BOARD OF STUDIES MEETING – 2018-19
K.S.R.M COLLEGE OF ENGINEERING
AUTONOMOUS

Minutes of the Meeting

Date	08.06.2018	Day	Wednesday
Time	10:30 AM	Venue	Computer Lab in Main Block
Dept./SS	H&S	Convener	Dr. B.Rama Bhupal Reddy

Members Present:07   **Members Absent: 00**

S.No	Name	Designation	Signature	S.No	Name	Designation
1.	Prof.M.Mallikarjuna Reddy	Prof., SKU, Ananthapur.				
2.	Prof. G.Sankara Sekhar Raju	Prof., JNTU, Pulivendula.				
3.	Dr. G. Viswanatha Reddy	Prof., SVU, Tirupati.				
4.	Dr. B.Rama Bhupal Reddy	Prof., KSRMCE	B.Ram			
5.	Sri. Y. Satheesh Kumar Reddy	Assistant Prof., KSRMCE.	Y.S. Reddy			
6.	Smt. G. Radha	Assistant Prof., KSRMCE.	G. Radha			
7.	Sri. G. Sreedhar	Assistant Prof., KSRMCE.	G. Sreedhar			

Dr. B.Rama Bhupal Reddy welcomed all the members to the meeting and presented the agenda of the meeting.

The resolutions are:

	To do item	Discussion	Resolution	Coordinator/in-charge
1	Approval of UG I and II Semester syllabus for R18UG Regulation.	The chairman presented the syllabus designed by the faculty of Mathematics after taking the feedback from all stakeholders and by comparing with premier institute syllabus	The committee members discussed UG I-semester Mathematics-I & II- semester Mathematics-II is common for all branches syllabus and finalized. Suggested some text books and reference books for prescribed syllabus.	Prof. B.Rama Bhupal Reddy
2	Approval of PG Power Systems (EEE) syllabus for R18PG Regulation.	The chairman presented the syllabus designed by the faculty of Mathematics after taking the feedback from all stakeholders and by comparing with premier institute syllabus	The committee members discussed PG Power Systems (EEE) Mathematical Methods for Power Engineering syllabus and finalized. Suggested some text books and reference books for prescribed syllabus.	Prof. B.Rama Bhupal Reddy

The Head of the Department have proposed the Vote of thanks and concluded the meeting.

Convenor

HoD
Dr. I. SREEVANI M.Sc.,Ph.D
Head of Humanities & Sciences
K.S R.M College of Engineering
KADAPA 516005

UG Programs in Civil Engineering (R18 UG)

Curriculum

1st Semester

Subject Code	Subject Category	Subject Title	L	T	P	IM	EM	CR
1821101	BSC	Mathematics – 1	3	1	0	30	70	4
1823102	BSC	Engineering Chemistry	3	1	0	30	70	4
1824103	HSMC	English	2	0	0	30	70	2
1805104	ESC	Programming for Problem Solving	3	0	0	30	70	3
1823107	BSC	Chemistry Lab	0	0	3	50	50	1.5
1805108	ESC	Programming for Problem Solving Lab	0	0	4	50	50	2
1824109	HSMC	English Lab	0	0	2	50	50	1
		Total	11	2	9	270	430	17.5

2nd Semester

Subject Code	Subject Category	Subject Title	L	T	P	IM	EM	CR
1821201	BSC	Mathematics – 2	3	1	0	30	70	4
1822204	BSC	Engineering Physics	3	1	0	30	70	4
1802205	ESC	Basic Electrical Engineering	3	1	0	30	70	4
1803207	ESC	Engineering Graphics and Design	1	0	4	50	50	3
1822208	BSC	Engineering Physics Lab	0	0	3	50	50	1.5
1802209	ESC	Basic Electrical Engineering Lab	0	0	2	50	50	1
1803211	ESC	Workshop and Manufacturing Practice	1	0	4	50	50	3
		Total	11	3	13	290	410	20.5

