

Minutes of 12th meeting of Board of Studies of Department of Mathematics held on 01.08.2018 at 11.00am in Room No:110, Block IV, CHRIST.

In the Chair: Dr TV Joseph, Head of the Department

Members Present: Details are mentioned in the attendance sheet.

Declaration of the Quorum and calling the meeting in order:

The Chairman declared the validity of the Quorum and called the meeting to order.

Matters of the agenda:

1. Recommendations for PhD curriculum:

After the briefing of the newly delegated duty to the Department of Mathematics of conduct and administration of PhD course by Center for Research, the following are the suggestions made.

- To schedule the coursework of 40 credits for the first six months and complete it by end of December
- To form a Doctoral Advisory Committee comprising of Dean of Sciences, Head of the Department, Supervisor, Internal expert, External expert and one Interdisciplinary expert
- To make guide allotment after completion of coursework
- To insist on three publications before submission of thesis.
- The course content of the following papers were presented for approval
 - a. PhD 132 Mathematics Writing
 - b. PhD 133 Research Publications
 - c. PhD 138A Fluid Mechanics Research Skills
 - d. PhD 138B Graph Theory Research skills
 - e. PhD 139 Mathematics Tools for Researchers

The suggestions were unanimously approved by the members present subject to the changes incorporated based on the suggestions made. The following are the suggestions

- To insist on two publications and accept a communicated submission if approved by DAC
- Guides to maintain high standards of research and allow publications in reputed journals
- To give students exposure to core topics by permitting them to attend classes held on their core papers
- To hold seminars for students to present results on topics of their choice to evaluate their original aptitude for research

2. Research activities of the department:

Research activities of the department and its policy were discussed and approved.

3. Any other matter:

With no other matter to discuss, the Chairman adjourned the meeting by thanking the experts and the members for their presence and suggestions.





DEPARTMENT OF MATHEMATICS

BOS Meeting

BOS meeting of Department of Mathematics was held on 1ST February 2018. The following members were present.

Sl. No.	Name and Position	Member/ Invitee	Signature
1.	Dr T.V. Joseph	Chairman	
2.	Dr (Fr) Abraham, Pro – Vice Chancellor, Christ University	Member	
3.	Dr (Fr) Joseph Varghese	Member	
4.	Dr S Pranesh	Member	
5.	Dr Mayamma Joseph	Member	
6.	Dr. Gangadhar S Kanalli	Member	
7.	Dr Hari Baskar R	Member	
8.	Dr Smita Nagouda	Member	
9.	Dr Sangeetha George	Member	
10.	Dr Sangeetha Shathish	Member	
11.	Dr Paradesi Tabitha Rajasekar	Member	
12.	Dr B Mahantesh	Member	
13.	Dr Surendra Kulkarni, Dean of Sciences	Member	
14..	Dr G D Veerappa Gowda, Dean, TIFR Centre for Applicable Mathematics, Bangalore	Invitee	
15.	Dr. Meenakshi D'Souza, Associate Professor, Indian Institute of Information Technology, Bangalore.	Invitee	
16.	Dr. B Sury, Professor, Indian Statistical Institute, Bangalore.	Invitee	
17.	Dr. Abhinanda Sarkar, Associate Dean, MYRA School of Business, Stanford University, USA	Invitee	
18.	Dr Surendra Kulkarni, Dean of Sciences, Christ University.	Invitee	

Minutes of 11th meeting of Board of Studies of Department of Mathematics held on 01.02.2018 at 10.00am in Board Room, Auditorium Block, CHRIST.

In the Chair: Dr TV Joseph, Head of the Department

Members Present: Details are mentioned in the attendance sheet.

Declaration of the Quorum and calling the meeting in order:

The Chairman declared the validity of the Quorum and called the meeting to order.

Matters of the agenda:

1. Confirmation of minutes of the previous meeting held on 09.02.2017:

The minutes of the previous meeting of Board of Studies was duly reviewed and approved.

2. Recommendations for B.Sc curriculum:

After the briefing of proposed changes in B.Sc curriculum by the Chairman, the following are the suggestions made.

- To introduce a course on Discrete Mathematics with topics like Logic, Recurrence relations and Set theory.
- Partial ordered sets to be included as the first topic in Unit 3(Lattice Theory) of MAT642C - Computational and Applied Mathematics.
- To include the topic Trees and Networks and exclude the topic Coloring in Unit 3 of the elective course MAT642D- Graph Theory

The proposed changes in the B.Sc curriculum were unanimously approved by the members present subject to the changes incorporated based on the suggestions made.

3. Recommendations for M.Sc curriculum:

After the briefing of proposed changes in M.Sc curriculum by the Chairman, the following are the suggestions made.

- To include Recurrence Theory and exclude Approximation and Randomization Algorithms in Unit IV of the elective course MTH447-Design and Analysis of Algorithms.
- To introduce an elective course on Simulation and Random Number generation or incorporate these topics in the course Mathematical Modelling
- To include topic Symbolic Mathematics in the lab courses
- To introduce Libraries for Differential Equations in Python in the lab courses
- To include topics Onto functions and Stirling Numbers in the course MTH448- Combinatorial Mathematics and include textbook Graham, Ronald L., et al. "Concrete mathematics: a foundation for computer science." *Computers in Physics* 3.5 (1989): 106-107. as Recommended Reading

The proposed changes in the M.Sc curriculum were unanimously approved by the members present subject to the changes incorporated based on the suggestions made.

4. Recommendations for M.Phil curriculum:

The proposed changes in the M.Phil curriculum were unanimously approved by the members present subject to the changes incorporated based on the suggestions made.

5. Review of the results of ESE April and October 2017 of B.Sc, M.Sc and M.Phil programmes:

The result analysis of the End semester examinations of B.Sc, M.Sc and M.Phil programmes was reviewed and was found satisfactory.

6. Approval of the Board of Examiners for the academic year 2018-2019:

The updated list of examiners of the Board of Examiners was reviewed and approved.

7. Research activities of the department:

Research activities of the department and its policy were discussed and approved. Publications of the department were found satisfactory.

8. Any other matter:

With no other matter to discuss, the Chairman adjourned the meeting by thanking the experts and the members for their presence and suggestions.



(Signature)

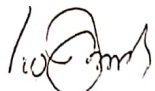
41-02-2018


CHRIST UNIVERSITY, BENGALURU

Changes in Curriculum

Deanery: Science
 Department: Mathematics
 Programme: MSc Mathematics

Course/Code/Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
MTH151	Nil	New Course Introduced <u>Course Title:</u> Mathematics Lab using FOSS tools	To enhance the computing skills relevant for use in Mathematics.	
MTH251	Nil	New Course Introduced <u>Course Title:</u> Mathematics using Python	To enhance the computing and programming skills relevant for use in Mathematics.	
MTH447	Nil	New Course Introduced <u>Course Title:</u> Design and Analysis of Algorithms	To provide more electives based on the Mathematics needed for computational aspects.	
MTH448	Nil	New Course Introduced <u>Course Title:</u> Combinatorial Mathematics	To provide more electives based on the Mathematics needed for computational aspects.	


 HOD/Dept Coordinator
 01/12/15


 Dean/Associate Dean

Registrar

CHRIST UNIVERSITY, BENGALURU

Changes in Curriculum

Deanery: Science
Department: Mathematics
Programme: BSc. (PCM, PME, CME, CMS, EMS)

Course/Code/Unit	Existing Syllabus	Proposed Syllabus	Reasons for Change	Remarks
MAT351	Real Analysis Using Maxima	Introduction to Python Programming for Mathematics	This course is introduced due to increased popularity and relevance of Python Programming in scientific computing. This course will be a prerequisite for learning any course on Mathematics by using Python	
MAT451	Algebra Using Scilab	Mathematical Models using Python Programming	This course is introduced to give the students the familiarity in using Python programming for handling certain Mathematical Models	

Since the final year students (2016-2019 batch) are studying under CBCS system, the existing courses on Algebra, Algebra using Scilab, Financial Mathematics, Financial Mathematics using MAXIMA, Numerical Methods, Numerical Methods using MATLAB, Real and Complex Analysis, Analysis using MAXIMA, Fourier Series and Integral Transforms, Fourier Series and Integral Transforms using MAXIMA and Scilab, Operations Research, Operations Research using Scilab, offered for final year are completely removed and a new structure (with new courses) that is compatible with CBCS is introduced and is as follows:

