

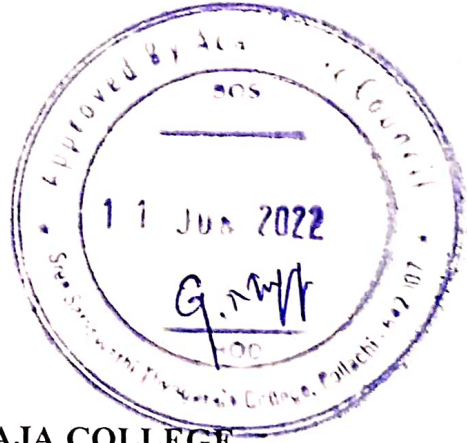
Curriculum Framework under Choice Based Credit System (CBCS) and

Syllabus for Outcome Based Education (OBE) in

**BACHELOR OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING**

**(B.Sc AI&ML) Degree Programme**

for the students admitted from the academic year 2022 – 23



**SREE SARASWATHI THYAGARAJA COLLEGE**

An Autonomous, NAACRe–Accredited with ‘A’ Grade, ISO 21001:2018 Certified  
Institution, Affiliated to Bharathiar University, Coimbatore, Approved by AICTE for  
MBA/MCA and by UGC for 2(f) & 12(B) status

Palani Road, Pollachi–642107, Coimbatore Dist, Tamilnadu

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(including end-semester examinations and semester breaks)

ii) Even Semester: December -May

(including end-semester examinations and semester breaks)

Any change in the Academic Calendar/Schedule may be made by the college whenever necessary.

#### Academic Schedule:

The Academic Schedule of all degree programmes under the CBCS shall be administered as per the Academic Calendar of the college published for every academic session.

#### 3. Course Structure:

The Course Structure of the Academic Programmes under the CBCS shall be as per the Course Structure given below. The nature of the Courses for all Academic programmes shall be as below:

**UG programmes are conducted with a minimum total of 140 credits**

*Summary of UG Courses Pattern and Credit Distribution in Choice Based Credit System as given under*

Part	Curriculum Structure	No. of Courses	Credits to be earned
I	Languages	2 - 4	6 - 12
II	English	2 - 4	6 - 12
III	Core (Major) Courses	16 - 18	72 - 80
	Allied Courses	04 - 05	16 - 20
	Electives	03	12
IV	Non-Major Electives (NME)	2	04
	Value Based Courses (VBC)	2	04
	Skill Based Courses (SBC)	4	08
V	Extension Activities	1	Grade
Total			140

**PG Programmes are conducted with a minimum total of 90 credits**

*Summary of PG Courses Pattern and Credit Distribution in Choice Based Credit System as given under*

Part	Curriculum Structure	No. of Courses	Credits to be earned
III	Core courses	17	74
	Electives	4	16
Total			90

**MBA/MCA Programme is conducted with a total of 90 credits**

*Summary of MCA Course Pattern and Credit Distribution in Choice Based Credit System as given under*

Part	Curriculum Structure	No. of Courses	Credits to be earned
III	Core Courses	20	68
	Electives	03	09
	Specialization Electives	04	13
Total			90

**Part I: Language I :** Tamil or any one of the Indian or foreign languages i.e. Malayalam, French, Hindi, Telugu and Kannada.

It is mandatory for all the UG students to study a language under part I. A student can select and study any one of the languages offered under part I. The syllabus drafted would enable the students to communicate with ease and effectiveness in that language. It is offered in the **first two semesters** with one examination at the end of each semester.

**3.2. Part II: Language II: English :** The study of English is made compulsory for all UG students under part II. The subject offered during the first two semesters with one examination at the end of each semester.

**Part III:** A set of major papers that include Theory, Practical, Allied, Core Electives, Project and Internship in the major field of study selected by the student. Core courses are mandatory.

**Part IV:**

**a) Basic Tamil/ Advanced Tamil/ NME:**

**i.** Students who have not studied Tamil up to XII STD and have taken any Language other than Tamil in Part I shall take Basic Tamil comprising of two offers in the third and fourth semesters.

**ii.** Students who have studied Tamil up to XII STD and have taken any Language other than Tamil in Part I shall take Advanced Tamil comprising of two Courses.

**iii.** Students who have studied Tamil up to XII STD and also have taken Tamil in Part-I shall take Non-Major Elective comprising of two Courses of NME in the third and fourth semesters. A set of non – major elective courses are offered as choices to the students, outside their major discipline. The courses other than the core and allied shall be opted by the students as Non – Major Electives.

**b) Skill Based Courses:** The courses offered as skill - based courses of the programme is aimed at imparting Advanced Skills of the programme. This comprises of four courses from 3rd to 6th semesters

**c) Value Based Courses :** Courses of cross-cutting issues relevant to the current pressing concerns both nationally and internationally such as gender, environment and sustainability, human values and professional ethics, development of creative and divergent competencies.

**d) Massive Open Online Courses (MOOC):** According to the guidelines of UGC, the students are encouraged to avail this option of enriching by enrolling themselves in the MOOC provided by various portals such as SWAYAM, NPTEL, and Spoken Tutorial etc. As per University Grants Commission (UGC) notification, The Massive Open Online Course (MOOC) through any online platform is compulsory. The institute is transferring the equivalent credit earned on receipt of MOOCs completion certificate and it shall incorporate these marks/credits in the overall mark sheet of the student.

**Part V: Extension Activities:**

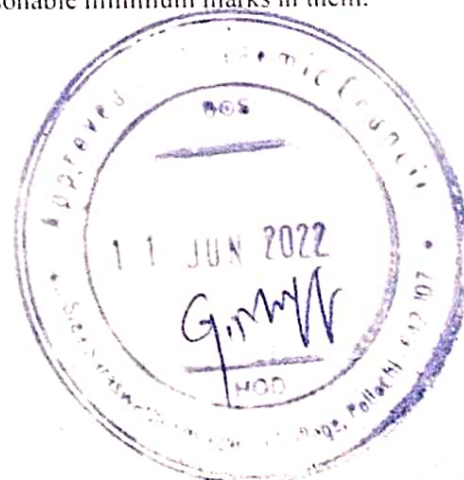
All the Students shall have to enroll compulsorily for NSS/NCC/Sports activities. The extension activities are must for each student to take part in at-least in any one of these activities for the fulfillment of the degree

The mark sheet shall carry the gradation relevant to the marks awarded to the candidates. The grades will be awarded at the end of the Fifth Semester. This grading shall be incorporated in the mark sheet to be issued at the end of the semester.

**4 Attendance Eligibility to appear for the End Semester Examinations**

A student will be allowed to appear for the end semester examinations only if:

1. He/She procures atleast 75% of attendance.
2. He/She should show satisfactory progress in studies, in all the tests and examinations conducted by the college / department during the semester and secure at least reasonable minimum marks in them.
3. His/Her conduct in the college during the semester is satisfactory.





Regulations 2022

Choice-Based Credit System for the Academic Programmes with effect from 2022-2023

The following Regulations shall be effective for the courses of study leading to the Bachelor Degree which shall be of three years duration comprising of six semesters and Master Degree which shall be of two years duration comprising of four semesters. The Regulations shall come into effect from the Academic Session, 2022-2023. STC College follows the UGC, TANSCHER and Bharathiar University guidelines of CBCS pattern in framing Course Scheme and scheme of examinations for the students admitted in various UG and PG Programmes from the Academic year 2022-23 and onwards.