Detailed Course Structure
Department of EEE

B. Tech - I Semester (Theory - 4, Lab - 3)

S. No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	1821101	Mathematics-I	BSC	3	1	0	30	70	4
2	1823102	Engineering Chemistry	BSC	3	1	0	30	70	4
3	1824103	English	HSMC	2	0	0	30	70	2
4	1805104	Programming for Problem Solving	ESC	3	0	0	30	70	3
5	1823107	Chemistry Lab	BSC	0	0	3	50	50	1.5
6	1805108	Programming for Problem Solving Lab	ESC	0	0	4	50	50	2
7	1824109	English Lab	HSMC	0	0	2	50	50	1
Total				11	02	09	270	430	17.5

B. Tech - II Semester (Theory - 4, Lab - 3)

S. No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	1821201	Mathematics-II	BSC	3	1	0	30	70	4
2	1822203	Engineering Physics	BSC	3	1	0	30	70	4
3	1802206	Basic Electrical Engineering	ESC	3	1	0	30	70	4
4	1803207	Engineering Graphics & Design	ESC	1	0	4	50	50	3
5	1822208	Engineering Physics Lab	BSC	0	0	3	50	50	1.5
6	1802210	Basic Electrical Engineering Lab	ESC	0	0	2	50	50	1
7	1803211	Workshop on Manufacturing Practices	ESC	1	0	4	50	50	3
Total				11	03	13	290	410	20.5

B. Ram

M.Sc.,Ph.D
Head of Humanities & Sciences
KSRM College of Engineering
KADAP: 5 6 005
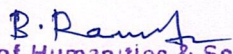
UG Programs in Mechanical Engineering (R18 UG)
Curriculum

1st Semester

Subject Code	Subject Category	Subject Title	L	T	P	IM	EM	CR
182110 1	BSC	Mathematics - I	3	1	0	30	70	4
182310 2	BSC	Engineering Chemistry	3	1	0	30	70	4
182410 3	HSMC	English	2	0	0	30	70	2
180510 4	ESC	Programming for Problem Solving	3	0	0	30	70	3
182310 7	BSC	Chemistry Lab	0	0	3	50	50	1.5
180510 8	ESC	Programming for Problem Solving Lab	0	0	4	50	50	2
182410 9	HSMC	English Lab	0	0	2	50	50	1
		Total	11	2	9	270	430	17.5

Second Semester (mechanical)

Subject Code	Subject Category	Subject Title	L	T	P	IM	EM	CR
182120 1	BSC	Mathematics - II	3	1	0	30	70	4
182220 4	BSC	Engineering Physics	3	1	0	30	70	4
180220 5	ESC	Basic Electrical Engineering	3	1	0	30	70	4
180320 7	ESC	Engineering Graphics & Design	1	0	4	50	50	3
182220 8	BSC	Engineering Physics Lab	0	0	3	50	50	1.5
180220 9	ESC	Basic Electrical Engineering Lab	0	0	2	50	50	1
180321 1	ESC	Workshop and Manufacturing Practices	1	0	4	50	50	3
		Total	11	3	13	290	410	20.5

Detailed Course Structure
Department of ECE

I Semester

S. No.	Subject Code	Subject	Category	L	T	P	IM	EM	Credits
1	1821101	Mathematics – I	BSC	3	1	0	30	70	4
2	1822102	Engineering Physics	BSC	3	1	0	30	70	4
3	1823103	Basic Electrical Engineering	ESC	3	1	0	30	70	4
4	1824107	Engineering Graphics & Design	ESC	1	0	4	50	50	3
5	1822108	Engineering Physics Lab	BSC	0	0	3	50	50	1.5
6	1826106	Basic Electrical Engineering Lab	ESC	0	0	2	50	50	1
7	1827110	Workshop and Manufacturing Practices	ESC	1	0	4	50	50	3
		Total:		11	3		290	410	20.5

II Semester

S. No.	Subject Code	Subject	Category	L	T	P	IM	EM	Credits
1	1821201	Mathematics - II	BSC	3	1	0	30	70	4
2	1823202	Engineering Chemistry	BSC	3	1	0	30	70	4
3	1824203	English	HSMC	2	0	0	30	70	2
4	1805204	Programming for Problem Solving	ESC	3	0	0	50	50	3
5	1823207	Chemistry Lab	BSC	0	0	3	50	50	1.5
6	1805208	Programming for Problem Solving Lab	ESC	0	0	4	50	50	2
7	1824209	English Lab	HSMC	0	0	2	50	50	1
		Total:		11	02	09			17.5