Semester	Course Code	For 2016-2019 Batch	Course Type	Hrs/Wk	Total Hrs	Marks	Credits
5	MAT541	Linear Algebra	DSE	3	45	100	3
	MAT551	Linear Algebra using Scilab	DSE-P	2	30	50	2
	MAT542A	Integral Transforms	DSE	3	45	100	3
	MAT542B	Numerical Methods					
	MAT542C	Number Theory					
	MAT542D	Calculus of Several Variables					
	MAT542E	Financial Mathematics					
	MAT552A	Integral Transforms using Scilab	DSE-P	2	30	50	2
	MAT552B	Numerical Methods using Scilab					
	MAT552C	Number Theory using Scilab					
	MAT552D	Calculus of Several Variables using MAXIMA					
	MAT552E	Financial Mathematics using MAXIMA					
6	MAT641	Complex Analysis	DSE	3	45	100	3
	MAT651	Complex Analysis using MAXIMA	DSE-P	2	30	50	2
	MAT642A	Mechanics	DSE	3	45	100	3
	MAT642B	Mathematical Modelling					
	MAT642C	Computational and Applied Mathematics					
	MAT642D	Graph Theory					
	MAT642E	Operations Research					
	MAT652A	Mechanics using Scilab	DSE-P	2	30	50	2
	MAT652B	Mathematical Modelling using Scilab					
	MAT652C	Computational and Applied Mathematics using Scilab					
	MAT652D	Graph Theory using Python					
	MAT652E	Operations Research using Scilab					

HOD/Dept Coordinator

Dean/Associate Dean

Registrar

PANEL OF EXTERNAL EXAMINERS FOR POST GRADUATE PROGRAMS
(Additions only)

Department : Mathematics

Course	Paper Name/s	Paper Code/s	Name of the Examiner	Qualification/s	Experience (Yrs)	Current Position/Institution
MPhil	Graph Theory	RMT241B	Dr Nagesh	M.Sc, Ph.D	10 years	PES, Bengaluru
MPhil	Graph Theory	RMT241B	Dr R Chandrshekar	M.Sc,Ph.D	30 years	Professor, T. John College, Bengaluru
MPhil	Graph Theory	RMT241B	Dr. Naga Marutha Kumari	MSc, PhD	15 years	Associate Professor, Reva University;suma@reva.edu.in
MPhil	Graph Theory	RMT241B	Dr. Vishu Kumar M	MSc, PhD	10 years	Associate Professor, Reva University; vishukumar@revainstitution.org
MPhil	Graph Theory	RMT241B	Dr. Kumar Abhishek	MSc, PhD	25 years	Professor, Amritha Univeristy
MPhil	Graph Theory	RMT241B	Dr. J. Geetha	MSc, PhD	15 years	Asst. Professor, Amritha University
MPhil	Graph Theory	RMT241B	Dr. Radha Iyer R.	MSc, PhD	8years	Asst. Professor, Amritha University


HOD/Dept Coordinator
01/02/18


Dean/Associate Dean

Registrar

CHRIST (Deemed to be University)
Department of Mathematics

Feedback on curriculum : Action taken report
Academic year 2018-2019

Highlights of the Comments received through the feedback on Curriculum:

1. The quality of questions in the question paper of mid sem and endsem have to become better and challenging.
2. Syllabus of Real analysis has to be improved, beyond just sequence and series.
3. I feel in practicals, we should be taught a single software in all the six semesters so that we can master that. At present, we are learning three different softwares, but practically have learnt only to pass exams. If Matlab was taught throughout the six semesters, it would have helped us more.
4. The question paper should have new type of questions which are not covered in class so that understanding is checked
5. A few courses like number theory ,graph theory etc. should be provided as electives.
6. An option to choose the second paper as an elective for final year students. This can include papers like Advanced concepts in Algebra, Numerical Analysis etc. This might provide more depth in specific topics of interest for a student to pursue higher studies.
7. To make the papers of numerical methods and operations research a little more concept oriented to avoid large calculations during examination. This will help to strengthen one's idea on the subject matter and its applications.
8. Also, for the practical aspect of OR, for a student not comfortable with the basics of programming, rote learning programs does not make any sense, as you learn something not just to write it on paper, but to actually use it in real life, and I know, I would never, if I am not writing the program on my own and no rote learning would teach me how to do it.
9. Please look into the course for software papers. They are really difficult to cope with. If possible, the syllabus should try to cover topics for competitive exams. At present there is too much gap between students from very reputed institutes and our students.
10. The syllabus can provide in-depth knowledge, which it lacks. So much more can be taught in the specified subjects. Syllabus is a bit shallow. In place of Maxima and Scilab, MATLAB or Sci-py can be introduced. Maxima is good only for a semester.
11. The number of theorems in 5th and 6th sem needs to be reduced.
12. Syllabus is standardized as per the local, national and global needs.
13. Please introduce an option, in the third year, for students to specialise in one of the three subjects of their chosen fields.
14. The programme provides a good base for the future endeavours.
15. Thank you for your guidance and support Sir. I'm glad to see him grow not only in terms of academics but more importantly as a human being. Full marks to the department for giving him inputs beyond the textbook.

Action Taken:


As per the feedback received for the last few years,, the following courses were introduced:

1. MAT351 - Introduction to Python Programming for Mathematics
2. MAT451 - Mathematical modelling using Python Programming
3. MAT531 - Linear Algebra
4. MAT551 - Linear Algebra using Scilab
5. MAT541A - Integral Transforms
6. MAT541B - Numerical Methods
7. MAT541C - Number Theory
8. MAT541D - Calculus of Several variables
9. MAT551A - Integral Transforms using Scilab
10. MAT551B - Numerical Methods using Scilab
11. MAT551C - Number Theory using Scilab
12. MAT551D - Calculus of Several variables using MAXIMA
13. MAT631 - Complex Analysis
14. MAT651 - Complex Analysis using Maxima
15. MAT641A - Mechanics
16. MAT641B - Mathematical Modelling
17. MAT641C - Computational and Applied Mathematics
18. MAT641D - Graph Theory
19. MAT651A - Mechanics using Scilab
20. MAT651B - Mathematical Modelling using Scilab
21. MAT651C - Computational and Applied Mathematics using Scilab
22. MAT651D - Graph Theory using Python
23. MTH151 - Mathematics Lab using FOSS tools
24. MTH251 - Mathematics using Python
25. MTH447 - Design and analysis of Algorithms
26. MTH448 - Combinatorial Mathematics

MAT351, MAT451, MTH151 and MTH251 were introduced inorder to change the programming language oriented courses completely in Python only (This batch of students will continue with Python based courses in their final year also)

Elective courses along with the corresponding practicals were introduced to address the request to include more mathematics courses in the curriculum. (based on feedback of the past few years)

Note: The requests that are not considered this year will be considered during the curriculum revision in the upcoming academic years.



HEAD

Department of Mathematics,
CHRIST (Deemed to be University)
BENGALURU-560 029

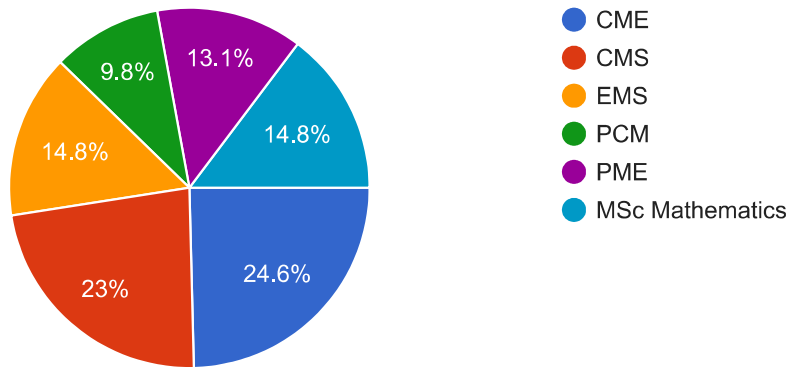
Student Feedback Survey on Curriculum

61 responses

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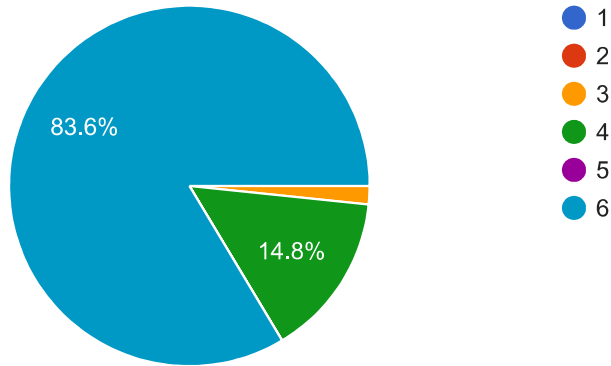
My Programme