I. Definitions and codification:

- a) **CBCS:** CBCS means Choice Based Credit System. Choice Based Credit System is a flexible system of learning. This system permits students to,
    - learn at their own pace
    - choose electives from a wide range of Elective Courses offered for the programme
    - undergo additional courses and acquire more than the required number of credits
    - adopt an inter-disciplinary approach in learning
    - make the best use of the expertise of the available faculty.
  - b) **Programme:** The term 'programme' is used to mean the whole learning experience or combination of courses in a particular field of study
  - c) **Curriculum:** The term "Curriculum" indicates the various components of the programme and branch of study. The UG Curriculum under the CBCS consists of five parts and the medium of instruction is English. The PG Curriculum under the CBCS consists of only part III and the medium of instruction is English. Part four offers additional credits.
  - d) **Course:** A Programme is divided into a number of courses. A course is a unit of instruction or segment of subject area under any programme. The traditional concept 'paper' is replaced by 'course'.
  - e) **Scheme of examination:** It denotes the course outline during the period of study or the components of the particular Programme and branch of study.
  - f) **Syllabus:** The subject contents of each course is referred to as "Syllabus".
  - g) **Academic Year:** An academic year means a period of twelve months consisting of two semesters.
  - h) **Semester:** The word "semester" is used to mean a half-yearly term or term of studies including examinations, vacations and semester breaks.
  - i) **Semester Duration:** A semester normally extends over a period of 15 class weeks. Each week has 30 hours of instruction spread over the week.
  - j) **CIA:** The word "CIA" is used to refer to the continuous internal assessment within the half-yearly term.
  - k) **End-semester:** The word "end-semester" is used to refer to the terminal processes of examinations and evaluations at the end but within the half-yearly term.
  - l) **Credit:** 'Credit' defines the quantum of contents/ syllabus prescribed for a course and determines the number of hours of instruction required per week. Thus, normally in each of the course, credits will be assigned on the basis of the number of lectures/ tutorials/ laboratory work and other forms of learning required to complete the course contents in a 14-15 week schedule:
 

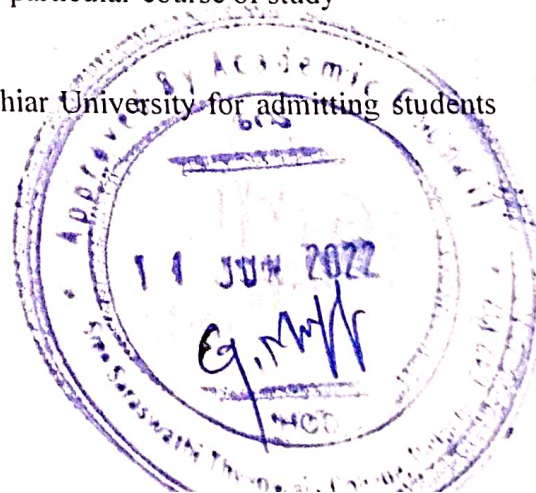
i) 1 Lecture	= 1 Hour duration	=1 Credit
ii) 1 Tutorial	= 1 Hour duration	=1 Credit
iii) 1 Practical	= 2 Hours duration	=1 Credit
- Note:** The lecture sessions and tutorials shall not be substituted with any other activities like seminars, group discussions etc..
- m) **Grade point:** Grade point is the numerical weightage given to the particular course of study

Admission

The eligibility conditions and the guidelines issued by the Bharathiar University for admitting students are followed for all UG and PG Programmes offered at STC.

Semester Duration:

- i) Odd Semesters: June –November



(including end-semester examinations and semester breaks)

ii) Even Semester: December -May

(including end-semester examinations and semester breaks)

Any change in the Academic Calendar/Schedule may be made by the college whenever necessary.

### Academic Schedule:

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	Specialization Electives	04	13
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**Part I: Language I :** Tamil or any one of the Indian or foreign languages i.e. Malayalam, French, Hindi, Telugu and Kannada.

It is mandatory for all the UG students to study a language under part I. A student can select and study any one of the languages offered under part I. The syllabus drafted would enable the students to communicate with ease and effectiveness in that language. It is offered in the **first two semesters** with one examination at the end of each semester.

**3.2. Part II: Language II: English :** The study of English is made compulsory for all UG students under part II. The subject offered during the first two semesters with one examination at the end of each semester.

**Part III:** A set of major papers that include Theory, Practical, Allied, Core Electives, Project and Internship in the major field of study selected by the student. Core courses are mandatory.

**Part IV:**

a) Basic Tamil/ Advanced Tamil/ NME:

i. Students who have not studied Tamil up to XII STD and have taken any Language other than Tamil in Part I shall take Basic Tamil comprising of two offers in the third and fourth semesters.

ii. Students who have studied Tamil up to XII STD and have taken any Language other than Tamil in Part I shall take Advanced Tamil comprising of two Courses.

iii. Students who have studied Tamil up to XII STD and also have taken Tamil in Part-I shall take Non-Major Elective comprising of two Courses of NME in the third and fourth semesters. A set of non – major elective courses are offered as choices to the students, outside their major discipline. The courses other than the core and allied shall be opted by the students as Non – Major Electives.

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d) **Massive Open Online Courses (MOOC):** According to the guidelines of UGC, the students are encouraged to avail this option of enriching by enrolling themselves in the MOOC provided by various portals such as SWAYAM, NPTEL, and Spoken Tutorial etc. As per University Grants Commission (UGC) notification, The Massive Open Online Course (MOOC) through any online platform is compulsory. The institute is transferring the equivalent credit earned on receipt of MOOCs completion certificate and it shall incorporate these marks/credits in the overall mark sheet of the student.

**Part V: Extension Activities:**

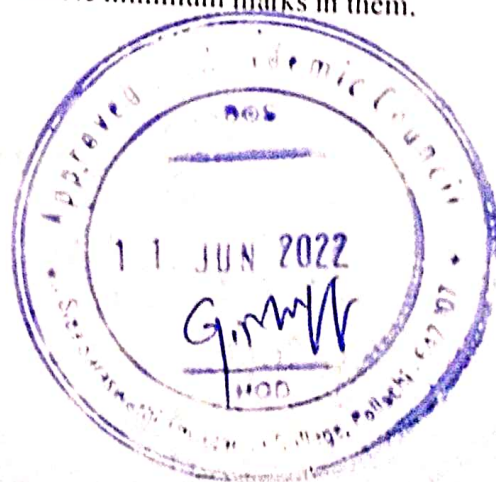
All the Students shall have to enroll compulsorily for NSS/NCC/Sports activities. The extension activities are must for each student to take part in at-least in any one of these activities for the fulfillment of the degree

The mark sheet shall carry the gradation relevant to the marks awarded to the candidates. The grades will be awarded at the end of the Fifth Semester. This grading shall be incorporated in the mark sheet to be issued at the end of the semester.

**Attendance Eligibility to appear for the End Semester Examinations**

A student will be allowed to appear for the end semester examinations only if:

1. He/She procures atleast 75% of attendance.
2. He/She should show satisfactory progress in studies, in all the tests and examinations conducted by the college / department during the semester and secure at least reasonable minimum marks in them.
3. His/Her conduct in the college during the semester is satisfactory.





