**Math in Music – An Introduction**

**Programme(s) in which it is offered: All UG Programmes**

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| **Course Category**: Multidisciplinary  | **Sub category**: Humanities & Social sciences |
| **Course Credit Structure:** 3 | **Course Code:**  |
| **Total Number of Hours: 45 hours** | **Contact Hours Per Week:** 3 hours |
| **Lecture:** Credits-2, Hours: 30 | **Tutorial:** Credits-1, Hours: 15 |
| **Practical:** nil | **Medium of Instruction: E**nglish/Malayalam/Tamil |
| **Date of Revision:** | **Skill Focus:** Life skills |
| **Short Name of the Course:** MD\_MM | **Schedule of Offering**: Odd/Even |
| **Course Level:** Beginner |  |

**Course Description**

This is a multidisciplinary course offered to students of all UG programme who wish to understand the math in music and learn the tala system of Carnatic Music. This course starts from the Suladi Tala system and progresses to the application of Jati-s in various tala-s. This course helps them to elevate the appreciation level of Carnatic Music, which is the traditional art form of India.

**Course Introduction**

This course purely concentrates on the Tala system of Carnatic Music. It commences with the Adi tala and the concept of Suladi Sapta tala system and how it is developed to 35 talas and 175 talas. The concept of Chapu tala-s are also dealt with in this course. The application of Pancha jati Ta-Dhim-Ki-Na-Tom in these talas are aslo covered.

**Course Objective**

* Familiarise the concept of Tala system in the traditional South Indian Music
* Familiarise laya by simple rhythm techniques and learn basic technical terms
* Introduction to saptatalas and tala exercises
* Awareness on Jati system and its application on various tala-s
* Learn to apply chollu-s in off-beat pattern

**Course Outcome**

By the end of the course the students -

* understand the concept of Tala and Laya
* Explain saptatala-s, 35 tala-s & 175 tala-s and also chapu tala-s
* Apply Panchajati Ta-Dhim-Ki-Na-Tom in sapta tala and chapu tala
* Appreciate Carnatic music concert with more concrete knowledge of tala system
* Create Koruvai-s on the basis of acquired knowledge in this course

**Prerequisites and other constraints**

Basic interest to approach and learn a new area of knowledge.

**Pedagogy**

The methodology of instructions in this course is based on the following principles.

* Training during tutorials to enhance rhythmic aptitude
* Theory sessions to understand concepts, terminologies used in Carnatic music tala system, and assignments on these topics
* Assignments, interim singing and theory evaluation will be done along with the course
* Interim demo sessions by students to enhance confidence in the area.
* E Content and listening material shall be used wherever necessary

**Suggested Reading:**

(1) Raveendranath, AK. Dakshinenthyan sangeetam. Kerala: Department of cultural publications, Government of Kerala.

(2) Sambamoorthy,P. South Indian Music Book I. Chennai: The Indian Music Publishing House, Royapettah

(3) Chelladurai, PT. The splendour of South Indian Music. Dindigul: Vaigarai publishers, Dindigul, Tamilnadu

**Evaluation Pattern**

**Classroom participation** – Evaluation of student involvement in the classroom and the practice and delivery of learnt content in class.

**Assignments** –

(1) How sapta tala-s are developed into 335 and 175 tala-s

(2) Chapu Tala-s and its varieties

**Viva**

Viva 1 – to evaluate Tala learning

Viva 2 – to evaluate the understanding of Chollu-s in Tala-s.

**Quiz** – 2

One individual quiz to assess the understanding of application of Tala system in Carnatic music

One group quiz activity to assess coordination while exchanging the chollu-s in Pancha jati-s and Korappu

**End Semester Examination –**

(1) **Written theory examination** - basic terminologies used in the Tala system of Carnatic music the notation writing techniques of Tala-s.

(2) **Individual Viva evaluation** - on the Tala system they have learned.

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| Continuous InternalAssessment (CIA) Components\* | Component Type | Weightage Percentage | TotalMarks | Tentative Dates |
| Assignments | 12% | 40 | After 10hrs, 20hr, 35 hrs, 50hrs |
| Viva | 9% | 30 | After 15hrs, 30hrs,45hrs |
| Quiz | 6% | 20 | After25hrs, 40 hrs  |
| Classroom Participation | 3% | 10 | Throughout the course |
| CIA Marks | 30% | 100 |  |
| ESE  | 70% | 100 |  |

**Module Sessions**

**Module 1: Sruti & Laya No. of Hours: 10**

Introduction to Carnatic Music Tradition

Concept of Sruti & Laya

Difference between Tala and Laya

Adi Talam in 1st, 2nd, 3rd and 4th speeds

Matra & Aksharam

Suladi sapta Tala-s

Anga-s – Laghu, Drutam, Anudrutam

Concept of Tisram

Jati & Gati

Development of sapta tala-s to 35 and 175 tala-s

**Reading:**

(1) Raveendranath, AK. Dakshinenthyan sangeetam. Kerala: Department of cultural publications, Government of Kerala.

(2) Vidya Shankar. Aesthetic and scientific values in Carnatic Music (Vol – III): publishedby Parampara, Chennai

**Activities:**

Individual/group practice sessions of Tala exercises and chollus

Listen to the audio/video content and e content provided/suggested during sessions

Group discussion on topics covered

**Module 2: Chapu Tala-s No. of Hours: 10**

What are Chapu Tala-s

Types of Chapu Talam

History of Chapu Talam

Difference between Chapu and Suladi sapta tala-s

Chollu-s of Chapu Talam

Practice of Chapu talam in 1st & 2nd speed

Practice of Chapu talam with chollu after one matra, two matra-s, three matra-s and four matra-s

**Reading:**

(1) Raveendranath, AK. Dakshinenthyan sangeetam. Kerala: Department of cultural publications, Government of Kerala.

(2) Vidya Shankar. Aesthetic and scientific values in Carnatic Music (Vol – III): publishedby Parampara, Chennai

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Group discussion on topics covered

**Module 3: Pancha Jati-s & Koruvai-s No. of Hours: 10**

5 Jatis

Pancha Jati Ta-Dhim-Ki-Na-Tom

Application of the same in sapta talam & chapu tala-s

Pancha Jati in Tisram

Concept of Kuraippu in Adi Talam- reducing from 64 to 8

Setting of Koruvai in Adi Tala

Concept of Kuraippu in other Tala-s with more Aksharakala-s

**Reading:**

(1) Raveendranath, AK. Dakshinenthyan sangeetam. Kerala: Department of cultural publications, Government of Kerala.

(2) Vidya Shankar. Aesthetic and scientific values in Carnatic Music (Vol – III): publishedby Parampara, Chennai

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**Module 4: Taladaśaprāna No. of Hours: 15**

What is Taladaśaprāna?

Influence of each prana in Tala

Impact of these prana-s in kriti/composition/musical part

History of Chapu talam

Tala in one, two and four Kalai

Notation system of Tala-s in Chaturasram and Tisram

Makuta swaram

**Reading:**

(1) Raveendranath, AK. Dakshinenthyan sangeetam. Kerala: Department of cultural publications, Government of Kerala.

(2) Vidya Shankar. Aesthetic and scientific values in Carnatic Music (Vol – III): publishedby Parampara, Chennai

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Note: The number of hours may be decided by the instructors based on the content and importance of the module.