61 responses



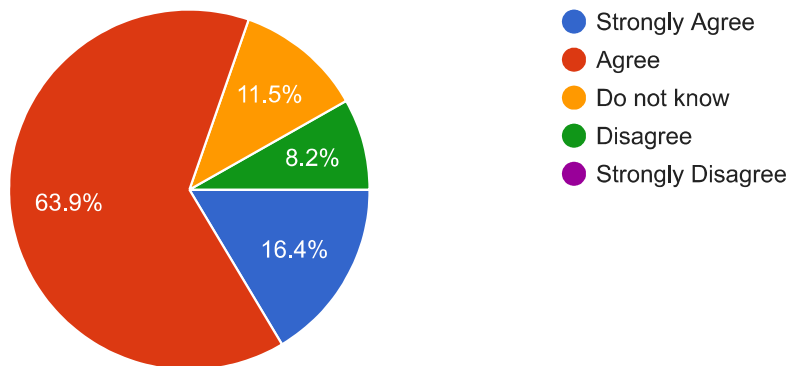
Semester

61 responses



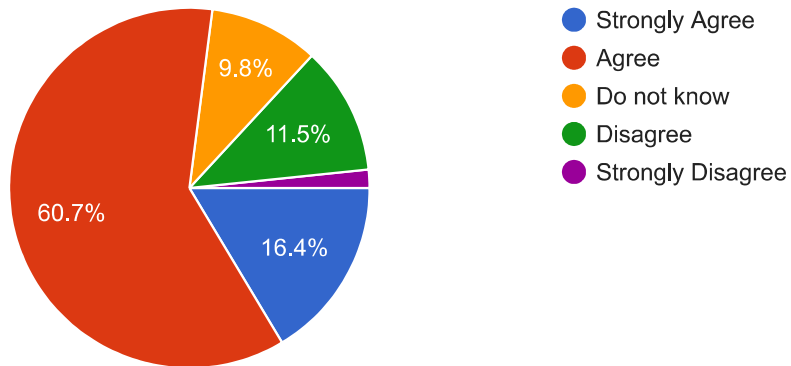
The curriculum provides scope for higher studies.

61 responses



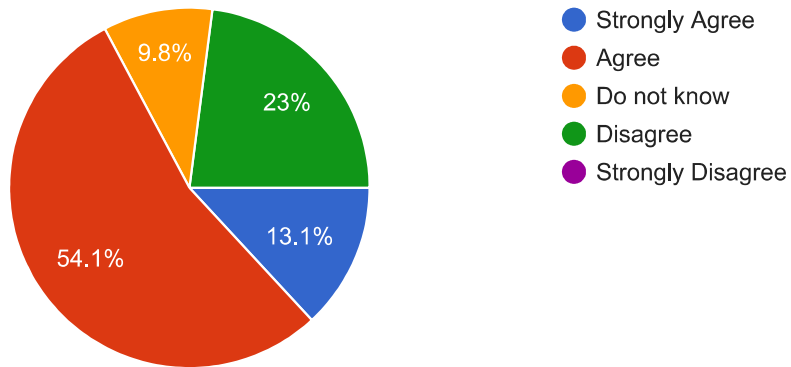
The total number of hours allocated for the entire Mathematics curriculum in the programme is sufficient.

61 responses



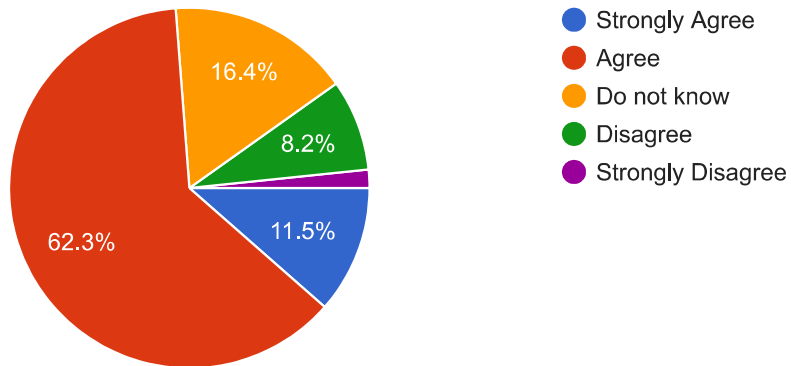
The course objectives meet my expectations.

61 responses



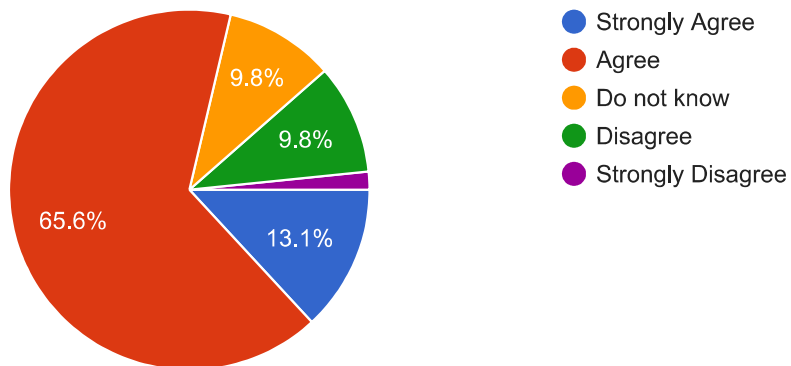
The specified learning outcomes rightly summarize the the scope of the course.

61 responses



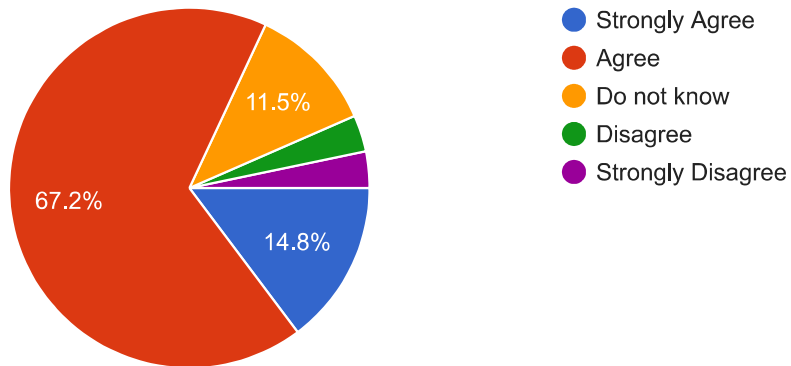
The number of hours allocated for each unit of the course is sufficient.

61 responses



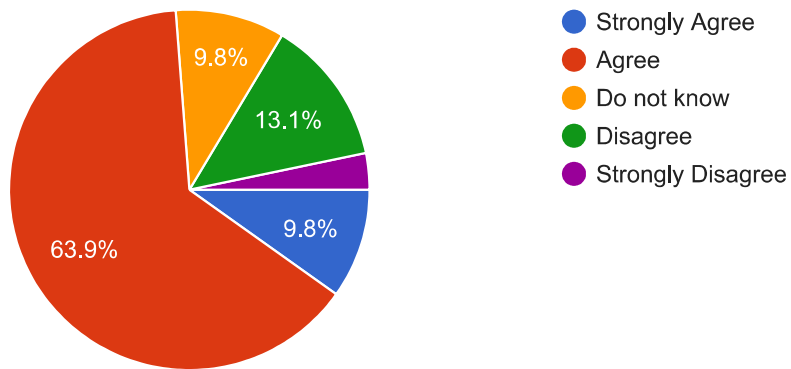
The learning resources provided cover all the topics specified in the course.