### Shortage of Attendance

The following regulations will be followed for condonation and detention as well:

1. Candidates who earn 75% of attendance and above in the current semester are eligible to write the examinations, both arrears and regular subjects.
2. Candidates who earn attendance between 65% and 74% (both included) in the current semester are not eligible to appear for the examination if the shortage of attendance is condoned by the Principal after the payment of the condonation fee prescribed by the Bharathiyar University.
3. Candidates who earn attendance between 50% and 64% (both included) in the current semester are not eligible to write examinations in the current semester subjects but are permitted to continue their studies in the next semester provided it is the first time that the candidates have earned attendance between 50% and 64% or else the candidates have to discontinue the course and rejoin in the same semester during next year with the proper approval of the Registrar, Bharathiyar University. However, these candidates are eligible to write the arrears if they have any.
4. Candidates who earn attendance below 50% are not eligible to write examinations in the current semester subjects and also have to discontinue the course and rejoin in the same semester in the next year with proper approval of the Registrar, Bharathiyar University. However, these candidates are eligible to write the arrears subjects, if any.
5. Candidates who earn attendance between 50% and 64% in the previous semester and have earned combined attendance of 75% or more by taking the average of the attendance earned in the current and the previous semesters are eligible to write semester subjects along with the current semester subjects.

### 5. Restrictions to appear for the examinations

- a) Any candidate having arrears paper(s) shall have to appear in all arrears paper along with the regular semester papers.
- b) "Candidates who fail in any of the course of UG degree examinations shall complete the course **within 5 years** from the date of admission and "Candidates who fail in any of the course of PG degree examinations shall complete the course **within 4 years** from the date of admission and should they fail to do so, they shall take the examination in the texts/ revised syllabus prescribed for the immediate next batch of candidates. If there is no change in the texts/syllabus they shall appear for the examination in that course with the syllabus in vogue until there is a change in the texts or syllabus. In the event of removal of the course consequent to change of regulation and / or curriculum after 4/5 year period, the candidates shall have to take up an equivalent course in the revised syllabus as suggested by the Chairman of the board of studies concerned and fulfill the requirements as per the regulation of curriculum for the award of the degree.

### 6. Examination and Evaluation:

- a) Examination and evaluation shall be done on a continuous basis, at least three times during each semester.
- b) There shall be 50% marks for internal assessment and 50% marks for End-semester examination in each course during every semester.
- c) **Internal Assessment:**  
In internal assessment, different tools such as objective tests, written tests, assignments, paper presentation, laboratory work, etc. suitable to the courses may be employed.
- d) **End Semester Examinations:**
  - There shall be one End semester examination carrying 50% Marks in each course of a Semester covering the entire syllabus prescribed for the Course. The End semester examination is normally a written/ laboratory-based examination/Project Work/Dissertation.
  - The Controller of Examinations shall make necessary arrangements for notifying the dates of the End semester examinations and other procedures as per rules (at least 20 days in advance) and the Academic Calendar notified by the College.
  - Normally, the End-semester examination for each course shall be of three hour duration.
- e) The Procedure for Internal Assessment and End Semester Examination is prescribed in **Annexure I**.
- f) The pattern of Question paper both the CIA and ESE is prescribed in **Annexure II**.
- g) **Confidential Works:** Setting the question papers, scrutinizing of question papers, evaluating the answer scripts, tabulation of marks, etc. and announcement of results, shall be governed by the Controller of Examinations.
- h) The mode of conduct of the end-semester examinations of the practical/ dissertation courses shall be partially external as below:

G. M. M. R.



- The end-semester examinations of all practical/ dissertation courses shall be conducted by a Board of Examiners consisting of the internal examiner (the concerned course teacher) and an external examiner appointed by the Controller of Examinations.
- i) The mode of end-semester examination and evaluation of the Course shall be specified in the detailed syllabus of the Course concerned.
- j) End-semester Practical examinations shall normally be held before the theory examinations.

## 7. Malpractices in Examinations

The students, who indulge in any malpractice, while writing examination, will be directed to report to the Chief Superintendent. The chief superintendent will review and forward the case to Controller of Examinations and the COE in turn will submit the details to Malpractice Committee for the initiation of appropriate disciplinary proceedings.

- ## 8. Improvement of Marks in the subjects already passed:
- Candidates wanting of improving the marks awarded in a passed subject in their first attempt shall reappear in the subsequent semester only. The improved marks shall be considered for classification but not for ranking. When there is no improvement, there shall not be any change in the original marks already awarded.

## 9. Re-Valuation

**i) Photocopy of valued answer scripts:** If the candidates intend to apply for the Xerox copy of their answer scripts, they have to annex the Xerox copy of their Identity Cards attested by their respective Heads of Departments, along with their application.

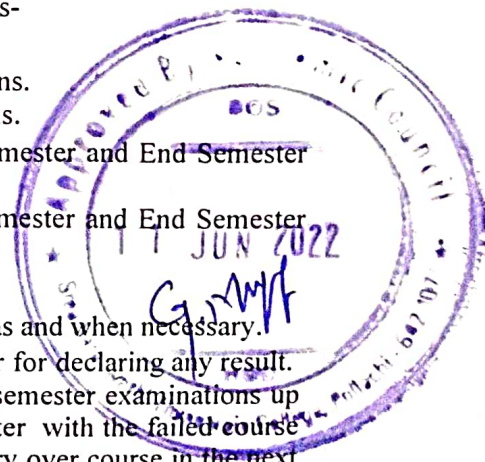
After receiving the photocopy, the student can verify the copy to find out whether there is any discrepancy in the total marks or omission of marking in the valuation process. If any discrepancy is noticed the same may be brought to the notice of the Controller of Examinations for remedial action.

**ii) Revaluation after getting photocopy of valued answer scripts:** Those candidates, who have obtained the photocopy of the answer scripts, may apply for revaluation. The valuation of the photocopy of the answer script can be verified by the course teacher and if the course teacher is convinced that the script deserves higher marks than what is awarded, he/she can recommend for applying revaluation by the subject teacher and the Head of the department. Provision available for revaluation is for theory examinations only.

- ## 10. Supplementary Exam:
- Candidates, who are having one course as arrears / absent after their final semester results, shall be permitted to appear for special supplementary examinations (**There is no provision for revaluation or re-totalling after supplementary examinations**).

## 11. Results and Progression:

- a) A candidate shall be declared as have passed a course, provided he/ she secures-
  - (i) in each Course at least
    - UG: 40% of marks in the ESE and total marks of End Semester Examinations.
    - PG: 50% of marks in the ESE and total marks of End Semester Examinations.
  - (ii) UG: at least 'C' grade in the 10 point scale combining both the in-semester and End Semester Examination performance in all the Courses separately.
  - PG: at least 'B' grade in the 10 point scale combining both the in-semester and End Semester Examination performance in all the Courses separately.
  - (iii) There shall be no separate pass mark for Internal Assessment.
- b) There may be moderation of Internal Assessment marks/End Semester marks as and when necessary.
- c) The marks of CIA examinations obtained by the candidate shall be carried over for declaring any result.
- d) A candidate who fails or does not appear in one or more courses of any end semester examinations up to Sixth Semester shall be provisionally promoted to the next higher semester with the failed course as carry over course(s). Such candidates will be eligible to appear in the carry over course in the next regular examinations of those courses.
- e) The Controller of Examinations shall declare the results of the Examinations and issue Grade-sheets.
- f) The first rank holder of a programme shall be decided on the basis of the CGPA. However, the Overall Weighted Percentage of Marks (OWPM) of a candidate shall be considered in case of tie in CGPA.



## 12. Grading System

The absolute grading system shall be applied in evaluating the performance of the students.

