CHRIST COLLEGE (AUTONOMOUS), IRINJALAKUDA

ACADEMIC ADMINISTRATIVE AUDIT (AAA)

SELF STUDY REPORT

NAME OF THE DEPARTMENT: MATHEMATICS

PERIOD: 2019 JUNE-2020 DEC

CATEGORY:

The Departments shall enter the necessary data in this booklet itself. For positive responses the details asked need be given only in a very brief manner. All claims must be supported by documentary evidence.

DEPARTMENT GRADING

The department is requested to submit a Self Study Report (SSR) of its performance during the academic year 2019 – 20 in the following format, for the purpose of department grading. The grading aims to encourage self-evaluation, accountability, research, and innovation in teaching and learning. It will also help to create healthy competition in curricular and extracurricular activities among departments. The grading will be performed based on the following six criteria.

Criterion I – Teaching-learning Process

Criterion II – Research

Criterion III – Consultancy and extension

Criterion IV – Extracurricular activities

Criterion V – Student Support and Progression

Criterion VI – Supportive activities

CRITERION I – TEACHING-LEARNING PROCESS

a. Does the department Plan and organize the teaching-learning and evaluation schedules?

Yes [√]   No   [   ]   (10 MARKS)

(If yes; provide documentary evidence-Submit filled up Teachers Diary (2019-20)of each teacher or any other evidence)

b. Which teaching-learning method/s is/are used by teachers?

(Put √ marks in appropriate boxes. Details must be given)

1. Lecture   [√]
2. Interactive method   [√]
3. Project-based learning   [√]
4. Computer-assisted learning   [✓]
5. Experiential learning   [✓]
6. Seminars   [✓]
7. Others (mention)   [   ]   (3 marks each   max 15MARKS)

c. Does the department use any modern teaching aids and tools like computers, audio-visuals, MOODLE, CAL (Computer Aided Learning), internet and other information/materials, which ensure that students have effective learning experience?

Yes [√]   No [   ]   3marks each   max   15

If yes, give details.

d. Department conducted any exams in MOODLE-Learning Management system?

Yes [√]   No [   ]   3marks each   max   15

If yes, give details of exams.

e. Does the department conduct any skill-developing programs (short-term add-on courses, soft-skill development programs etc.) for students?   05 for each –   max 10

Yes [✓]   No   [   ]

If yes, give details

f. Does the department apply for any new course, by designing curricula for it, during the current year?

Yes ☐   No ☑   5 each   max   15

If yes, give details

g. How many teachers attended seminar/ workshop/ conference/ refresher courses etc. during the period (Use separate sheet if necessary) > 90% =10,   >50=5, <50 =0   max 10

Sl. No	Name of faculty		Title of the seminar/ workshop/ conference etc.	Duration		Whether internation al/ national/ state/regio nal	Organizing agency
				From	To		
1	Tintumol Sunny		FDP on Digital Tools in Teaching	23.11. 2020	27.11. 2020	National	Providence Women's College for Woman, Calicut
2	Tintumol Sunny		FDP on Quality Science Education in India in the 21st Century	03-11- 2020	09-11- 2020	National	Christ College (Autonomous) Irinjalakuda Thrissur
3	Tintumol Sunny		Moodle Learning Management System	09-11- 20	13-11- 2020	National	Bishop Kurialachery College for woman, Amalagiri Kottayam
4	Tintumol Sunny		CAS Promotion	07.11. 2020	07.11. 2020	National	IQAC, St. Joseph's College Irinjalakuda
5	Tintumol Sunny		A Road Map to Enhance Core Teaching	14.02. 2020	27.02. 2020	National	Academic Staff College, , Kerala Veterinary and

			Competencies in Academic Landscape				Animal Sciences University, Mannuthy
6	Tintumol Sunny		Introduction to Latex	16.10. 2020	17.10. 2020	National	Department of Mathematics, M E S Kalladi College, Mannarkkad
7	Tintumol Sunny		New Trends in Fuzzy and Rough Set Theory and its applications	25.09. 2020	29.09. 2020	International	Department of Mathematics and Statistics, School of Basic sciences, Manipal University, Jaipur
8	Tintumol Sunny		Topological Data Analysis series-1	03.09. 2020	05.09. 2020	National	Department of Mathematics, Al-Ameen College, Edathala
9	Tintumol Sunny		Mathematical Research in Fuzzy sets, Rough Sets and soft Sets	27.07. 2020	31.07. 2020	International	Research Culture Society and Government Science College Chhota Udepur, Gujarat
10	Tintumol Sunny		Geometry of Surfaces	25.07. 2020	25.07. 2020	National	Department of Mathematics, St. Berchman's College Changanassery
11	Tintumol Sunny		Introduction to Grobner Basis	11.07. 2020	11.07. 2020	National	Department of Mathematics, St. Berchman's College Changanassery