61 responses



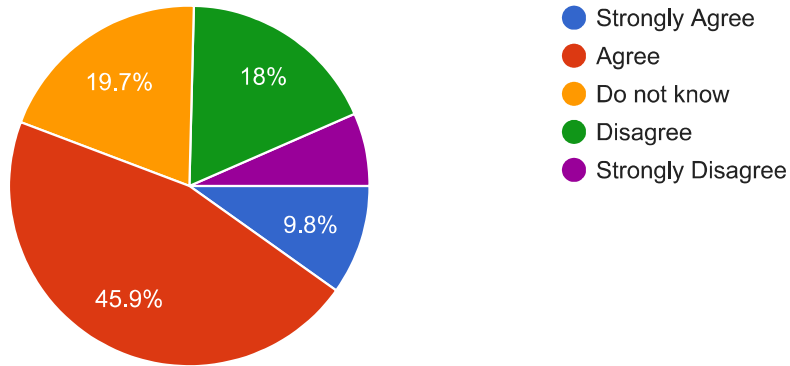
The assessment criteria meet the learning objectives of the courses.

61 responses



The assessment criteria perfectly measure my learning.

61 responses



General Comments; if any:

9 responses

Good

Instead of Maxima and scilab, introduce Matlab/Python which is not only a stronger tool but also simple to use

More priority should be given to core papers like analysis and algebra

Please don't push us into depression with two components of CIA. And allot teachers who really match our standard. We cannot cope with professors who are in stage of teaching Masters.

Core Mathematics paper should be given more importance.

Our Complex Analysis teacher is a highly skilled person with immense knowledge. He is best suited for masters students. The cia components were a real burden. With two projects to finish we really had to deal with a lot.

Thank you

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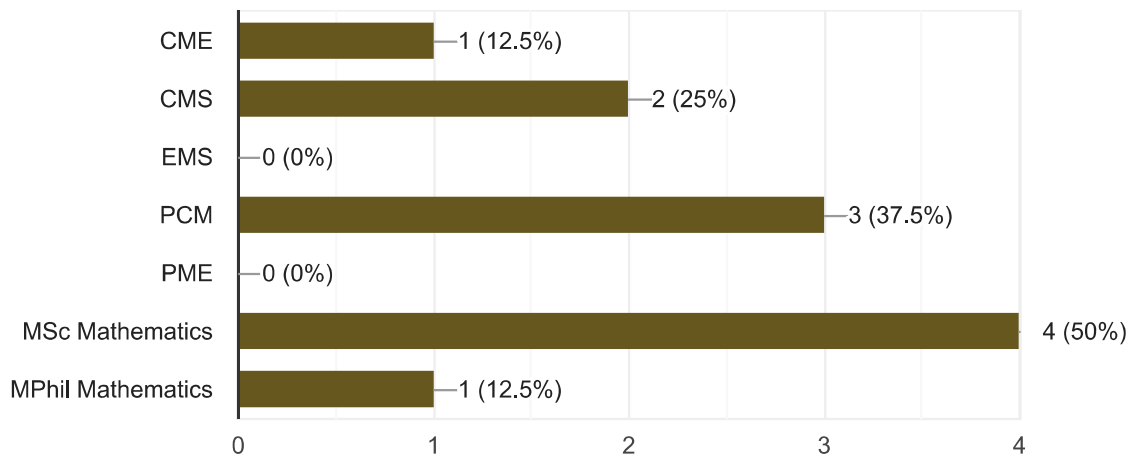
Alumni Feedback

8 responses

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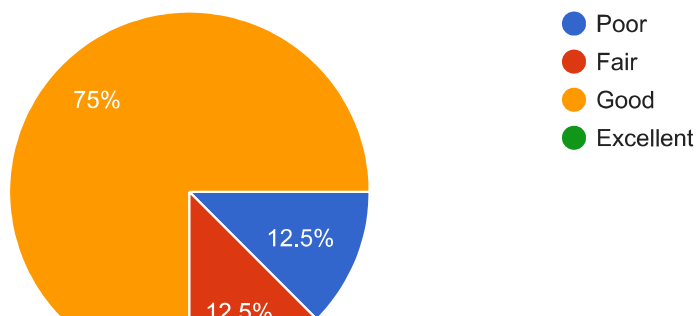
Program/s Completed

8 responses



How do you rate the Over all quality of instruction by Faculty?

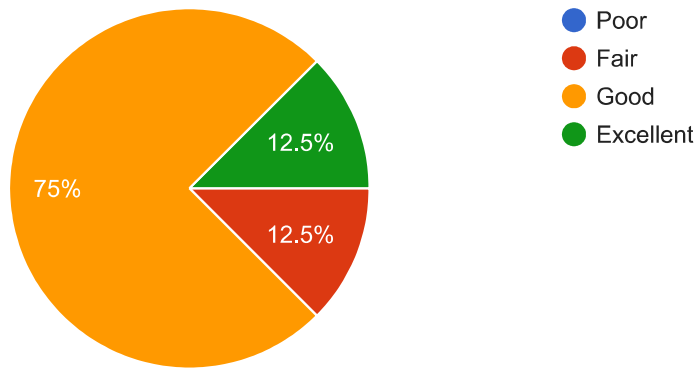
8 responses





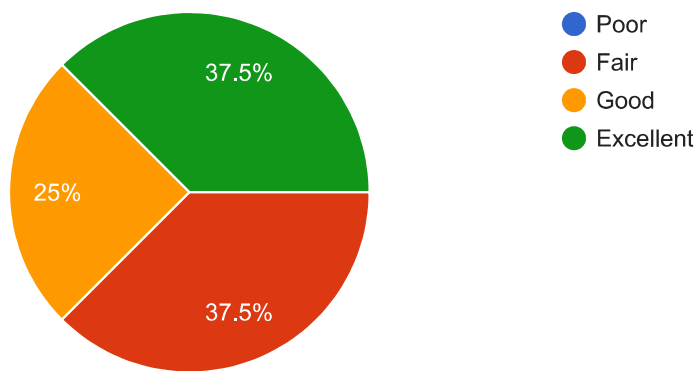
How do you rate the Quality of Instruction by Faculty in Mathematics

8 responses



How do you rate the Quality of Education support Services?

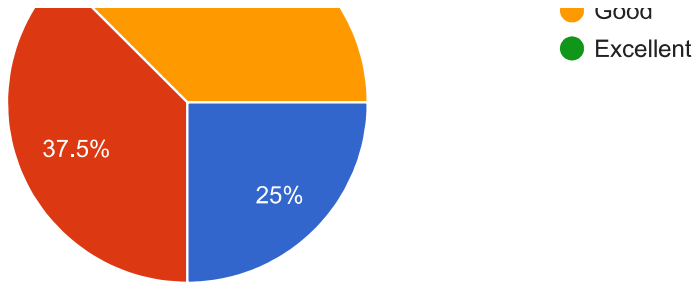
8 responses



How do you rate the Quality of Individual attention from Faculty?

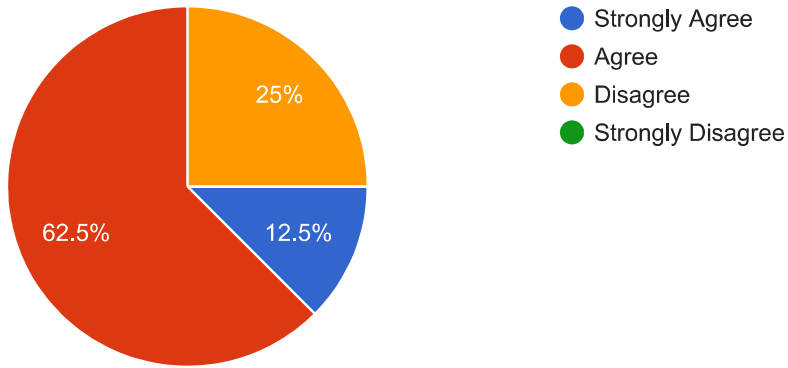
8 responses





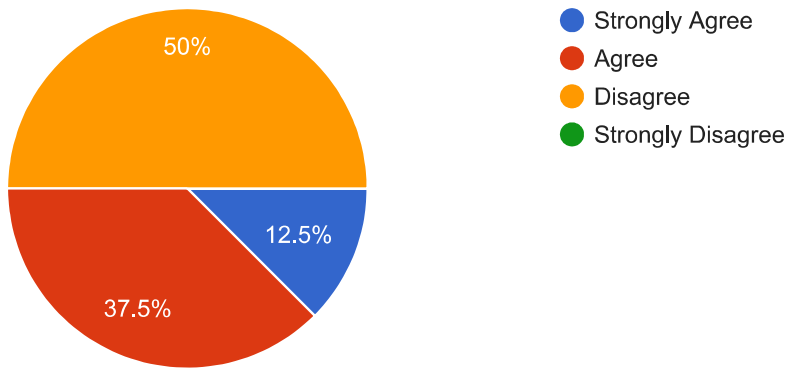
As a result of Mathematics courses I took at CHRIST, I learned to understand basic principles, methodologies and perspective in my discipline.

