



Shambasveshwar College of Science, Kalaburagi

DEPARTMENT OF METHEMATICS

1. Course Name : Concepts of Maxima and Sci-lab
2. Course Code : SBMAT01
3. Syllabus Unit wise : Enclosed
4. Duration of the Course : 10-02-2019 to 12-03-2019
5. No. Of Students Enrolled : 25
6. No. of Staff Handed the Course : 02 Members
7. Fees Collected if any : Free
8. Attendance : Enclosed
9. Experts invited from : 1. Dr. Mahantesh S. Swamy, Govt. F.G. College Farhatabad.  
2. Sri. Rajshekar Chalegeri, SSM College Shahabad.
10. Examination Conducted details : Enclosed
11. Permission from the Management to start the Course : -
12. Grading / Class awarding System: Question Paper prepared for 80 marks and with respect to evaluated answer scripts Grading/ Class is awarded for the students
13. Constitution of BOS and BOE : BOS Meeting Held on 26<sup>th</sup> Feb 2019 Copy Enclosed.
14. Exam Related reforms :
15. External Agency involved with MOU
16. No. Of Times Course Conducted: one Time
17. Course Advertisement and their Bills : Notice Circulated to class enclosed
18. Notice Being uploaded on the College Website:
19. Feedback from Students : Enclosed
20. Action taken report of Feedback: On the basis of Feedback Department decides to conduct the Course every year.
21. Department meetings for conduct of course and their meetings : Enclosed
22. Audited Statements of Expenses: -
23. Sanction Letter from affiliating management : -
24. Course Material Prepared : Enclosed

**HEAD**

**Department of Mathematics**  
**Shambasveshwar College of Science**  
**KALABURAGI**



**SHARANBASAVESHWAR COLLEGE OF SCIENCE, KALABURAGI**  
**Department of Mathematics**

The meeting in the department is conducted to Organize a Certificate Course ,Concept of Maxima and Sci-Iab from 10/2/2019 to 12/03/2019,for the B.Sc.VI semester Students.

*Mose*  
Head of the Department  
**HEAD**  
Department of Mathematics  
Sharanbasaveshwar College of Science  
KALABURAGI

1. *Adi*
2. *PS*
3. *Asa*
4. *M*
5. *Preeti*



**SHARNBASVESHWAR COLLEGE OF SCIENCE KALABURAGI**

Date -1/2/2019

The students of IV<sup>th</sup> and VI<sup>th</sup> semester here by inform<sup>ed</sup> that the Department of Mathematics is introducing a certificate course, interested students can enroll their name<sup>s</sup> Ms. Mahalaxmi Belagumpi and fill the application form.

*M. K. S.*

Head of the Department

**HEAD**

**Department of Mathematics**

**Sharnbasveshwar College of Science**

**KALABURAGI**

*A. K. S.*

Principal

**PRINCIPAL**  
**SHARNBASVESHWAR COLLEGE**  
**OF SCIENCE, GULBARGA**



## Sharanbasveshwar College of Science, Gulbarga

### DEPARTMENT OF MATHEMATICS

Proceeding of the meeting of the board of studies in Mathematics (under graduate) held on 26<sup>th</sup> Feb 2019 to prepare the syllabus for certificate course in “**Concept of Maxima and Scilab**” for B.Sc V<sup>th</sup> semester for the academic year 2018-19 onwards

#### Members Present

SL.NO	Names	sign
1	Dr.Mahantesh S.Swamy	
2	Mr.Rajshekar S.Chalgeri	
3	Mr.Manjunath S.Kore	
4	Ms.Mahalaxmi H.Belagumpi	
5	Mr.Siddarajkumar S.Aldi	
6	Smt.Tara A.Agastirth	
7	Ms.Aruna T.Biradar	
8	Smt.Preeti R.Kalshetty	

#### PROCEEDINGS:

The syllabus for certificate course in “**Concept of Maxima and Scilab**” for B.Sc V<sup>th</sup> semester in Mathematics was drafted after discussion during the meeting of Board of studies and placed for the approval and implementation from the academic year 2018-19 onwards.