12	Tintumol Sunny		Recent Research Topics in Mathematics	28.05. 2020	29.05. 2020	National	Department of mathematics, Auxilium College(Autonomous) Vellore
13	Tintumol Sunny		Mathematical Documentation and Computation Using Online Tools	28.05. 2020	29.05. 2020	National	PG & Research Department of Mathematics, St. Mary's College(Autonomous), Thoothukudi, Tamilnadu
14	Tintumol Sunny		Research Methods and Writing skills in Mathematical Sciences	25.05. 2020	27.05. 2020	National	Department of Mathematics, Bon Secours College for Women,Thanjavur
15	Tintumol Sunny		Contactless Teaching and Learning Pedagogy	19.05. 2020	19.05. 2020	International	IQAC, St. Xavier's College for woman, Aluva
16	Dr. Seena V		FDP on Quality Science Education in India in the 21st Century	03-11-2020	09-11-2020	National	Christ College (Autonomous) Irinjalakuda Thrissur
17	Dr. Seena V		National Mentor's day Webinar on 'Understanding the Mentee:The Innovative Mentor'	27.10. 2020		National	Prajyothi Nikethan College, Pudukad
18	Dr. Seena V		National Webinar on 'Rings and Ideals'	23.10. 2020		National	Department of Mathematics and History Korambayil Ahamed Haji Memorial

							Unity Women's College
19	Dr. Seena V		A Webinar on Academic Publishing in the Digital Environment.	14.10.2020		State	St.Terases College, Ernakulam
20	Dr. Seena V		One Week Faculty Development Programme Capacity Building in Drafting Proposals for Funded Research	05.10.2020	11.10.2020	National	St.Terases College, Ernakulam and GAD-TLC under PMMMNMTT
21	Dr. Seena V		International Web Conference on Fractals and Iterated Function Systems	25.09.2020	26.09.2020	International	Christ College (Autonomous) , Irinjalakuda
22	Dr. Seena V		Faculty Development Programme on R Programming	07.09.2020	14.09.2020	National	Marthoma College Thiruvalla in Association with Spoken Tutorial IIT Bombay
23	Dr. Seena V		One Week Faculty Development Programme on Python 3.4.3	27.08.2020	02.09.2020	National	Department of Physics and IQAC Barnagar Collge, Sorbhog Barpetta, Assam
24	Dr. Seena V		Infinite dimensional normed space and Schauder basis	24.08.2020		National	KKTM College, Pullut
25	Dr. Seena V		Recent Research Topics in Mathematics	28.05.2020	29.05.2020	National	Department of mathematics, Auxilium College(Autonomous) Vellore

26	Dr. Shinto K G		FDP on Quality Science Education in India in the 21st Century	03-11-2020	09-11-2020	National	Christ College (Autonomous) Irinjalakuda Thrissur
27	Dr. Shinto K G		Moodle Learning Management System	09-11-20	13-11-2020	National	Bishop Kurialachery College for woman, Amalagiri Kottayam

h. Give details of faculty members, if any, who are selected as resource persons for seminar/workshop/conference/refresher courses etc. during this period (Use separate sheet if necessary)   2 for each –   max   10

Sl. No	Name of faculty	Title of the seminar/ workshop/ conference etc.	Duration		Whether international/ national/ state/regional	Organizing agency
			From	To		
1	Dr. Seena V	An Introduction to Latex	12.08.2020		regional	Malabar Christian College, Kozhikode
2	Dr. Shinto K G	National Enrichment Program in Mathematics (NEPM 2020)	15-07-2020	24-07-2020	National	SH College Chalakudy
3	Dr. Shinto K G	Maths Fest, DWITHI 2K19	08-12-2019	08-12-2019	State	Vimala College Thrissur

| 4 | Dr. Shinto K G | International virtual workshop on Mathematics: Some concepts and applications | 01-07-2020 | 15-07-2020 | International | Sir Syed College Thaliparamba |

i. Does the department introduce any innovations in teaching/ learning/ evaluation during the current year? (like online tests, video lectures from out station resource persons)

Yes ☑   No ☐

10 for each – max 20

If yes, give details

j. Does the department provide remedial teaching?   15

Yes ☑   No ☐

If yes, furnish the following (use separate sheet if needed); provide evidence for student attendance