8 responses



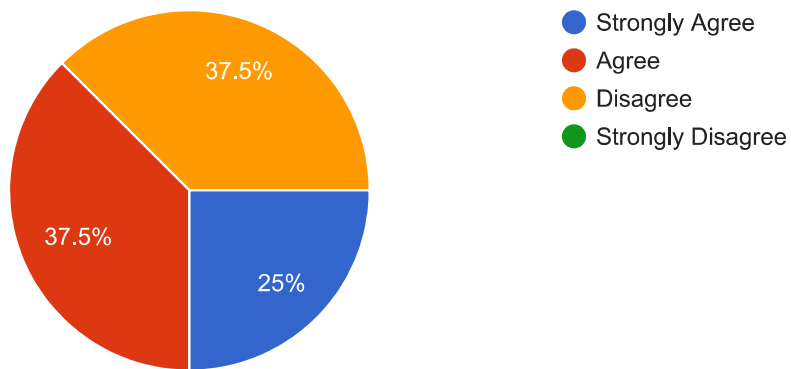
As a result of Mathematics courses I took at CHRIST, I learned to communicate knowledge more effectively in written and oral form.

8 responses



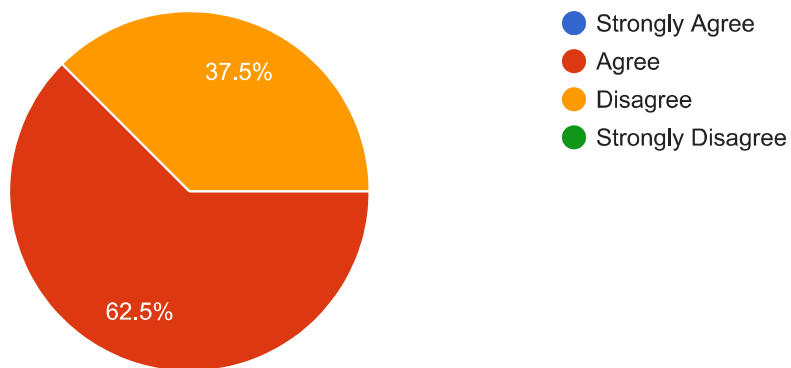
As a result of Mathematics courses I took at CHRIST, I improved my critical thinking skills that will be useful throughout my life.

8 responses



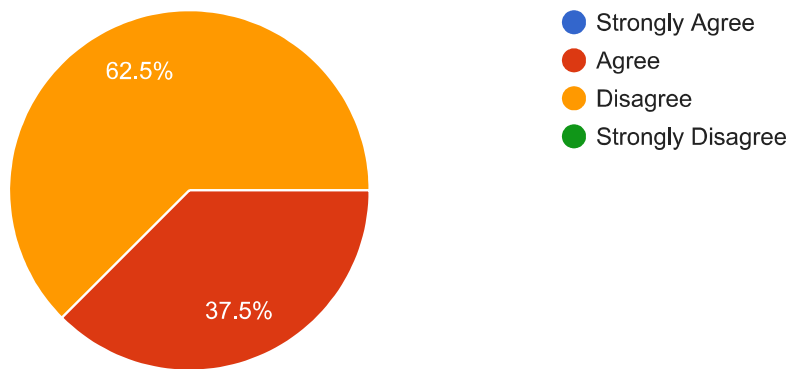
As a result of Mathematics courses I took at CHRIST, I learned to understand connections between my discipline and other disciplines.

8 responses



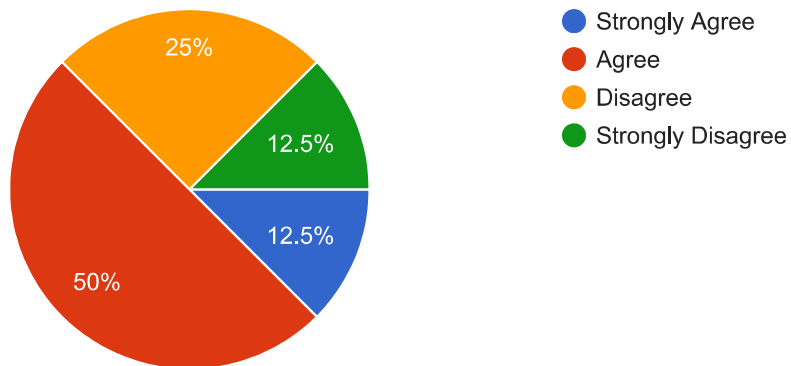
As a result of Mathematics courses I took at CHRIST, I learned to see my disciplines connection to global issues.

8 responses



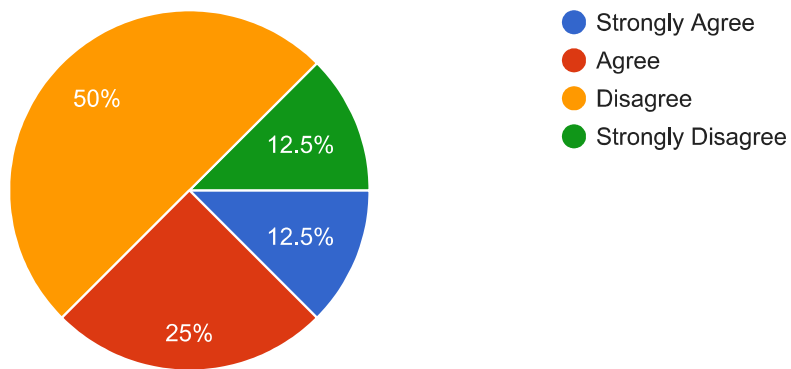
As a result of Mathematics courses I took at CHRIST, I am motivated for further studies in Mathematics.

8 responses



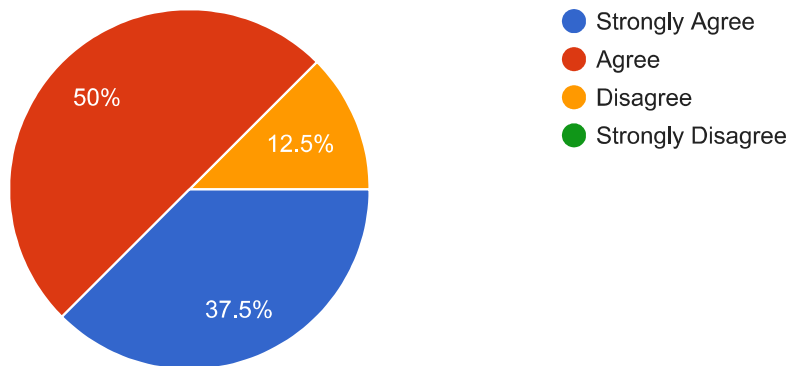
CIA grading practices and other academic policies were administrated fairly

8 responses



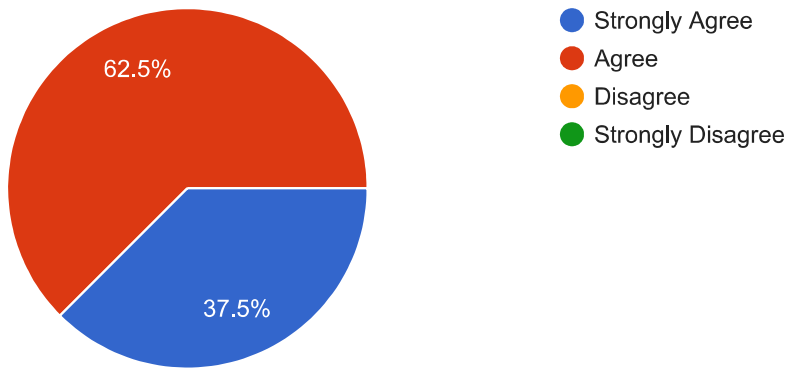
Faculty members in my Department were interested in my progress as a student.

