## About Gujarat Technological University

Gujarat Technological University (GTU) is the largest state government university in Gujarat, catering to the fields of Engineering, Business Management, Computer Science, Pharmacy and Architecture. Today GTU is considered as the benchmark among the technological universities of India. The Industrial Training and Placement Cell transform a knowledge seeker into a sought-after professional. GTU's Policy Documents for Student Start-up Development and for Skill Development Mission are being used by universities all over India

## About JKMS

JKMS Foundation was established in the year 2016 with an aim to promote Bhartiya Ganit Shastra. It connects ancient Bhartiya wisdom to modern Mathematics and inspires young minds to solve problems in the easiest way possible with perfection. JKMS caters problems from Calculations to Calculus. Vigorous endeavors have been put in continuing the legacy of Indian Mathematics JKMS Foundation has successfully organized sessions of Bharatiya Ganit Shastra (Vedic Mathematics) with GTU, Faculty development Program with L.D. College of Engineering, DIET, SCERT New Delhi, Vaidik Gurukulam Lucknow. JKMS is also associated with Blind Persons Association, Ahmedabad in imparting training to visually Impaired students with concepts of Mathematics. It is also conducting online training program in association with VHPA (U.S.)

यथा शिखा मयूराणां, नागानां मणयो यथा। तद् वेदांगशास्त्राणां, गणितं मूर्ध्नि वर्तते॥

Like the crowning crest of a peacock ,and the shining gem on the cobra's hood Mathematics is the supreme among Vedanga shastras

## Coordinators

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Resource Persons

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(3) Mr. Maruti J. K. Sharma
(4) Mr. Dheeraj Gupta

Important Guidelines
Eligibility:10+2 or equivalent from a recognized Board. Eng. Diploma / degree students / Graduates/ Postgraduates / Professionals
**Duration of Course** : 2.5 months
**Apply Online**   ( Online Registration Form)
**Last Date of Online Application**: 28th Nov. 2020
Program fee :         Rs.3500/-
Non- Residential :-   For Indian Citizens
**Overseas Students**: USD. $ 150.00
*Fees is inclusive of Study Material (Soft copy) and Online exam fees*
**Venue:**- Online mode
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**Payment Gateway** :http://payit.cc/S16680

## Gujarat Technological University
### Graduate School of Engineering and Technology

### Centre For Continuing Education (GTU- CCE)
And
### Jagat Kyoso Centre for Mathematics and Sciences
(Supported by JKMS Foundation New Delhi)
**Organize**

**Course for**

## "CERTIFICATE  PROGRAM"
in
### BHARATIYA GANIT SHASTRA
{Vedic Mathematics}
Its Applications
in
### Modern Mathematics

**Starts 1st December 2020**

**Ends 06th  February 2021**

**Time: evening 4.30 to 5.00 PM**

BHARATIYA GANIT SHASTRA

-A WAY TO UNDERSTAND MATHS

**Training Mode: Online**

## About Bhartiya Ganit Shastra

Mathematics is the unseen thread that links various subjects together to form a beautiful necklace of the Total Knowledge.

Bharatiy Ganit Shastra a subject which existed in India since centuries, where calculations which were essentials for in subjects of Astronomy and Astrology and can be seen in Shulbsutras, Aryabhatiya,Lilawati Ganitam in its simplest forms and flexibility. It is not unknown that Scientific knowledge was at its peak in ancient India and can be seen in architecture of ancient temples which are monumental proof of expertise beyond our belief. . Mathematics is the queen of all sciences.

Mathematics is a distressing word for many across the world. This subject is considered as Dry subject studied as an obligation. Whereas application of Mathematics is there in all walks of life as well as Professions , *still it is seen that many students study Maths out of compulsion whether they like or not. whether they like it or not. Majority of School children feel that they must deal with Mathematics only till they finish school but, when they enter college, this dream is often shattered.*
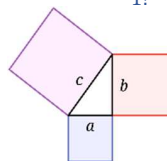
## Mathematics in Ancient India

The mathematics in India can be sighted in the Vedic literature which developed later into Astronomy, Astrology, Algebra, Arithmetic, Geometry and so on. As per the need of time, the ancient Indian mathematicians like Aryabhata, Bhaskara, Varahmihir, compiled the existing knowledge of mathematics along with their exhaustive discoveries and the

works written by these medieval Mathematicians were far advanced than the Mathematics that evolved in the West. Brahmagupta, established rule for cyclic quadrilaterals and globally famous Brahmagupta equation. Bodhayana explained complete theory of right-angled triangles in his globally famous book Shulba Sutras. Lilavati of Bhaskaracharya is "The Manuscript of Maths" Since the last century, many Westerners have started doing research and translating many a works by the ancient Indian mathematicians. The expositions by ancient Indian mathematicians can also be termed Vedic because it was developed from the Vedic literature. Remember that Ancient Indian Mathematics does not mean only techniques to: - do calculations faster, but also covers the whole.

$$\cos\alpha + \cos\beta = 2\cos\frac{1}{2}(\alpha+\beta)\cos\frac{1}{2}(\alpha-\beta)$$

$$x = \frac{-b \pm \sqrt{b^2-4ac}}{2a} \quad (x+a)^n = \sum_{k=0}^{n}\binom{n}{k}x^k a^{n-k}$$

$$(1+x)^n = 1 + \frac{nx}{1!} + \frac{n(n-1)x^2}{2!} + \cdots \quad A = \pi r^2$$

**a² + b² = c²**

दीर्घचतुरस्रस्य अक्ष्णयारज्जुःपार्श्वमानी तिर्यमानिच।

यत् पृथग्भूते कुरुतस्तदुभयं करोति॥

Bodhayana Shulba Sutra chapter I verse 48
In a Right-Angled Triangle the sum of the areas of the two

squares on the legs (a and b) equals the area of the square the hypotenuse (c).

## Certificate course in Bharatiya Ganit Shastra (vedic ganit)

Bharatiya Ganit shastra (Vedic Mathematics) simplifies all the branches of Mathematics. It has increasingly found acceptance globally owing to the precision, swiftness, and flexibility in calculation. The current certificate program has been designed as per Diploma course curriculum. It will help the students understand fundamentals of Mathematics to excel in their academic field. Participants will be able to apply Bharatiya Ganit shastra concepts in various domains of Mathematics Such as:

> ➢ **Trigonometry & Calculus**
> ➢ **Coordinate Geometry**
> ➢ **Polynomial Functions**
> ➢ **Algorithms &Graphs….***much more*

This unique program will also lead to expansion of Logical, Conceptual thinking, and insight in an Individual. In addition, preparation for Competitive Examination being an inbuilt part of Bharatiya Ganit Shastra program makes it a holistic and essential prerequisite for today's rapidly changing World. The very objective of this Certificate program is to make student conversant with Bharatiya Ganit Shastra Principles and formulae which are easy to understand and flexible in operative procedure. This 10 weeks Certificate program comprises of thrice a week session of 1.5-hour duration each . Training will encompass glorious history of Bharatiy Ganit (Vedic Mathematics),flexible calculation practices involved in for complex Mathematical processes in above mentioned domains of Mathematics