SHARANBASVESHWAR COLLEGE OF SCIENCE, KALABURAGI

Course Code	SBMAT01	Internal Marks	20 marks
Number of lecture per week	3hrs	Exam Marks	80
Total number of lecture in hrs	30hrs	Exam Hours	3hrs

Course Objectives: This Course will enable students to:

- Arm the students with basics programming concept of maxima and Scilab
- To understand can solve the problems by using maxima and Scilab software
- To understand and develop well structured programs using software
- To learn the basic data structures through implementing in research.

Contents:

1. Introduction to Maxima and Scilab, History and Installation	4 hours
2. Working with maxima and Maxima files	10 hours
Computation of programs on Matrices	
i) Addition of matrices ,	
ii) Substraction of matrices ,	
iii) Multiplication of matrices	
iv) Differentiation	
vi) Integration	
vii) limit of a function	
viii) 2D and 3D graph	
3. Illustration of Convergent , Divergent and Oscillatory Sequence	6 Hours
4. Introduction to Numerical Computation	4 Hours



- i) Bisection Method
- ii) Regula - Falsi Method
- iii) Newton Rapson Method

5. working with sci-lab

6 Hours

Computation of programs on Scilab

- i) Addition of matrices
- ii) Substraction of matrices ,
- iii) Multiplication of matrices
- iv) Differentiation
- v) Integration

Co-Ordinator

Head of the department

*Maijennath Kote*

*M. Kote*  
HEAD

Department of Mathematics  
Sharnbasveshwar College of Science  
KALABURAGI

*[Signature]*  
PRINCIPAL  
SHARNBASVESHWAR COLLEGE  
OF SCIENCE, GULBARGA



**SHARANBASVESHWAR COLLEGE OF SCIENCE, KALABURAGI**

**Students List Enrolled for Certificate Course:**

Sl.No.	Name of the student	University Reg.No.	College Roll.no.	Contact Number
1.	Kusum Mahantappa	1749397	164	7618782199
2.	Nivedita Basavantrao	1749276	39	9902165088
3.	Sushma Maharudrappa	1749428	198	9740480871
4.	Shivani Shammene	1749323	74	9972508356
5.	Swathi Konin	1749432	199	8095650456
6.	Dhanappa Kashinath	1749499	18	9741353847
7.	Kailasgouda Shreemant	1749260	22	8970817059
8.	Shruti Madivalappa	1749317	78	9880392175
9.	Vishwanath	1749347	100	9620668263
10.	Sharanabasava Siddharam	1749310	68	9036340567
11.	Aishwarya .M.Boratti	1749236	02	6360424151
12.	Soundarya	1749427	194	9886696891
13.	Shwetha otagi	1749321	80	7411710479
14.	Siddarath	1749324	82	7652984563
15.	Sudharani	1749328	88	7353405545
16.	Dayananda	1749353	111	6362364090
17.	Swati.Patil	1749373	137	9900829270
18.	Soumya.Choudhary	1749334	85	9591635331
19.	Pooja Patil	1749281	44	8867080902
20.	Radhika	1749292	54	8217023931
21.	Laxmi.Wali	1749533	115	8197201311
22.	Dinesh	1749515	121	6548795123
23.	Venkatesh	1748569	217	8618802669
24.	Geeta.Mahadev	1749394	185	8197957852
25.	Ambika	1749238	04	7899197619



SHARANBASVESHWAR COLLEGE OF SCIENCE, KALABURAGI

Students Marks List :

Sl.No.	Name	Register. No.	Internal Marks	External Marks	Total	Grade
1.	Shivani Shammane	1749323	10	50	60	A
2.	Swathi Konin	1749432	08	56	64	A
3.	Ambika.S.	1749392	20	60	80	A
4.	Kusum Mahantappa	1749397	10	41	51	A
5.	Shruti Madivalappa	1749317	15	75	95	A+
6.	Shwetha otagi	1749321	12	71	91	A+
7.	Nivedita Basavantrao	1749276	15	70	85	A+
8.	Aishwarya .M.Boratti	1749236	20	73	93	A+
9.	Vishwanath	1749347	13	72	85	A+
10.	Kailasgouda Shreemant	1749260	10	60	70	A
11.	Sharanabasava Siddharam	1749310	10	40	50	B+
12.	Vidya .S.	1747434	08	75	83	A
13.	Soumya.Choudhary	1749334	20	63	83	A
14.	Sudharani	1749328	12	65	77	A
15.	Pooja Patil	1749281	20	55	75	A
16.	Swati.Patil	1749373	15	60	75	A
17.	Laxmi.Wali	1749533	20	60	80	A
18.	Radhika	1749292	20	40	60	A
19.	Geeta.Mahadev	1749394	18	52	70	A
20.	Ambika	1749238	04	60	64	A
21.	Sushma Maharudrappa	1749428	15	62	77	A
22.	Dhanappa Kashinath	1749499	20	66	86	A+
23.	Soundarya	1749427	11	56	77	A
24.	Shwetha otagi	1749321	18	60	78	A
25.	Dinesh	1749515	10	AB	AB	AB



SHARANBASVESHWAR COLLEGE OF SCIENCE, KALABURGA



Application Form  
(To be filled by the Candidate)



Application no:

Date:

Application for the concepts of maxima & scilab ..... Certificate Course

- Name of the Candidate (as enrolled in the SSLC records in block letters)  
..... SWATI .....
- Father's Name: Revansiddappa Patil .....
- Caste & Category Lingayath (III B) .....
- Date of Birth: 07-05-1998 .....
- Sex: Male/Female: Female .....
- Percentage of SSLC & PUC Examination: 88.16 % & 71.5% .....
- Present Academic status: Marks obtained in Mathematics  
Isem: 108 ..... IIsem: 105 ..... IIIsem: 85 ..... IVsem: 98 ..... Vsem: 953 .....  
VIsem: 248 .....
- University Reg.No.: 1749373 ..... Roll No.: 137 .....
- Combination : PME .....
- Address of the candidate with Pin code (in block letters)  
..... PLOT NO: 112 SWAMI VIVEKANAND NAGAR .....
- ..... SANTOSH COLONY ALAND ROAD KALABURGI .....
- ..... PIN CODE : 585102 .....
- Mobile No: 9110829889 ..... E - mail address: swatipatil61528@gmail.com

SW  
Candidate's Signature

Patil  
Father/Mother/Guardian Signature

Maha  
Hod & Coordinator  
1) Mr. Manjunath.S.Kore  
2) Miss.Mahalaxmi.H.B.

Patil  
Principal  
SHARANBASVESHWAR COLLEGE  
OF SCIENCE, GULBARGA

\* Certificate courses:  
• Mathematical software( Maxima and Scilab)

SHARANBASVESHWAR COLLEGE OF SCIENCE, KALABURGA



Application Form  
(To be filled by the Candidate)



Application no:

Date:

Application for the Concepts of maxima & Scilab Certificate Course

1. Name of the Candidate (as enrolled in the SSLC records in block letters)  
..... Soumya .....
2. Father's Name: ... Maharudrappa Choudhary .....
3. Caste & Category ... Simpl. (2A) .....
4. Date of Birth: ... 05/03/1999 .....
5. Sex: Male/Female: ... Female .....
6. Percentage of SSLC & PUC Examination : SSLC :- 84.32%, PUC :- 82.16
7. Present Academic status: Marks obtained in Mathematics  
 Isem:  $(39+55)=94$  Isem:  $(61+44)=105$  Isem:  $(38+37)=75$  IVsem:  $(54+65)=119$  Vsem:  $(55+58+94)=207$   
 VIsem:  $(67+74+82)=223$
8. University Reg.No.: 1749334 ..... Roll No.: 85 .....
9. Combination : ... PCM .....
10. Address of the candidate with Pin code (in block letters)  
 H. NO: 4-160 SARAF BAZAR MAKTAMPUR, KALABURGI .....  
 Pin code : 585101 .....