8 responses



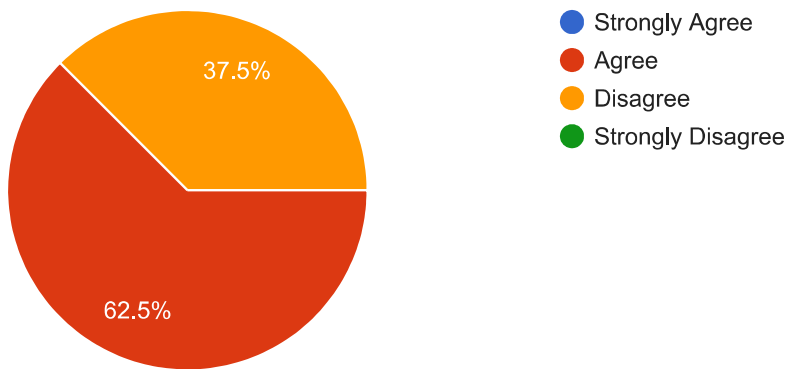
Teachers were available for Assistance outside of the class

8 responses



The courses required for my major were appropriate.

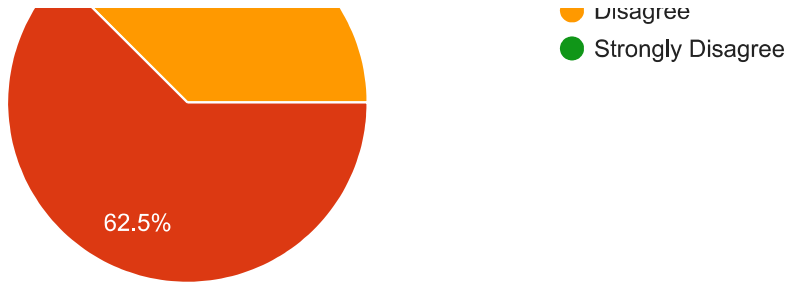
8 responses



My major courses were intellectually challenging.

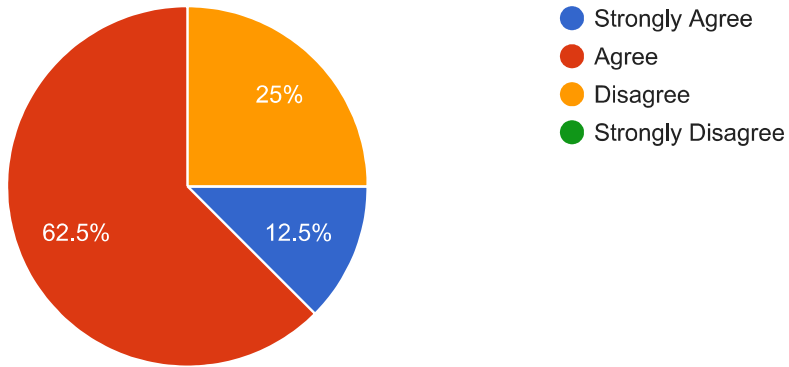
8 responses





I would recommend this course at CHRIST to other students

8 responses



General Comments; if any:

0 responses

No responses yet for this question.

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Google Forms



Parents Feedback form

7 responses

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Name of the Parent

7 responses

Jose

Pius F Poovathingal

Sheela Thomas

Jhumka Chanda

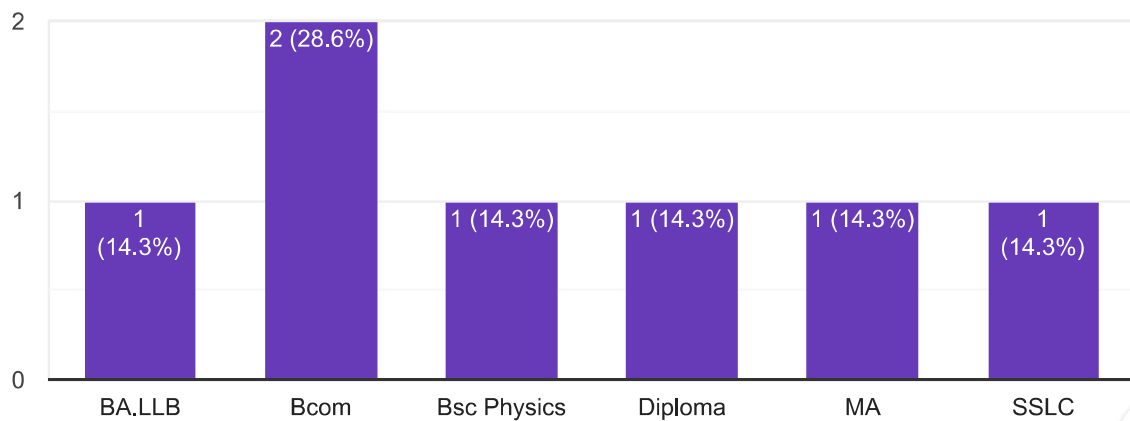
Adv.Suresh Mathai

HARIHARAN. V

Thomas C K

Educational Qualification

7 responses



Organisation

7 responses

Business

State Bank of India

Not Working

Not applicable

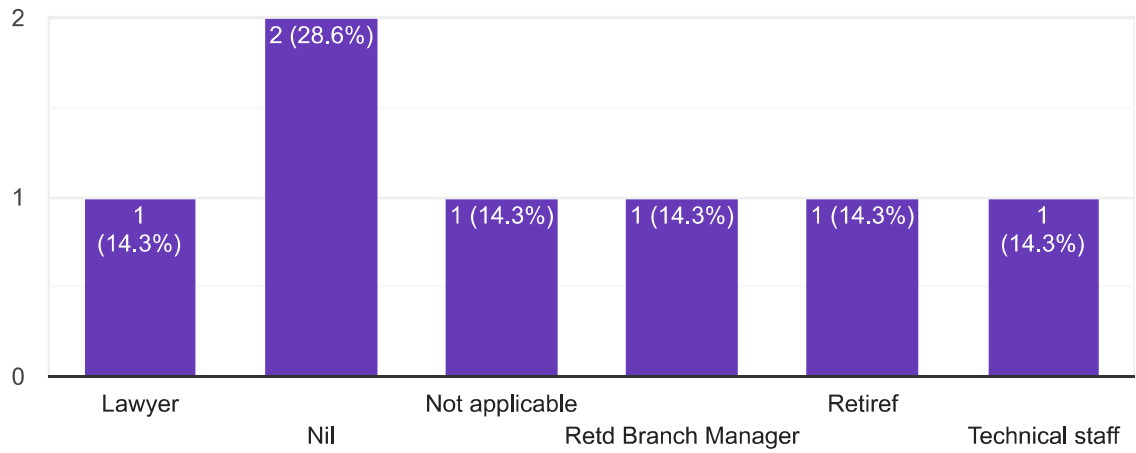
Private

Retired

Private sector

Designation

7 responses



Name of the student

7 responses

Linu

Agnes Poovathingal

Rebecca Thomas

Arjun Chanda

Vrinda Mary Mathew

Aishwarya hariharn

Jojoy Thomas C

Name of the Programme

7 responses

MSc Maths

Msc mathematics

MSc Mathematics

MSc Mathematics

M.Sc. Mathematics

Msc mathematics

Msc Mathematics



Contact Phone Number/s

7 responses

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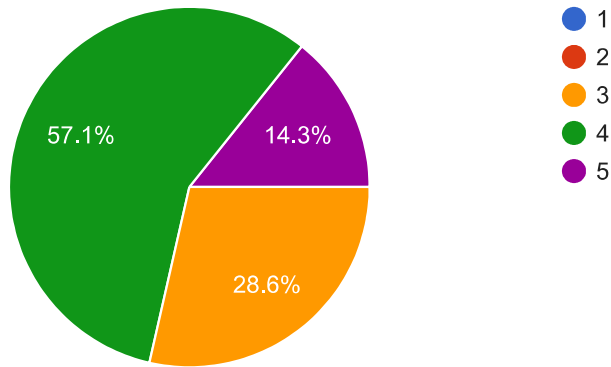
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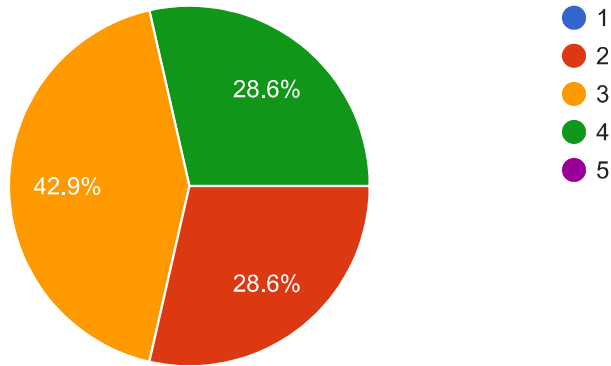
Does the syllabus orient the students towards higher education?