Detailed Course Structure
COMPUTER SCIENCE AND ENGINEERING

I Semester

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1821101	BSC	Mathematics – I	3	1	0	30	70	4
1822104	BSC	Engineering Physics	3	1	0	30	70	4
1802103	ESC	Basic Electrical Engineering	3	1	0	30	70	4
1803107	ESC	Engineering Graphics & Design	1	0	4	50	50	3
1822108	BSC	Engineering Physics Lab	0	0	3	50	50	1.5
1802109	ESC	Basic Electrical Engineering Lab	0	0	2	50	50	1
1803110	ESC	Workshop and Manufacturing Practices	1	0	4	50	50	3
		TOTAL	11	3	13	290	410	20.5

II Semester

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1821201	BSC	Mathematics – II	3	1	0	30	70	4
1823202	BSC	Engineering Chemistry	3	1	0	30	70	4
1824203	HSMC	English	2	0	0	30	70	2
1805204	ESC	Programming for Problem Solving	3	0	0	30	70	3
1823207	BSC	Chemistry Lab	0	0	3	50	50	1.5
1805208	ESC	Programming for Problem Solving Lab	0	0	4	50	50	2
1824209	HSMC	English Lab	0	0	2	50	50	1
		TOTAL	11	2	9	270	430	17.5

B. Ram
Head of Humanities & Sciences
K.S.R.M College of Engineering
KADAPA - 516 005

Course Title	MATHEMATICS – I					B. Tech. I Sem (Common to All Branches)		
Course Code	Category	Hours/Week			Credits	Maximum Marks		
		L	T	P	C	Continuous Internal Assessment	End Exams	Total
1821101	BSC	3	1	--	4	30	70	100
Mid Exam Duration: 2Hrs						End Exam Duration: 3Hrs		

Course Objectives:

To enable the students to apply the knowledge of mathematics in various engineering fields by making them to learn the following:

- The essential tool of matrices in a comprehensive manner.
- The convergence of series.
- Maxima and minima of a function and the radius of curvature
- The Jacobians and extreme values of a function.
- Evaluate the definite integrals, Beta and Gamma functions. Apply Fourier series in engineering problems.

Course Outcomes: On successful completion of this course, the students will be able to

CO 1	Apply the essential tool of matrices in a comprehensive manner.(L3)
CO 2	Describe the convergence of series.(L2)
CO 3	Classify the functions of several variables which is useful in optimization techniques.(L4)
CO 4	Define Beta and gamma functions and solve definite integrals. (L1)
CO 5	Determine the Fourier series of the functions. (L3)

UNIT I: Matrices (14 Hours)

Basic definitions of Symmetric, skew-symmetric and orthogonal matrices – Elementary transformations – Rank – Echelon form, Normal form– System of linear equations –Eigen values and Eigen vectors for real matrices – Cayley-Hamilton theorem – Diagonalization of matrix by orthogonal transformation.

UNIT II: Sequences and series (8 Hours)

Convergence of sequences and series – Comparison test – p test – D'Alemberts ratio test – Cauchy's root test. Power series – Series for exponential, trigonometric and logarithm functions.

UNIT III: Differential Calculus (10 Hours)

Taylor's and Maclaurin's series – Maxima and minima of single variable – Curvature: Curvature of a curve – Curvature of a circle – Radius of a curvature – Centre of Curvature – Equation to the circle of curvature.

UNIT IV: Multivariable Calculus (10 Hours)

Functions of two or more variables – Partial derivatives, Total derivative – Jacobians – Maxima and minima of functions of two variables – Lagrange's method of undetermined multipliers.

UNIT V: Integral Calculus: (12 Hours)

Evaluation of definite integrals – Beta and Gamma functions and their properties. Fourier series: Half range Fourier sine and cosine expansions – Parseval's theorem.

Text Books:

1. Higher Engineering Mathematics, Dr. B.S. Grewal, Khanna Publishers-43 edition 2014.
2. Advanced Engineering Mathematics, Erwin Kreyszig, Wiley Publications, 9th edition-2013.
3. Calculus and Analytic geometry, G.B. Thomas and R.L. Finney, Pearson, 9th Edition, Reprint, 2002.
4. Introductory Linear Algebra with applications, Kolman, Bernard Hill, David R

Reference Books:

1. Higher Engineering Mathematics, B.V. Ramana, Mc. Graw Hill Education (India) Pvt. Ltd, New Delhi, 11th Edition, Reprint 2010.
2. Linear Algebra: A Modern Introduction, D Poole, 2nd Edition, Brooks/Cole, 2005.
3. A Text Book of Engineering Mathematics, N.P. Bali and Manish Goyal, Lakshmi Publications, Reprint 2008.
4. Advanced Engineering Mathematics, Greenberg Michael D, Cengage Publishers.

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K A D A P A - 516 005

Course Title	MATHEMATICS – II				B. Tech. I Sem (Common to All Branches)		
Course Code	Category	Hours/Week			Credits	Maximum Marks	
		L	T	P	C	Continuous Internal Assessment	End Exams	Total
1821201	BSC	3	1	--	4	30	70	100
Mid Exam Duration: 2Hrs					**End Exam Duration: 3Hrs**		

Course Objectives:

To enable the students to apply the knowledge of mathematics in various engineering fields by making them to learn the following:
- First order differential equations.
- Linear differential equations with constant coefficients.
- Laplace transforms in engineering problems.
- Evaluate multiple integrals.
- Understand Vector Calculus concepts and their applications.

Course Outcomes: On successful completion of this course, the students will be able to

CO 1	**Solve** the first order linear differential equations (L3)
CO 2	**Solve** the higher order linear differential equations with constant coefficients.(L3)
CO 3	**Apply** Laplace Transforms in engineering problems.(L3)
CO 4	**Evaluate** multiple integrals.(L5)
CO 5	**Understand** Vector Calculus concepts and analyze their applications in engineering problems. (L4)

UNIT I: First order ordinary differential equations (10 Hours)
Linear, Bernoulli equations, Exact and equations reducible to Exact. Applications: Orthogonal trajectories, Newton's law of cooling, Law of natural growth and decay.

UNIT II: Ordinary differential equations of higher order (10 Hours)
Linear differential equations of second and higher order with constant coefficients – R.H.S term of the type e^{ax}, sinax, cosax, polynomials in x, $e^{ax} V(x)$, $xV(x)$ – Method of variation of parameters.

UNIT III: Laplace transforms (12 Hours)

Laplace transforms of standard functions – Properties of Laplace Transforms – Transforms of derivatives and integrals – Evaluation of integrals by Laplace transforms – Laplace transform of periodic functions. Convolution theorem. Inverse Laplace Transforms – Applications of Laplace transforms to ordinary differential equations.

UNIT IV: Multiple Integrals (10 Hours)
Evaluation of double integrals in Cartesian coordinates and polar coordinates – Change of variables in double integrals – Change the order of integration in double integrals – Evaluation of triple integrals in Cartesian and polar coordinates – Change of variables in triple integrals.

UNIT V: Vector Calculus: (12 Hours)
Vector differentiation: Scalar point function – Vector point function – Vector operator Del – Gradient – Divergence – Curl. Vector integration: Line, Surface and Volume integrals.

Green's theorem in a plane, Stoke's theorem and Gauss-divergence theorems (Statements only). Applications of Green's, Stoke's and Gauss divergence theorems.

Text Books:

1. Higher Engineering Mathematics, Dr. B.S. Grewal, Khanna Publishers-43 edition 2014.
2. Advanced Engineering Mathematics, Erwin Kreyszig, Wiley Publications, 9th edition- 2013
3. Calculus and Analytic geometry, G.B. Thomas and R.L. Finney, Pearson, 9th Edition, Reprint, 2002.
4. Advanced Calculus, Widder V David, Pearson Publishers

Reference Books:

1. Higher Engineering Mathematics, B.V. Ramana, Mc. Graw Hill Education (India) Pvt. Ltd, New Delhi, 11th Edition, Reprint 2010.
2. A Text Book of Engineering Mathematics, N.P. Bali and Manish Goyal, Lakshmi Publications, Reprint 2008.
3. Advanced Engineering Mathematics, Greenberg Michael D, Cengage Publishers.
4. Advanced Engineering Mathematics, Neil Opeter V

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