The following scale of grading system shall be applied to indicate the performances of students in terms of letter grade and grade points as given below:

**Conversion of Marks to Grade Points & Letter Grade :( Performance in a course/paper)**

RANGE OF MARKS (In percent)	GRADE POINTS	GRADE	DESCRIPTION
90 - 100	9.0 - 10.0	O	OUTSTANDING
80 - 89	8.0 - 8.9	D+	EXCELLENT
75 - 79	7.5 - 7.9	D	DISTINCTION
70 - 74	7.0 - 7.4	A+	VERY GOOD
60 - 69	6.0 - 6.9	A	GOOD
50 - 59	5.0 - 5.9	B	AVERAGE
40 - 49	4.0 - 4.9	C#	SATISFACTORY
00 - 39	0.0	U	RE-APPEAR
ABSENT	0.0	U	ABSENT

Reappearance is necessary for those who score below 50% Marks in PG \*\*;

Reappearance is necessary for those who score below 40% Marks in UG\*;

# only applicable for UG programs

### Grade Point Average (GPA):

Grade point average (GPA) is calculated for each part taking into account of all the courses studied under each part. Calculation of grade point average semester -wise and part -wise is as follows:

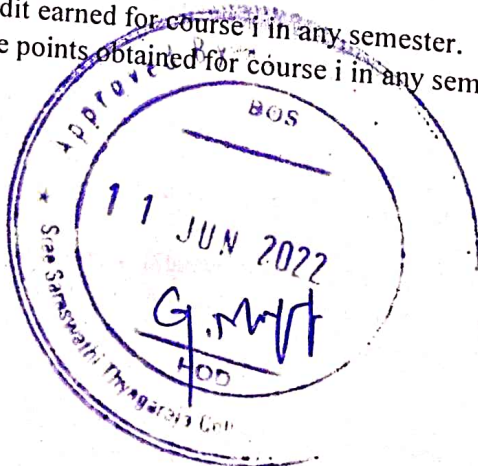
Sum of the multiplication of grade points by the credits of the courses

$$\text{GPA} = \frac{\text{Sum of the multiplication of grade points by the credits of the courses}}{\text{Sum of the credits of the courses in a semester}}$$

$$\text{GPA} = \frac{\sum(C_i G_i)}{\sum C_i}$$

Where  $C_i$  = Credit earned for course  $i$  in any semester.

$G_i$  = Grade points obtained for course  $i$  in any semester.





**Classification of Successful Candidates (Overall):**

CGPA	GRADE	CLASSIFICATION OF FINAL RESULT
9.5 to 10.0	O+	First Class - Exemplary *
9.0 and above but below 9.5	O	
8.5 and above but below 9.0	D++	First Class with Distinction *
8.0 and above but below 8.5	D+	
7.5 and above but below 8.0	D	
7.0 and above but below 7.5	A++	First Class
6.5 and above but below 7.0	A+	
6.0 and above but below 6.5	A	
5.5 and above but below 6.0	B+	Second Class
5.0 and above but below 5.5	B	
4.5 and above but below 5.0	C+ #	Third Class
4.0 and above but below 4.5	C #	
0.0 and above but below 4.0	U	Re-appear

“\*” The candidates who have passed in the first appearance and within the prescribed semester of the Programme (Major, Allied, Inter Departmental and Elective Course alone) are eligible.

“#” Only applicable to U.G. Programme

**Cumulative Grade Point Average (CGPA) :**For the entire program CGPA is calculated in the following manner:

Sum of the multiplication of grade points by the credits of the courses of entire programme under each part

CGPA = 
$$\frac{\text{Sum of the Credits of the Courses of the entire programme under each part}}{\text{Sum of the Credits of the Courses of the entire programme under each part}}$$

$$\sum_{ni} \frac{\sum_{ni} C_n i G}{\sum_{ni} C_n i}$$

$$\sum_{ni} C_n i$$

In order to get through the examination, each student has to earn the minimum marks prescribed in the internal (wherever applicable) and external examinations in each of the theory course, practical course and project viva.

Normally, the ratio between internal and external marks is 50:50. There is no passing minimum for internal component. The following are the minimum percentage and marks for passing of each course, at UG and PG levels for external and aggregate is as follows:

S.No	Program	Passing Minimum in Percent	
		External (50)	Aggregate (100)
1	UG Degree	40% (20)	40% (40)
2	PG Degree	50% (25)	50% (50)

13. **Ranking:** Rank holders of a programme shall be decided on the basis of the CGPA. A candidate who qualifies the UG degree course passing all the examinations in the first attempt within the minimum period of prescribed for the course of study from the date of admission to the course and secures 1 or II class shall be eligible for ranking and such ranking shall be confined to 10 % of the total number of candidates qualified in that particular branch of study, subject to a maximum of 10 ranks. Results of the candidates appeared in the improvement or Arrears Examinations shall not be counted for the award of Prizes/Medals, Rank or Distinction.

**14. Rules for Admission on Transfer from other Colleges:**

- (a) Under Bharathiyar University guidelines, the admission on transfer of students from other institutions shall be allowed. However, such transfer shall be permissible provided that-
- there is a vacancy in the respective program of study in the Institution where the transfer is requested
  - both the institutions conduct the same degree programmes under the CBCS.
  - the course structure along with the nomenclature of the courses are similar between the two institutions,

(b) In fulfillment of the conditions as laid down in clause 13(a), a candidate may be allowed to get admission on transfer from other college on the production of transfer certificate from Bharathiyar University, Previous semester markstatements, , etc. not later than 1 (one) month from the commencement of the classes of the semester concerned.

- The marks obtained in the courses will be converted and grades will be assigned as per the STC norms.
- The transfer students are eligible for classification.
- The transfer students are not eligible for Ranking, Prizes and Medals

15. **Conferment of the Degree:** No candidate shall be eligible for conferment of the Degree unless he / she

- has undergone the prescribed course of study for a period of not less than six semesters and has passed the examinations as have been prescribed therefor.
- has completed all the components prescribed under Parts I to Part V in the CBCS pattern to earn 140 credits.
- has successfully completed the prescribed Field Work/ Institutional Training (if any) as evidenced by certificate issued by the authorities concerned.





## REGULATIONS ON MOOC

### PREAMBLE

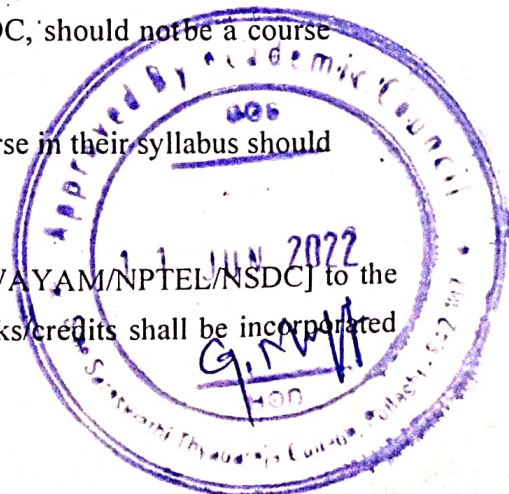
**National Programme on Technology Enhanced Learning (NPTEL)** is a joint venture of the IITs and IISc, funded by the Ministry of Education (MoE) Government of India, and was launched in 2003. Initially started as a project to take quality education to all corners of the country, NPTEL now offers courses for certification every semester in almost all the disciplines. NPTEL is a National Coordinator for Engineering courses (UG and PG) under SWAYAM, the National MOOCs portal. NPTEL also offers courses in Humanities and Management subjects as the NPTEL partner institutes do have these departments. It offers the courses in online mode which is instructor-lead and self-paced learning environment.

**Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM)** has emerged as one of the World's biggest Massive Open Online Courses (MOOCs) integrated platform of online courses, covering subjects from high school to higher education including Skill-based courses to ensure that every student benefits from learning material through ICT. There are a total number of 7,041 online courses on SWAYAM platform out of which 6,296 courses are credit courses and the remaining 745 courses are non-credit courses. University Grants Commission (UGC) vide Gazette Notification dated 25<sup>th</sup> March, 2021 has notified in the UGC (Credit Framework for online Learning courses through SWAYAM) Regulations, 2021 which facilitates an Institution to allow up to 40% of the total courses being offered by any higher education institution in a particular programme in any semester through online learning courses offered on SWAYAM platform. With this, the students studying in conventional Institutes / colleges can transfer the credits earned through the SWAYAM Courses into their academic records.

Sree Saraswathi Thyagaraja College, Pollachi is continuously taking part in promoting quality education as a higher education institution. The faculty members of the institution are also encouraged to complete the course in SWAYAM portal. With reference to the UGC notification, it has framed the regulations for credit transfer in order to encourage the students to undergo and learn the courses through NPTEL–SWAYAM portal.

The following MOOCs regulations would come into the force for the students admitted in the year 2022-23 and onwards.

- All Under Graduate (UG) and Post Graduate (PG) students are encouraged to complete two MOOCs [SWAYAM/NPTEL/NSDC] in their UG before completing the fifth semester and likewise two MOOCs [SWAYAM/NPTEL/NSDC] in PG before completing the third semester.
- The MOOCs, selected by the student from SWAYAM /NPTEL/NSDC, should not be a course that have been already given in their respective curriculum/syllabus.
- The UG & PG students who do not have entrepreneurship related course in their syllabus should choose one MOOC related to entrepreneurship out of two MOOCs;
- The institute is transferring the equivalent credit earned through [SWAYAM/NPTEL/NSDC] to the students on receipt of MOOCs completion certificate and these marks/credits shall be incorporated under extra credit course in the overall marksheet of the student.



- The institution will allot a Single Point of Contact (SPoC) who will provide the list of courses offered in the NPTEL/SWAYAM/NSDC platform in the First / Second / Third/ Fourth / Fifth semester for UG and similarly the list of courses offered in the NPTEL/SWAYAM/NSDC platform in the First / Second / Third semester for PG.
- A mentor will be allotted based on the domain areas of the students to guide, assist and track the status of progress.
- As per the guidelines provided by the Academic Council, an 8 weeks course can be considered for 2 credit course and a 12 weeks course can be considered for 3 credit course.
- Based on this, the student should complete 2 MOOCs [each of 8 weeks duration] and earn in a total of 4 credits [ 2 credits per MOOC].
- The actual marks scored by the student will be taken as it is, in order to incorporate the score in the mark statement, if he/she successfully obtained the certification through MOOC.
- The following table describes the certification grade, equivalent marks and the further step(s) required for the student:

Assignment Status	Certification Status	Equivalent Mark	Further Step
Submitted	Elite+Gold	Actual Score by NPTEL	Not required
Submitted	Elite+Silver	Actual Score by NPTEL	Not required
Submitted	Elite	Actual Score by NPTEL	Not required
Submitted	Completed	Actual Score by NPTEL	Not required
Submitted	Not Completed	50% of the assignment Score + 50% of the score from the test conducted by the Institute	The student should attend the test in the institute
Not Completed	Not obtained	The actual score secured in the test conducted by the institute	The student should attend the test in the institute

- If a student has successfully completed the course in NPTEL/SWAYAM/NSDC, then the marks obtained and the appropriate credits will be informed by the SPoC to the Office of the Controller of Examinations (CoE). The marks and its corresponding grade may change as per the CBCS guidelines and regulations of the corresponding programme.
- If any student opts for more than the required number of MOOC, it will be considered as additional credit, and it will not be considered for calculating the CGPA.
- If the student fails in the MOOC examination or the student did not appear for the MOOC examination, there is an **alternative option** for the student to complete the MOOC through the examination conducted by the college similar to that of MOOCs;

In such case, the student needs to pay the MOOC exam fee at the college and he will be allowed to take up a 100 MCQ test at the college lab; the results of this online test will be taken up by the COE section for the completion of MOOC.

11 JUN 2022



## REGULATIONS ON CREDIT TRANSFER

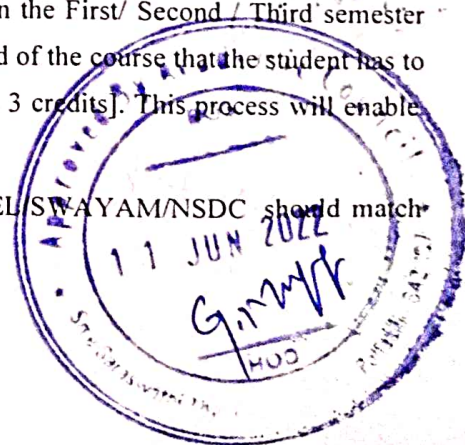
### PREAMBLE

National Programme on Technology Enhanced Learning (NPTEL) is a joint venture of the IITs and IISc, funded by the Ministry of Education (MoE) Government of India, and was launched in 2003. Initially started as a project to take quality education to all corners of the country, NPTEL now offers courses for certification every semester in almost all the disciplines. NPTEL is a National Coordinator for Engineering courses (UG and PG) under SWAYAM, the National MOOCs portal. NPTEL also offers courses in Humanities and Management subjects as the NPTEL partner institutes do have these departments. It offers the courses in online mode which is instructor-lead and self-paced learning environment.

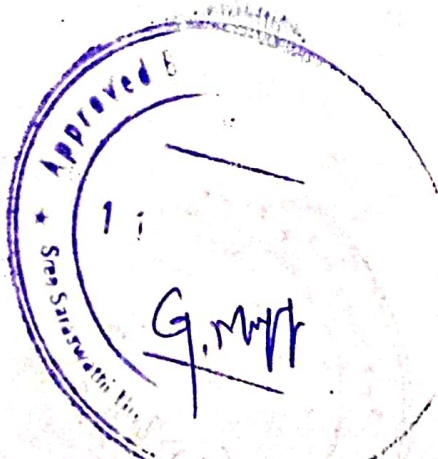
Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) has emerged as one of the World's biggest Massive Open Online Courses (MOOCs) integrated platform of online courses, covering subjects from high school to higher education including Skill-based courses to ensure that every student benefits from learning material through ICT. There are a total number of 7,041 online courses on SWAYAM platform out of which 6,296 courses are credit courses and the remaining 745 courses are non-credit courses. University Grants Commission (UGC) vide Gazette Notification dated 25<sup>th</sup> March, 2021 has notified in the UGC (Credit Framework for online Learning courses through SWAYAM) Regulations, 2021 which facilitates an Institution to allow up to 40% of the total courses being offered by any higher education institution in a particular programme in any semester through online learning courses offered on SWAYAM platform. With this, the students studying in conventional Institutes / colleges can transfer the credits earned through the SWAYAM Courses into their academic records.

Sree Saraswathi Thyagaraja College, Pollachi is continuously taking part in promoting quality education as a higher education institution. The faculty members of the institution are also encouraged to complete the course in SWAYAM portal. With reference to the UGC notification, it has framed the regulations for credit transfer in order to encourage the students to undergo and learn the courses through NPTEL-SWAYAM portal. The following credit transfer regulations would come into the force for the students admitted in the year 2022-23 and onwards.