7 responses



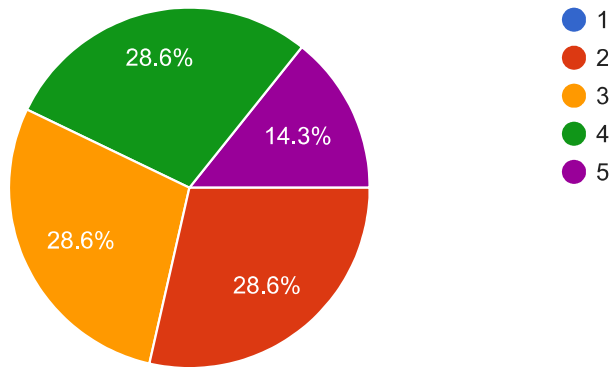
Is employability given weightage in the design and development of the syllabus?

7 responses



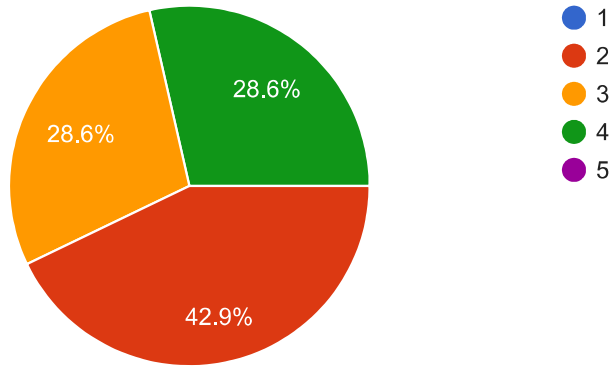
Is the syllabus designed to have a component on value based education?

7 responses



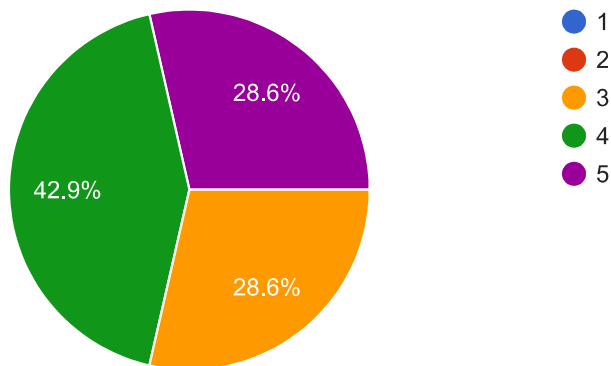
Does the syllabus have components to serve the needs of the society?

7 responses



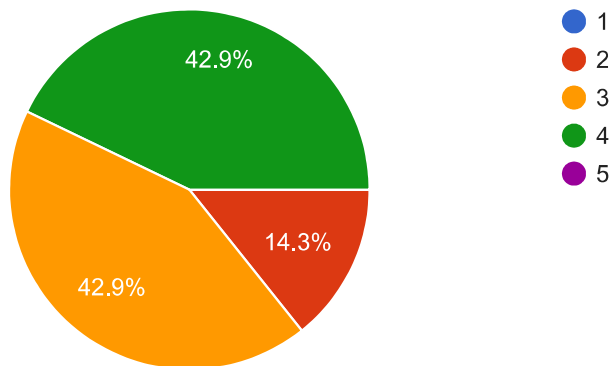
Does the syllabus promote self-study and attitude of research?

7 responses



Does the syllabus help the students to enhance their personality?

7 responses



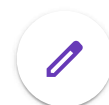
General Comments and Suggestions:

0 responses

No responses yet for this question.

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Google Forms



Teachers Feedback form

7 responses

[Publish analytics](#)

Name of the Faculty Member

7 responses

HARI BASKAR R

B Mahanthesh

Anirban Roy

Smita S Nagouda

Sudev N K

CHARLES DOMINIC

Sangeetha Shathish



Employee Id

7 responses

123

1986

715

423

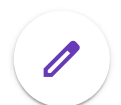
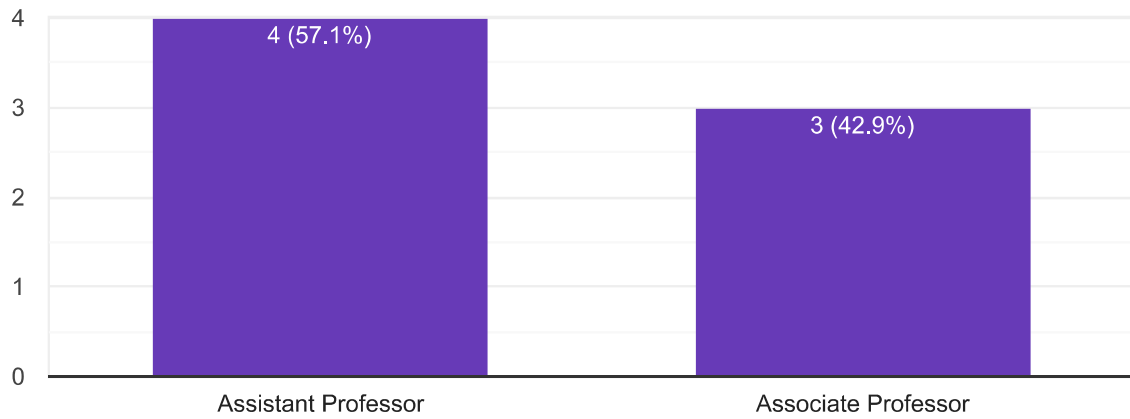
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2618

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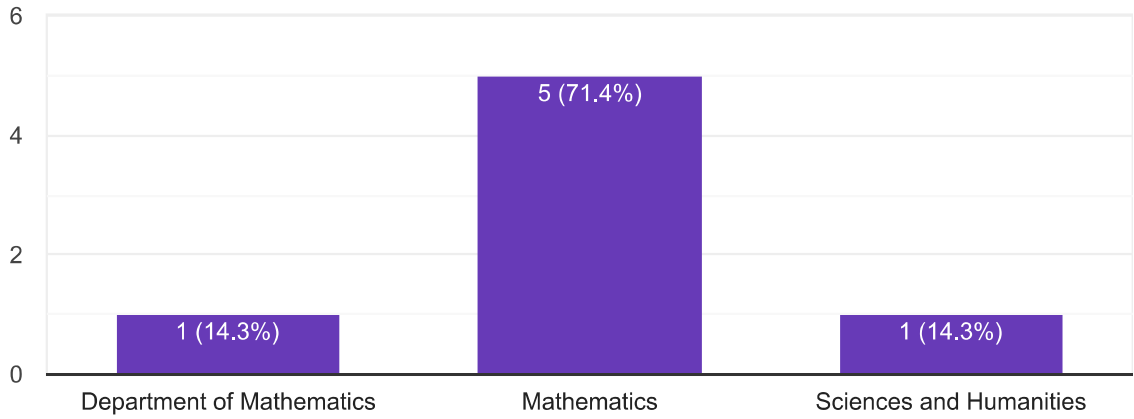
Designation

7 responses



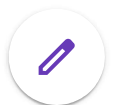
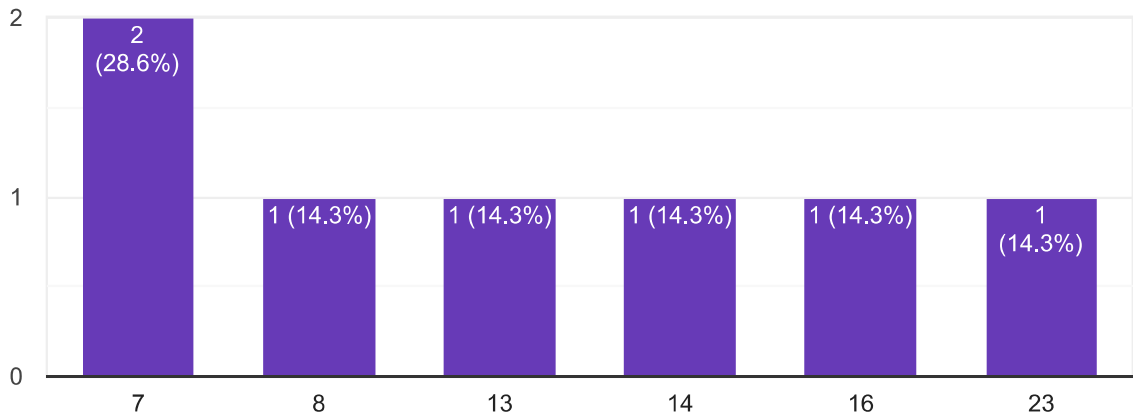
Department