Sl. No.	Name of the teacher	Class for which remedial teaching is arranged	No of students benefited
1	Dr. Shinto K G	4th Semester BSc Mathematics	40 (Online using Google meet and YouTube)
2	Dr. Shinto K G	2nd Semester BSc Chemistry	35 (Online using Google meet and YouTube)
3	Dr. Shinto K G	2nd Semester BSc Physics	30 (Online using Google meet and YouTube)

k. Does the department provide coaching for entrance tests/eligibility tests (JAM, CSIR/UGC, University entrance tests etc..)?   15

Yes ☑   No ☐

If yes, furnish the following (use separate sheet if needed); provide evidence for student attendance

Sl. No.	Name of the teacher	Class for which remedial teaching is arranged	No of students benefited
1	Dr. Shinto K G	Coordinator of NET Coaching in Mathematics	55 (Course: JRF coaching Mathematics (christijkmoodle.in))
2	Dr. Shinto K G	Coordinator of NET Orientation Class	278
3	Tintumol Sunny	Coordinator of IIT JAM Orientation Class	402
3	Dr. Seena V	Coordinator of JAM Orientation Class	402

CRITERION II – RESEARCH

a. Give details of the publication by faculty, if any during the period .   2 for each – max 10

Sl. No	Name of faculty	Title of the paper	Title of the Journal and year of publishing	Citation index and impact factor of the journal, if available
1	Tintumol Sunny	Boxdot and Star Products on Interval - Valued Intuitionistic Fuzzy Graphs	International Journal of Innovative Technology and Exploring Engineering (IJITEE) 2019	

2	Tintumol Sunny	On Level Subsets of Intuitionistic L- Fuzzy Graphs	Malaya Journal of Matematik 2020	

b. Is the department recognized as a research department?

Yes ☐   No ☑   05

If yes give the number of research scholars joined this year.

c. Did the department produce any Ph. D during the last two years? (*For research departments only*)

Yes ☐   No ☑   10

If yes furnish the following

Sl. No	Name of the Research scholar	Name of the guide	Title of the thesis	Year of awarding

d. Does the department have running Major research projects?

Yes ☐   No ☑ 10 for each   max 20

If yes furnish the following.

Sl. No	Name of the principal investigator	Duration		Title of the project	Funding agency
		from	to		

e. Does the department have running Minor research projects?

Yes ☐   No ☑   5 for each   max 15

If yes furnish the following.

Sl. No	Name of the principal investigator	Duration		Title of the project	Funding agency
		from	to		

a. Did the department submit any new proposal for project, seminar etc. to funding agencies during the academic year?

Yes ☐   No ☑   5 for each   max   10

If yes give the number proposals submitted and the name of agencies.

b. Did the department conduct seminar/workshop/conference etc. during the academic year?

Yes ☑   No ☐   5 for each   max 15

If yes furnish the following

Sl. No	Title of the seminar/ workshop/ conference etc.	Duration		Whether international/ national/ state/regional	Funding agency
		From	To		
1	Problem Cracking Session on IIT JAM "Want to Become an IITan?"	07-07-2020	07-07-2020	National	Department
2	Online Orientation Programme "How to Grab NET/JRF?"	22-07-2020	22-07-2020	National	Department
3	Online Orientation Programme "How to Crack IIT-JAM"	30-06-2020	30-06-2020	National	Department

4	International Web Conference on Fractals and Iterated Function Systems	25-09-2020	26-09-2020	International	Management
5	Fr. Thomas Chakramakkal Endowment Lecture Series, Lecture 1	06-01-2021	06-01-2021	National	Management

c. Is there any publication from faculty like books, articles, conference/seminar proceedings, course materials (for distance education), software packages or other learning materials, any other (specify) ?

Yes ✓   No ☐   5 for each   max   15

If yes give details.

Sl.No.	Name of Faculty	Course offered	Website link
1	Dr. Seena V	Technical Writing using Latex	https://christopencourseware.com /course/Technical+Scripting+Using++LaTeX

CRITERION III – CONSULTANCY AND EXTENSION

a. Does the department have any MoU/ MoC (memorandum of contract)/ mutually beneficial agreements signed with industry /agency, or other academic institutions?

*   Yes ✓   No ☐   5 for each   max 15

If yes give details.

a. Does the department have collaborative activities (on-the-job training, student placement, internship, publication, curriculum development, research, consultancy, etc.) with other organizations (service sector, agricultural sector, local bodies/community, administrative agencies, state/national/international organizations?

Yes ☐   No ✓   05 for each   max 10

If yes give details

b. Does the department conduct/coordinate any kind of extension activities which are integrated with the academic curricula, contributive to community development etc.?