- The possibility of Credit transfer has been provided for PG students only.
- Apart from completing 2 MOOCs as extra credit courses, the students are given this option of Credit transfer also;
- For credit transfer, the courses can be selected from NPTEL/SWAYAM/NSDC with the prior approval of the Head of the Department, Dean or Director and the Controller of Examination.
- The institution will allot a Single Point of Contact (SPoC) who will provide the list of courses [with 3 credits] offered in the NPTEL/SWAYAM/NSDC platform in the First/ Second / Third semester that can be registered by the student under credit transfer instead of the course that the student has to study in the Fourth semester [preferably elective course – with 3 credits]. This process will enable the student to register for the MOOC well in advance.
- At least 80 percent of the content of the syllabus from NPTEL/SWAYAM/NSDC should match with the approved elective course contents in IV Semester.



- A mentor will be allotted based on the domain areas of the students to guide, assist and track the status of the progress.
- As per the guidelines provided by the Academic Council, a 12 weeks course can be considered for 3 credit course.
- The actual marks scored by the student will be taken as it is, in order to provide the score in the mark statement, if he/she successfully obtains the certification through MOOC.
- If a student has successfully completed the course in NPTEL/SWAYAM/NSDC, then the marks obtained and the appropriate credits will be informed by the SPoC to the Office of the Controller of Examinations (CoE). The marks and its corresponding grade may change as per the CBCS guidelines and regulations of the corresponding programme.
- If the student is not able to complete the MOOCs for credit transfer purpose before third semester, then the student can proceed to study the course offered in IV Semester.
- An exclusive monitoring committee will be constituted to supervise the 80% syllabus content matching and ensure the smooth conduct of the credit transfer process. The committee will resolve any issues that may arise in the implementation of the guidelines and regulations from-time-to-time. The committee will have the following composition:
  - The Principal as the Chair Person;
  - Single Point of Contact (SPoC) as a Member;
  - Controller of Examinations as Member Secretary;
  - One Member from the School of Computing Science;
  - One Member from the School of Commerce;
  - One Member from the School of Management Studies;
  - One Member from Humanities and Social Studies (Consist of Tamil, English, Mathematics, Physics, Chemistry, Social Works, and Psychology).





**Curriculum Framework with Choice Based Credit System (CBCS) and Syllabus for Outcome Based Education (OBE) in Bachelor of Science ( Artificial Intelligence and Machine Learning) degree programme for the students admitted from the academic year 2022 – 23 onwards**

The Choice Based Credit System (CBCS) preserves the identity, autonomy and uniqueness of every programme and reinforce their efforts to be student centric in curriculum designing and skill imparting.

**Choice Based Credit System (CBCS):** Choice based credit system (CBCS), provides a learning platform wherein the student has the flexibility to choose their course from a list of electives, core, allied, non-major courses, value-based courses, and skill-based courses. This is a student-centric approach to learning or acquiring higher education. The curriculum with CBCS aims to achieve and accomplish the students experience their choice of courses and credits for their horizontal and vertical mobility

**Outcome Based Education:**

“Outcome-Based Education” (OBE) is considered as a student-centered instruction model that focuses on measuring student performance through outcomes. Outcomes include knowledge, skills and attitudes. In the OBE model, the required knowledge and skill sets for a particular degree is predetermined and the students are evaluated for all the required parameters (Outcomes) during the course of the program.

Part – I: Languages: Part – 1 comprises of category namely Tamil/Hindi/Malayalam/French

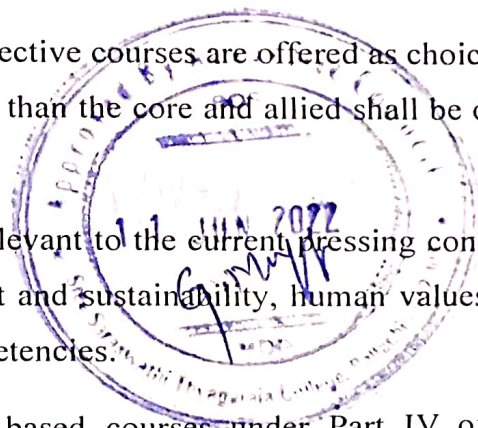
Part – II: English: Part – 2 comprises of the category namely English

Part – III: Core Courses: A set of major papers that include Theory, Practical, Allied, Core Electives, Project and Internship in the major field of study selected by the student. Core courses are mandatory in nature.

Part – IV: Non - Major Electives (NME): A set of non – major elective courses are offered as choices of the students, outside of their major discipline. The courses other than the core and allied shall be opted by the students as Non – Major Elective.

Value Based Courses (VBC): Courses of cross-cutting issues relevant to the current pressing concerns both nationally and internationally such as gender, environment and sustainability, human values and professional ethics, development of creative and divergent competencies.

Skill Based Courses (SBC): The courses offered as skill - based courses under Part IV of the programme is aimed at imparting Advanced Skill of the programme. This comprises of four courses from 3rd to 6th semesters. Massive Open Online Courses (MOOC): According to the guidelines of UGC, the students are encouraged to avail this option of enriching by enrolling themselves in the



MOOC provided by various portals such as SWAYAM, NPTEL, Coursera, etc. As per University Grants Commission (UGC) notification published in the gazette of India about UGC (Credit Framework for Online Learning Courses through SWAYAM) Regulation, 2016 on 19th July 2016, The Massive Open Online Course (MOOC) through online portal is compulsory. The institute is transferring the equivalent credit earned through SWAYAM on receipt of MOOCs completion certificate and shall incorporate these marks/credits in the overall mark sheet of the student.

Part – V: Extension Activities: Students shall be actively participated in the extension activities such as National Service Scheme (NSS), Youth Red Cross (YRC), Sports, and Red Ribbon Club (RRC). The extension activities are must for each student to take part in at-least in any one of these activities for the fulfilment of the degree.

### B.Sc (AI & ML) 2022-2023

#### Summary of Courses Pattern and Credit Distribution in Choice Based Credit System

Part	Curriculum Structure	No.ofCourses	Credits to be earned
I	Languages	2	6
II	English	2	6
III	Core (Major) Courses	21	82
	Allied Courses	4	18
	Core Electives	3	12
IV	Non-Major Electives (NME)	2	4
	Value Based Courses (VBC)	2	4
	Skill Based Courses (SBC)	4	8
V	Extension Activities	1	Grade
Total		41	140
Extra Credit Course - MOOC		2	4
Extra Credit Course - Professional English		2	6
Extra Credit Course - Placement		4	4
and Total		49	154



**Scheme of Examination (Student admitted from 2022-23 onwards)**

**Semester I**

Part	Course Type	Course Code	Name of the course	Period per Week			CIA	ESE	Total	Credi
				L	P	T				
I	Language-1	Theory 22TAM1L10 22MAL1L10 22HIN1L10 22FRE1L10	Language-I (Tamil/Malayalam/Hindi /French)	3	-	1	50	50	100	3
II	English	Theory 22GEN1L10	Communicative English- I	3	-	1	50	50	100	3
III	Core 1	Theory 22BCA1C10	Digital Fundamentals and Computer Organization	3	-	1	50	50	100	4
III	Core 2	Theory 22BAM1C20	Problem Solving And Programming In C	4	-	-	50	50	100	4
III	Core 3	Practical 22BAM1C30	Programming In C Lab	-	4	-	50	50	100	3
III	Allied 1	Theory 22BMAGAM0	Fundamentals Of Statistics	5	-	-	50	50	100	4
IV	VBC1	Theory 22DHE1V10	Value Education-1 Environment Science	2	-	-	50	-	50	2
	ECC	Theory 22GEN1Z10	Professional English for physical sciences – I	3	-	-	50	50	100	3*
<b>Total for Semester – I</b>				<b>30</b>			<b>400</b>	<b>350</b>	<b>750</b>	<b>23+3*</b>