11. Mobile No: 9591635331 .....

E - mail address: choudharysoumya5331@gmail.com

Soumya M  
Candidate's Signature

Maharudra Choudhary  
Father/Mother/Guardian Signature

Hod & Coordinator  
 1) Mr. Manjunath. S. Kore M.K.  
 2) Miss. Mahalaxmi. H. B.

Dr. S. Prasad  
Principal  
**DR. S. PRINCIPAL**  
**SHARANBASVESHWAR COLLEGE**  
**OF SCIENCE, GULBARGA**

\* Certificate courses:  
 Mathematical software (Maxima and Scilab)



SHARANBASVESHWAR COLLEGE OF SCIENCE, KALABURAGI  
PAPER: CONCEPTS OF MAXIMA & SCILAB COURSE CODE:SBMAT01  
Max.Marks-80

I . Answer the following questions.

- 1) By Using Maxima Command Compute the Following 10M
- $17+1000$
  - $72+859$
  - $100000+1758$
  - $7859-529$
  - $7^9$
  - $8^{100}$
  - $10^{20}$
- 2) By Using Maxima Command Compute the Following operations of Matrices. 10M
- A: $[1,5,6],[7,8,10],[0,1,5]$  and B: $[7,8,10],[15,1,2],[3,7,5]$ .
  - Compute A+B
  - Compute A-B
  - Compute A.B
- 3) By Using Maxima Command Compute the Following operations of Matrices, And give Reason : 15M
- A: $[1,1/2],[1/3,1/4],[1/5,1/6]$  and B: $[5,-2]$
  - Compute A+B
  - Compute A-B
  - Compute A.B
- 4) Express the Given Matrix in a programming language and name it. 5M
- A: $[5,0,0],[0,5,0],[0,0,5]$  and Calculate  $A^{100}$
- 4) Create the Matrix A= $[2,3,1],[4,1,8],[1,6,8]$ . B= $[1,3,-2],[8,2,1],[1,-1,6]$  and Verify  $AC+BC=(A+B)C$ ,  $AB-AC=A(B-C)$  5M
- 5) Create the matrix and calculate  $A^2$   
A= $[4,8,5],[3,6,1],[2,5,9]$ . And A= $[1,2],[6,8],[1,5]$ . 5M
- 6) Create the Matrix A= $[1,2,3,4],[0,3,5,7],[2,0,1,4],[3,2,0,5]$ . and the Identity matrix  
I= $[1,0,0,0],[0,1,0,0],[0,0,1,0],[0,0,0,1]$   
Show that  $AI=IA=A$  5M
- 7) To trace the curve  $y=4ax$  with  $a=2$  between the points  $x_0=-6$  to  $x_n=6$  5M



- 8) Plot 3D to trace the Curve  $\text{Sinh} \cos \theta$   $\theta \in [0, 2\pi]$ ,  $\phi \in [-\pi/2, \pi/2]$ . 5M
- 9) Plot 3D to trace the Curve  $Z \text{Sinh} \theta$   $\theta \in [0, 2\pi]$ ,  $Z \in [0, 5]$ . 5M
- 10) Describe the application of Mathematical Tools. (Maxima and Sci-lab) 5M
- 11) Describe the Maxima and its keycommands 5M

Centenary Celebrated Sharnbasveshwar Vidya Vardhak Sangh's



(Diamond jubilee Celebrated)

## SHARNBASVESHWAR COLLEGE OF SCIENCE, KALABURAGI

DEPARTMENT OF MATHEMATICS

### Certificate of Completion

Course Code: SBMAT01

This is to Certify that Mr./Miss... Sushma M .....

of B.Sc.....<sup>VI</sup>.....Sem. has Successfully Completed Certificate Course in "Concepts on Maxima and Scilab"

Grade...A.....

Place: Kalaburagi

Date: 29-04-2019 .....

M. K. S.

Head of the Department

[Signature]  
Principal