 etc.), Tables etc.,	<b>08</b>
<b>Unit II</b>	Various techniques to carry out basic operations covering Addition, Subtraction, Multiplication, Division, Complements and Bases, Vinculum number. Comparison of Standard Methods with Vedic Methods.	<b>07</b>
<b>Unit III</b>	General multiplication (Vertically Cross-wise), Multiplications by numbers near base. Verifying answers by use of digital roots, Divisibility tests, Division of numbers near base, Comparison of fractions.	<b>07</b>
<b>Unit IV</b>	Different methods of Squares (General method, Base method, Duplex method etc.) Cubes, Cube roots, Square Roots, General division. Quadratic Equations, Simultaneous Equations, Use of various Vedic Techniques for answering numerical aptitude questions from Competitive Examinations	<b>08</b>

**Suggested Reading:**

1. Bhatiya Dhaval, Vedic Mathematics Made Easy, Jaico Publishing House
2. Thakur Rajesh Kumar, Vedic Mathematics for students taking Competitive Examinations. Unicorn Books 2015 or Later Edition
3. Gupta Atul, Power of Vedic Mathematics with Trigonometry, Jaico Books
4. V. G. Unkalkar, Magical World of Mathematics (Vedic Mathematics), Vandana Publishers, Bangalore
5. Bhatiya Dhaval, Vedic Mathematics Made Easy, Jaico Publishing House
6. Thakur Rajesh Kumar, Vedic Mathematics for students taking Competitive Examinations. Unicorn Books 2015 or Later Edition
7. Gupta Atul, Power of Vedic Mathematics with Trigonometry, Jaico Books
8. V. G. Unkalkar, Magical World of Mathematics (Vedic Mathematics), Vandana Publishers, Bangalore

**Suggested Online Link:** None

**Suggested equivalent online courses:** None

**This course can be opted as a co-curricular course by the students of following subjects:**

B.A.  
B. Com  
B.B.A  
B.Sc.  
B.F.A  
B. Lib  
B.A.LL.B. (Hons)  
B.A.LL. B  
B.B.A.LL.B.  
B. Pharm

**Suggested Continuous Evaluation (25 Marks):**

Internal Assessment	Marks	External Assessment	Marks
Midterm Test	10	Written Examination	75
Assignment	5		
Presentation	5		
Attendance & class performance	5		

**Course Prerequisites:**

No pre-requisite required, open to all.