**Semester II**

I	Language -2	Theory 22TAM2L20 22MAL2L20 22HIN2L20 22FRE2L20	Language-II(Tamil/Malayalam/Hindi/French)	3	-	1	50	50	100	3
II	English	Theory 22GEN2L20	Communicative English-II	3	-	1	50	50	100	3
III	Core 4	Theory 22BAM2C10	Artificial Intelligence and Machine Learning Fundamentals	3	-	1	50	50	100	4
III	Core 5	Theory 22BDA2C20	Object Oriented Programming with Java	3	-	1	50	50	100	4

III	Core 6	Practical	22BDA2C30	Object Oriented Programming Lab	-	3	-	50	50	100	3
III	Allied 2	Theory	22BMAGA Q0	Mathematics for Machine Learning	5	-	-	50	50	100	4
IV	VBC 2	Theory	22DHE2V20	Value Education – 2Value Education And Human Rights	2	-	-	50	-	50	2
	ECC	Theory	22GEN2Z10	Professional English for Physical Sciences II	3	-	-	50	50	100	3*
	ECC			Placement	1	-	-	50	-	50	1*
				<b>Total for Semester – II</b>	<b>30</b>			<b>450</b>	<b>350</b>	<b>800</b>	<b>23+4*</b>

### Semester III

Part	Course Type	Course Code	Name of the course	Period per Week			CIA	ESE	Total I	Credit
				L	P	T				
I	Language -3	Theory	23TAM3L30 23MAL3L30 23HIN3L30 23FRE3L30	4	-	-	50	50	100	3
II	English	Theory	23GEN3L30	4	-	-	50	50	100	3
III	Core 7	Theory	22BAM3C10	4	-	-	50	50	100	4
III	Core 8	Theory	22BAM3C20	4	-	-	50	50	100	4
III	Core 9	Practical	22BAM3C40	-	3	-	50	50	100	3
III	Allied 3	Theory	22BAM3A10	4	-	-	50	50	100	4
IV	SBC1	Practical	22BAM3S10	-	3	-	30	45	75	2
IV	NME1	Theory	22BAM3N10	2	-	-	-	50	50	2
	ECC			-	-	-	-	-	-	2*
	ECC		22CTP3P10	2	-	-	50	-	50	1*
			<b>Total for Semester – III</b>	<b>30</b>			<b>380</b>	<b>395</b>	<b>775</b>	<b>25+3*</b>

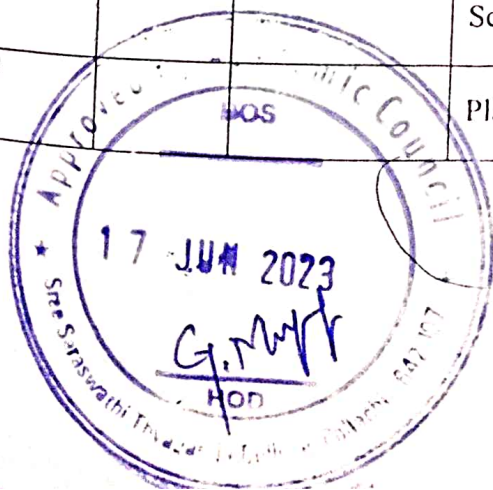


## Semester IV

I	Language -4	Theory	23TAM4L40 23MAL4L40 23HIN4L40 23FRE4L40	Language-III(Tamil/Malayalam/Hindi/French)	4	-	-	50	50	100	3
II	English	Theory	23GEN4L40	English Through Literature	4	-	-	50	50	100	3
III	Core 10	Theory	22BAM4C20	R Programming	4	-	-	50	50	100	4
III	Core 11	Practical I	22BAM4C30	R Programming with Data Visualization Lab	-	4	-	50	50	100	4
III	Core 12	Theory	22BAM4C40	Machine Learning Techniques	4	-	-	50	50	100	4
III	Allied 4.	Theory	22BAM4A20	Cloud Computing	4	-	-	50	50	100	4
IV	SBC2	Practical I	22BAM4S20	Computational Intelligence Lab	-	2	-	30	45	75	2
IV	NME2	Theory	-	NME Course - 2	2	-	-	-	50	50	2
	ECC			NPTEL	-	-	-	-	-	-	2*
	ECC		22CTP4P10	PERSONALITY DEVELOPMENT SKILLS & PARETO- II	2	-	-	50	-	50	1*
				Total for Semester - IV	30			380	395	775	26+3*

## Semester V

III	Core 13	Theory	22BAM5C10	Natural Language Processing	4	-	1	50	50	100	5
III	Core 14	Practical I	22BAM5C20	Natural Language Processing Lab	-	5	-	50	50	100	4
III	Core 15	Theory	22BAM5C30	Deep Learning	4	-	1	50	50	100	4
III	Core 16	Project	22BAM5C40	Project Work Lab	-	4	-	50	50	100	2
III	CE1	Theory	22BAM5E10	Core Elective - I	5	-	-	50	50	100	4
IV	SBC3	Practical I	22BAM5S30	Deep Learning Lab	-	4	-	30	45	75	2
V	EAC		22ETN5X10	Extension Activity - National Service Scheme/ Sports/NCC	Grade		-	-	-	-	
	ECC			Placement	2	-	-	50	-	50	1*

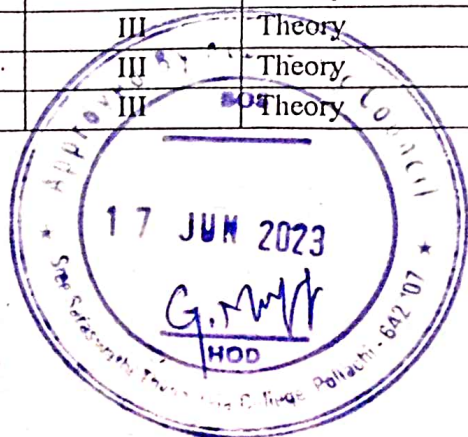


				Total for Semester – V	30			330	295	625	21+1*
Semester VI											
Part	Course Type	Course Code	Name of the course	Period per Week			CIA	ESE	Total	Credit	
				L	P	T					
III	Core 17	Theory	22BAM6C10	Computer Vision	5	-	1	50	50	100	4
III	Core 18	Practical	22BAM6C20	Computer Vision lab	-	5	-	50	50	100	4
III	Core 19	Theory	22BAM6C30	Internet of Things	4	-	1	50	50	100	4
III	CE2	Theory	22BAM6E20	Core Elective – II	5	-	-	50	50	100	4
III	CE3	Theory	22BAM6E30	Core Elective – III	5	-	-	50	50	100	4
IV	SBC4	Practical	22BAM6S40	Internet of Things Lab	-	4	-	30	45	75	2
				Total for Semester – VI	30			280	295	575	22
				Total	180			2120	1980	4100	140+14*

Students from B.Sc (AI & ML) to choose any one of the course from the following list of Languages courses offered:

#### List of Part – 1 Language Courses

S No	Semester	Course Type	Course Code	Course Name
1	I	Theory	22TAM1L10	Tamil – I
2	I	Theory	22HIN1L10	Hindi – I
3	I	Theory	22MAL1L10	Malayalam – I
4	I	Theory	22FRE1L10	French – I
5	II	Theory	22TAM2L20	Tamil – II
6	II	Theory	22HIN2L20	Hindi – II
7	II	Theory	22MAL2L20	Malayalam – II
8	II	Theory	22FRE2L20	French – II
9	III	Theory	21TAM3L30	Tamil – III
10	III	Theory	21HIN3L30	Hindi – III
11	III	Theory	21MAL3L30	Malayalam – III
12	III	Theory	21FRE3L30	French – III
13	III	Theory	22TAM4L40	Tamil – IV
14	III	Theory	21HIN4L40	Hindi – IV
15	III	Theory	21MAL4L40	Malayalam – IV
16	III	Theory	21FRE4L40	French – IV