Yes ⬚   No ⬚   5 for each   max   10

If yes give details.

c. Does the department have partnership with University/Research institutions/Industries/ NGOs etc. for extension activities?

5 + 5

Yes ⬚   No ✓   max   10

If yes give details

CRITERION IV – EXTRACURRICULAR ACTIVITIES

a. Mention achievements of students , if any, of the students under the department (D- zone, Quiz competitions etc..) outside the college

05 for each   max   15

SI No	Name	Class	Competition	Title	Prize
1	Reshma Soosan George	III DC Mathematics	Quiz Competition	Dr US Nair quiz competition (inter University level)	First
2	Ann Zeba Xavier	III DC Mathematics	Quiz Competition	Dr US Nair quiz competition (inter University level)	First
3	Reshma Soosan George	III DC Mathematics	Quiz Competition	Inter collegiate quiz competition in Mathematics organized by Christ College	First
4	Ann Zeba Xavier	III DC Mathematics	Quiz Competition	Inter collegiate quiz competition in Mathematics organized by Christ College	First

5	Reshma Soosan George	III DC Mathematics	Quiz Competition	Inter collegiate quiz competition in Mathematics organized by organized by St Josephs' College Irinjalakuda	Third
6	Ann Zeba Xavier	III DC Mathematics	Quiz Competition	Inter collegiate quiz competition in Mathematics organized by organized by St Josephs' College Irinjalakuda	Third
7	Anagha A H	II DC Mathematics	Quiz Competition	Inter collegiate quiz competition in Mathematics	Third
8	Anjana M Das	II DC Mathematics	Quiz Competition	Inter collegiate quiz competition in Mathematics	Third
9	Aadithyan C A	II DC Mathematics	Mathematics Troll Competition	Intercollegiate Maths Fest	Third

b. Mention the association activities, if any, during the academic year other than inauguration and sent off

5 each   max   10

1. Conducted one-month Maths Fest, Teka-Teki on February 2020.
2. Celebrated National Mathematics Day by conducting various intercollegiate completions, TESSERACT, from 22nd to 24th December 2020.

c.   Mention performance of students in sports activities during the academic year (Athletics, Games etc in Intercollegiate/University competitions)

2 marks for each   max   10

Sl No	Name	Class	Sports Item	Event	Prize
1	Sanju B	II DC Mathematics	Soft Tennis	All India inter university	participation
2	Sanju B	II DC Mathematics	Lawn Tennis	Intercollegiate Championship	First
3	Nicemol Thomas	III DC Mathematics	Weight Lifting	Intercollegiate interzone Championship	Second

| 4 | Nicemol Thomas | III DC Mathematics | Weight Lifting | All India inter university Championship | Fourth |
| 5 | Nicemol Thomas | III DC Mathematics | Weight Lifting | Senior Nationals Championship | Fourth |

    d. Any other relevant information the department wishes to add.   10 marks

CRITERION V – STUDENT SUPPORT AND PROGRESSION

    a. Furnish the pass percentage for degree main 2019 – 20 batch (pass out) and PG 2018 – 20 batch.

    max 60

% pass

Postgraduate course   : 77%

Degree (Main)   : 90%

Marks	>90%	89-80%	79-70%	69-55%
Number of students UG	8	17	8	2
Number of students PG				

Language & Complementary Course (Batch-wise)

Batch	Number of students with grade			
	>90%	89-80%	79-70%	69-55%

Pass > 90 % = 20 marks, > 80 % = 10 marks, <80% = 0 marks.

For UG: Each >90% 2 marks each, 1 for 89-80% (Max 50)

For PG: Each >90% 3 marks each, 2 for 89-80% (Max 50)

For Language/Complementary for each students > 90% 2 marks, 1 for 89-80%, 0.5 for 79-70% (Max 20)

b. Mention about CSIR-UGC-NET, if any, obtained for the 2018 – 20 batches. (provide documentary evidence)

                                              5 for each   max   20

c. No of students who got admission in Top universities/institutions
    (List of institutions- IITs, NITs, JNU, Hyderabad University, EFLUs, CUSAT, IISC, Pondicherry University, IISERs)

                                              5 for each   (Max 20)

SI No	Name	Course	University/Institution
1	AJAY AZAD P	M.Sc. Business Analytics	Dublin Business School Ireland
2	DILNA SIBI	M.Sc. Statistics	Kannur University Campus
3	HIRANMAYI P M	MCA	CUSAT
4	KRISHNENDU MOHAN	M.Sc. Statistics	CUSAT
5	PETCY ANNIE M.M.	M.Sc. Mathematics	CUSAT
6	RESHMA SOOSAN GEORGE	M.Sc. Statistics	CUSAT
7	VARSHA C P	M.Sc. Business Analytics	Dublin Business School Ireland

d. Mention the efforts made by the department to minimize the dropout rate and facilitate the students to complete the course.