7 responses



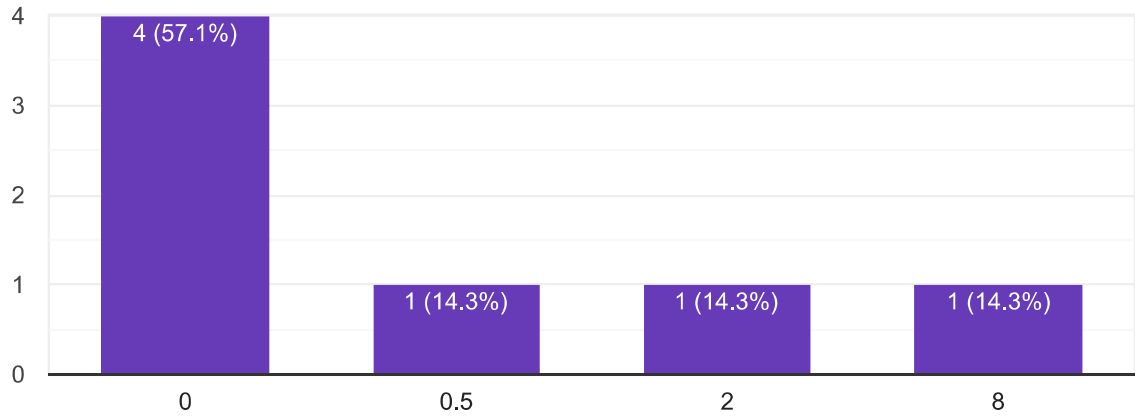
Experience in Teaching (Number of Years)

7 responses



Experience in Industry/R&D (Number of Years)

7 responses



Contact Phone Number/s

7 responses

9731888255

09164638219

+919845078784

98866751460

9497557876

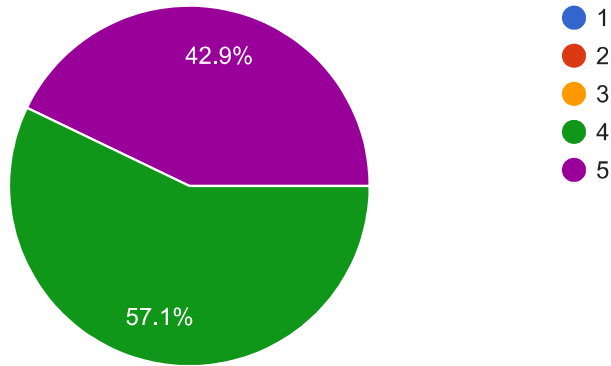
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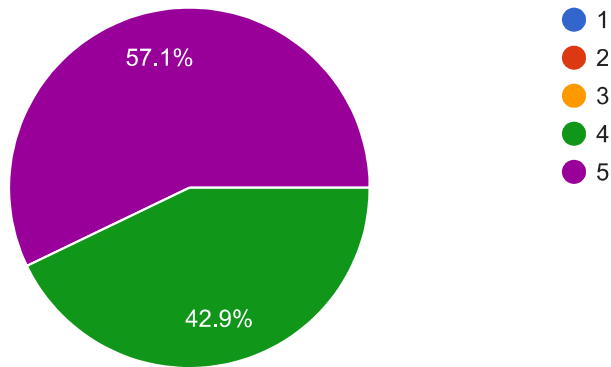
Does the syllabus satisfy the stated objectives and learning outcomes?

7 responses



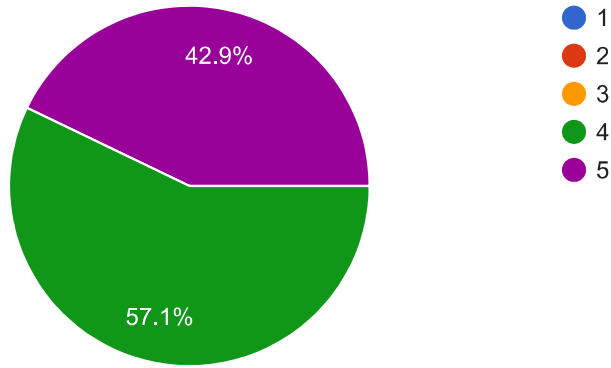
Do you have continuous processes to propose, modify, suggest and incorporate new topics in the syllabus?

7 responses



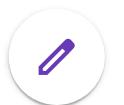
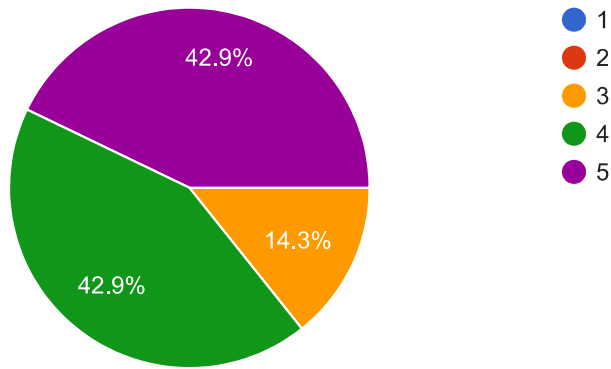
Is the syllabus effective in developing independent thinking?

7 responses



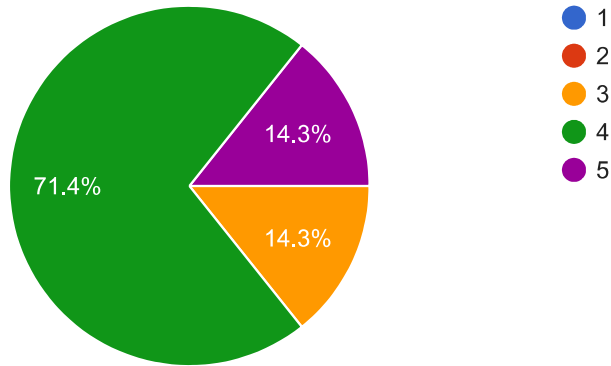
Does the departmental level expert committee meet to review the syllabus?

7 responses



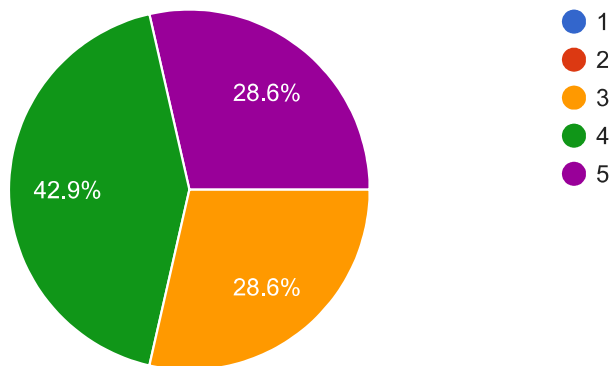
Does the syllabus enhance your knowledge in the subject area?

7 responses



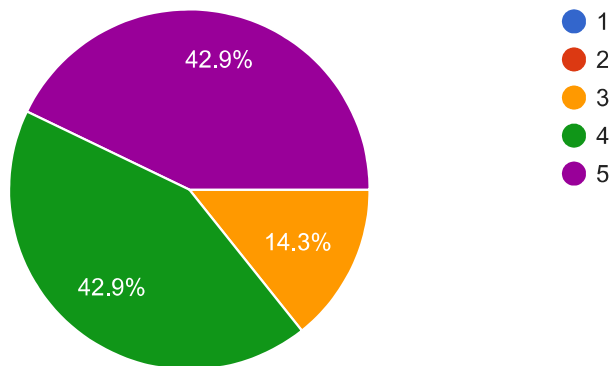
Does the syllabus enable the students to apply their knowledge in real life?

7 responses



Does the syllabus demand the teachers for research inclusive teaching?

7 responses



General Comments and Suggestions:

2 responses

NA

Every year corrections, modify and incorporate new topics in the syllabus is happening in BOS.

Everything systematically going good

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