## List of Allied Courses (CBCS)

S.No.	Semester	Type of course	Course Code	Course Name
<b>Allied – I</b>				
1	I	Theory	22BMAGAM0	Fundamentals Of Statistics
<b>Allied – II</b>				
1	II	Theory	22BMAGAD0	Optimization Techniques
<b>Allied – III</b>				
1	III	Theory	22BAM3A10	Data Structures and Algorithms
<b>Allied – IV</b>				
1	IV	Theory	22BAM4A20	Cloud Computing

## List of Value Based Courses

S.No.	Semester	Course Code	Course Name
1	I	22DHE1V10	Environmental Sciences
2	II	22DHE2V20	Value Education and Human Rights

## List of Core Elective Courses (CBCS)

S.No.	Semester	Elective	Type of course	Course Code	Course Name
<b>Electives of B.Sc. (AI&amp;ML)</b>					
1	V	I	Theory	22BAM5E10	Human Computer Interaction
2	VI	II	Theory	22BAM6E20	AI for Business and intelligent marketing
3	VI	III	Theory	22BAM6E30	AI and Robotics
<b>Electives of B.Sc. (DSA)</b>					
1	V	I	Theory	21BDA5EA0	Predictive Analytics
2	VI	II	Theory	21BDA6EA0	Web Analytics
3	VI	III	Theory	21BDA6EB0	Social Media Analytics
<b>Electives of B.Sc. (DCFS)</b>					
1	V	I	Theory	22BFS5EA0	Cyber Attack and Cyber Warfare
2	VI	II	Theory	22BFS6EA0	SOC Lab
3	VI	III	Theory	22BFS6EB0	Cloud Security and Forensics

## List of Skill Based Courses

S.No.	Semester	Type of course	Course Code	Course Name
1	III	Practical	22BAM3S10	Database Management System Lab
2	IV	Practical	22BAM4S20	Computational Intelligence Lab
3	V	Practical	22BAM5S30	Deep Learning Lab



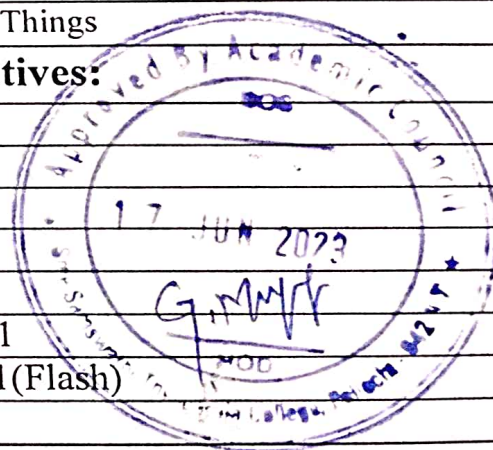
VI	Practical	22BAM6S40	Internet of Things Lab
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### List of Core Courses

No.	Semester	Core	Type of course	Course Code	Course Name
	I	Core 1	Theory	22BCA1C10	Digital Fundamentals and Computer Organization
	I	Core 2	Theory	22BAM1C10	Problem Solving And Programming In C
	I	Core 3	Practical	22BAM1C30	Programming In C Lab
	II	Core 4	Theory	22BAM2C10	Artificial Intelligence and Machine Learning Fundamentals
	II	Core 5	Theory	22BDA2C20	Object Oriented Programming with Java
	II	Core 6	Practical	22BDA2C30	Object Oriented Programming Lab
	III	Core7	Theory	22BAM3C10	Introduction to Database Management System
	III	Core8	Theory	22BAM3C20	Python Programming
	III	Core9	Theory	22BAM3C40	Python Programming Lab
	III	Core10	Practical	22BAM4C20	R Programming
	IV	Core11	Theory	22BAM4C10	Cloud Computing
	IV	Core12	Theory	22BAM4C20	R Programming
	IV	Core13	Practical	22BAM4C30	R Programming with Data Visualization Lab
	IV	Core14	Theory	22BAM4C40	Machine Learning Techniques
	V	Core15	Theory	22BAM5C10	Natural Language Processing
	V	Core16	Practical	22BAM5C20	Natural Language Processing Lab
	V	Core17	Theory	22BAM5C30	Deep Learning
	V	Core18	Project	22BAM5C40	Project Work Lab
	VI	Core19	Theory	22BAM6C10	Computer Vision
	VI	Core20	Practical	22BAM6C20	Computer Vision lab
	VI	Core 21	Theory	22BAM6C30	Internet of Things

### List of Non Major Electives:

	Course Code	Couse Name
1	22BMA3N10	Numerical Ability - I
	22BMA3N20	Verbal Reasoning
	22BMA4N10	Numerical Ability - II
	22BMA4N20	Non-Verbal Reasoning
2	22BCS3N10	Internet Programming- Lab 1
	22BCS3N20	Animation Technique- Lab 1(Flash)
	22BCS4N10	Basic Programming in C
	22BCS4N20	Animation Techniques- Lab (3ds- Max)
3	22BIT3N10	OfficeAutomation for Documentation L: 5
	22BIT3N20	Multimedia Lab I
	22BIT4N10	Office Automation Lab
	22BIT4N20	MultimediaLab II
4	22BCA3N10	Basics of Excel





5	22BCA3N20	Digital Publishing Tools-I
	22BCA4N10	Advances in Excel
	22BCA4N20	Digital Publishing Tools-II
	22BFS3N10	Principles of Computer Security
	22BFS4N10	Cyber forensics
	22BFS3N20	Information Security
	22BFS4N20	Cyberlaw
6	22BDA3N10	Data Visualization using Tableau - I
	22BDA3N20	R Programming for Beginners - I
	22BDA4N10	Data Visualization using Tableau - II
	22BDA4N20	R Programming for Beginners - II
7	22BAM3N10	Basic Python Programming
	22BAM3N20	Basic Power BI Lab
	22BAM4N10	Advance Python Programming Lab
	22BAM4N20	Advanced Power BI Lab
8	22BCH3N10	Chemistry in everyday life -I
	22BCH4N20	Chemistry for everyday life -II
9	22BPY3NA0	PsyLifeSkills
	22BPY3NB0	InterpersonalRelationshipskills
	22BPY4NA0	PsyLifeHacks
	22BPY4NB0	Problemsolvingandcreativity
10	22BEN3N10	Writing Skills for Media
	22BEN4N10	Professional and Technical Writing
11	22BCM3N10	Entrepreneurship
	22BCM4N20	PracticalBanking
12	22BBC3N10	Accounting Software-I
	22BBC4N20	Accounting Software-II
13	22BPA3N10	PersonalFinance
	22BPA4N20	BasicsofStockMarket
14	22BAB3N10	Agricultural Marketing
	22BAB4N10	Digital Marketing
15	22BBI3N10	DigitalBanking
	22BBI4N20	Elements of Insurance
16	22BAS3N10	Information Security
	22BAS4N20	Office Administration
17	22BBA3N10	Management Concepts
	22BBA4N10	Training and development

Note: The Course Yoga is offered as Capability Enhancement Course. Certificate with grade will be awarded according to the marks obtained