e.   Give the percentage of the students progressed to higher studies. Give details for last year.
     If records are kept   >70%- 05 marks, 69-60%-3 marks, 59-50%- 2marks   (Max 5)

SI No	REG NO	NAME	HIGHER STUDIES	
			COLLEGE	COURSE
1	CCARSMT016	AJAY AZAD P	Dublin Business School	M.Sc. Business Analytics
2	CCARSMT041	AMALA JAMES	St.Joseph's College	M.Sc. Data Analytics
3	CCARSMT024	ANGEL BABY	Christ	M.A. Economics
4	CCARSMT005	ANISHA BABU	St.Joseph's College	M.Sc. Mathematics
5	CCARSMT025	ANJALI JOHNY	Christ	M.Sc. Mathematics
6	CCARSMT026	ANNMARIA T. JOY		B.Ed
7	CCARSMT008	APARNA M A	Christ	M.Sc. Mathematics
8	CCARSMT028	DILNA SIBI	Kannur University Campus	M.Sc. Statistics
9	CCARSMT002	ELIZABETH THOMAS	CHRIST	M.Sc. Mathematics
10	CCARSMT010	FATHIMA.N.S		INTERNATIONAL CA
11	CCARSMT042	GAYATHRI P S	St.Joseph's College	M.Sc. Mathematics
12	CCARSMT043	HIRANMAYI P M	CUSAT	MCA
13	CCARSMT031	JOYSON PETER	MA College of Engineering	MCA
14	CCARSMT034	KRISHNAVENI K	Amrita University of Arts and Sciences, Kochi	M.Sc. Mathematics
15	CCARSMT044	KRISHNENDU MOHAN	CUSAT	M.Sc. Statistics
16	CCARSMT012	NANCY ENASU	Christ	M.Sc. Statistics
17	CCARSMT013	PETCY ANNIE M.M.	CUSAT	M.Sc. Mathematics
18	CCARSMT014	PONNU JALARTH	St.Joseph's College	M.Sc. Data Analytics
19	CCARSMT035	RESHMA SOOSAN GEORGE	CUSAT	M.Sc. Statistics
20	CCARSMT047	SANGEETHA P S	St. Thomas	MSW
21	CCARSMT036	SHANY VARGHESE	Sacred Heart College	M.Sc. Mathematics

f. Does the department provide any support for students for appearing and qualifying in various competitive examinations? (UGC-CSIR-NET, JAM, SLET, CAT, TOFEL, GMAT, GRE etc.); If yes provide evidence

(5 for each) (Max 10)

Yes ✓   No ☐

1. NET Coaching
2. IIT-JAM Training

g. Does the department provide placement and counseling services for students

Yes ☐   No ✓   Records to be kept   10

If yes give the number of students benefited

h. Does the department encourage and develop entrepreneurial skills among students

Yes ☐   No ✓   10

If yes give details

i. Does the department have a mechanism to seek and use data and feedback from its graduates and from employers, to improve the growth and development of the institution?

Yes ☐   No ☐

If yes give details   5 marks each   max   10

CRITERION VI – SUPPORTIVE ACTIVITIES

a. Members of the department involved in the administrative/club/committee activities of the college in 2019-20 academic year?

2 mark for each   (Max 10)

Sl. No.	Name	Activity to which associated
1	Tintumol Sunny	Gievance Redressal Cell (Students)

2	Tintumol Sunny	Alumni Executive Committee member
3	Tintumol Sunny	Guardians Meeting
4	Tintumol Sunny	Question Bank
5	Dr. Seena V	Certificate Course Coordinator
6	Dr. Seena V	Coordinator of the certificate course Programming in Matlab.
7	Dr. Seena V	Chairperson
8	Shinto K G	Time Table General Convenor
9	Shinto K G	Examination Chief Superintendent
10	Shinto K G	Nodal Officer of Centralized College Portal

b. Describe the measures taken for maintaining the cleanliness of staff room, classrooms, labs, museums etc.

Details to be furnished   (Max 10)

c. Does the department maintain proper documentation of data on Internal marksheets /Question papers/ Stock register (Details to be furnished)

Yes ☑   No ☐   (Max 10)

d. Mention the measures if any, taken by the department for personality development of students.

(Max 05)

Date: ۱۱ / ۱ / ۲۰۲۱

Signature:

Head of the department: