



MOTHER THERESA INSTITUTE OF ENGINEERING AND TECHNOLOGY



Melumoi (Post), Palamaner-517408.

(Approved by AICTE, New Delhi and Affiliated to JNTUA, Anantapuramu-515002)

(An ISO-9001:2015 Certified Institute)

(Email: mtieat@gmail.com Website: www.mtieat.com)

[COLLEGE CODE: HR]

DEPARTMENT OF MECHANICAL ENGINEERING

Place: Palamaner,

Date: 06.12.2019

To
The Principal,
MTIET,
Palamaner.

Sub: Organizing Add on Course for **III B.TECH** students titled
"HYPERMESH" - Req., & Regd.

With the reference to the subject cited above, I bring to your kind notice that to enhance the general skills and enrichment of the curriculum, the department of Mechanical Engineering is organizing a Add on Course titled, "**HYPERMESH**" for the III B.Tech students during the inter semester break with **minimum duration of 30 hours**. The Program will be conducted from 09.12.2019 to 14.12.2019.

In this connection the undersigned is proposing a request to grant the permission to organize the mentioned course for the third year students.

Please consider with prior hierarchy.

Thanking you,

DSree
HOD 6/12/2019

HEAD OF THE DEPT.
Mechanical Engineering
Mother Theresa Inst. of Engg. & Tech.,
PALAMANER - 517 408.



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DEPARTMENT OF MECHANICAL ENGINEERING

Ref.: MTIET/ME/AOC/CIR-02

Place: Palamaner,

Date: 07.12.2019.

C I R C U L A R

This is here by informed to all the III B.Tech students that the Department is very glad to organize a Add on Course to improve the skills on "HYPERMESH" during the period of inter semester break that is from 09-12-2019 to 14-12-2019, with minimum duration of 30 hours.

So all the interested students should register their names through the Department coordinator.

DSree
HOD 7/12/2019

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PALAMANER - 517 408.

Circulation to:

1. The III B.Tech Class rooms.
2. The Department Notice board.
3. Department file.



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DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE: HYPERMESH
COURSE SYLLABUS : : AY 2019-20

* * * * *

Duration: 30 Hours

UNIT I

6 hours

Introduction to Hyper mesh, Introduction about Hyper mesh, Introduction to CAE, Application of CAE Software, Advantages and Theory of FEM, Geometry, Create node, Node edit, Temp nodes, Distance, Dimensioning , Lines, Creation of surfaces and surface edit, Translate, Mid Surface Extraction, De featuring.

UNIT II

6 hours

Geometry Clean Up Surface edges, Visualization tool bar, Display tool bar, Clean up using quick edit, 2D Meshing, Introduction to meshing , Auto meshing, Size & Biasing, Density and mesh style, Replace, re meshing, Current and surface components.

UNIT III

6 hours

2d Mesh Quality, Quality Criteria, Aspect Ratio, Reducing The Trias Percentage, Quality index, T Connections, Free – Edges, Manual mesh Ruled Elem Offset.

UNIT IV

6 hours

Tools, Number And Mass Calculation, Project , Position, 3d Hex Meshing , Introduction To 3d Meshing , Types Of 3d Elements, 3d Solid Mesh, Solid Map Commands, 3d Tetra Meshing, Tetra Parameters, Tet Collapse.

UNIT V

6 hours

1d Mesh, Beam Elements, Bars, Rods, Rbe2 & Rbe3 Elements, Welding & Bolt Creation, Linear Meshing, Create Collectors, Material Properties, Load Constraints, Modal, Linear Static And Buckling Analysis, Deck Preparation, Material And Properties Assignment, Assign of Loads And Constraints, Saving The File Formats.

R. Sathish 7/12/2019
CO-ORDINATOR

D. Sree 7/12/2019
HOD/ME
HEAD OF THE DEPT.
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PALAMANER - 517 408.



DEPARTMENT OF MECHANICAL ENGINEERING
ADD ON COURSE :: HYPERMESH (1903AOC02)
III B.TECH, STUDENT REGISTRATION FORM
Academic Year - 2019-2020

S.NO.	REGD. NO.	NAME OF THE STUDENT	SIGNATURE
1	17HR1A0301	A LOKESWARI	A. Lokeshwari
2	17HR1A0302	A RUPESH	A. Rupesh
3	17HR1A0303	ANAGONDI MANJUNATHA	A. Manjunatha
4	17HR1A0304	B DHANUNJAYA	B. Dhanunjaya
5	17HR1A0305	B HARIKRISHNA	HARI KRISHNA. B
6	17HR1A0306	B MOULI REDDY	B. mouli Reddy
7	17HR1A0307	B R PUNEETH	B. R. puneeth
8	17HR1A0309	BODAYYAGARI NAGESH REDDY	Nagesh Reddy
9	17HR1A0310	BONUGOULLA LOKESH	B. Lokesh
10	17HR1A0311	C TEJA REDDY	C. Teja Reddy
11	17HR1A0312	CHADABAVI MURALI	C. Murali
12	17HR1A0313	D MANIKANTA	D. manikanta
13	17HR1A0314	D NAVEEN KUMAR	D. Naveen Kumar
14	17HR1A0315	DESIREDDI KALYAN KUMAR REDDY	D. Kalyan Kumar Reddy
15	17HR1A0316	G GANESH	G. Ganesh
16	17HR1A0317	GOTAPPAGARI PRAVEENKUMAR	G. Praveen Kumar
17	17HR1A0318	GOVINDARAJGARI VYSHNAVI	G. Vyshnavi
18	17HR1A0319	H V PAVANKUMAR	H. V. Pavankumar
19	17HR1A0320	K G KUMAR	K. G. Kumar
20	17HR1A0322	K VAMSI	K. Vamsi
21	17HR1A0323	KALEEMULLA ABDUL RAZAK	K. Abdul Razak
22	17HR1A0324	KAMASANI MURALIDHAR	K. Muralidhar
23	17HR1A0325	KANTE UDAY KIRAN	UDAY Kiran. K

24	17HR1A0326	KAVALI SUDHARSHAN	K. Sudharshan
25	17HR1A0328	KONETI PRATHAP REDDY	K. Prathap Reddy
26	17HR1A0329	KOPPALA PURUSHOTHAM REDDY	K. Purushotham Reddy
27	17HR1A0331	MUGHAL WASIM AKRAM	M. Wasim Akram
28	17HR1A0332	MALLELA SANTHOSH	Mallela Santhosh
29	17HR1A0333	MAMIDIGUMPULA KARTHIK KUMAR REDDY	M. Mamidigumpula K. Karthik Kumar Reddy
30	17HR1A0335	MUMMIDI LOKESH	M. Lokesh
31	17HR1A0336	N BHANU PRAKASH	N. Bhanu Prakash
32	17HR1A0337	N SAIRAM	N. Sairam
33	17HR1A0338	NARALLA PRUDHVI RAJ	N. Prudhvi Raj
34	17HR1A0339	P BABU REDDY	P. Babu Reddy
35	17HR1A0340	P Harish	P. Harish
36	17HR1A0341	P Pavan	P. Pavan
37	17HR1A0342	P SESHUWARDHANA REDDY	P. Seshuwardhana Reddy
38	17HR1A0343	PAGADALA REDDY ROHITH	P. Pagadala Reddy Rohith
39	17HR1A0344	POOLA SHABARISH KUMAR	P. Poola Shabarish Kumar
40	17HR1A0345	POTHAGANI DIVYA JYOTHI	P. Pothagani Divya Jyothi
41	17HR1A0347	PULAGANTI JHANSI	P. Jhansi
42	17HR1A0348	RAYALAPETA DIVYA	R. Divya
43	17HR1A0351	S MUNWAR	S. Munwar
44	17HR1A0352	S PRAKASH BABU	S. Prakash Babu
45	17HR1A0353	S SAMEER	S. Sameer
46	17HR1A0354	SHEIK JAFFAR ALI	S. Jaffar Ali
47	17HR1A0355	SHAIK SYFALLI	Shaik Syfalli
48	17HR1A0356	T E YESHWANTH KUMAR	T. E. Yeshwanth Kumar
49	17HR1A0357	THAMMIREDDYGARI SIVAPRASAD REDDY	T. Thammireddygari Sivaprasad Reddy
50	17HR1A0358	V N NAVEEN KUMAR	V. N. Naveen Kumar
51	17HR1A0359	VARIDIREDDY MEGHANATH	V. Varidireddy Meghanath
52	17HR1A0360	Y RAJKUMAR	Y. Raj Kumar
53	18HR5A0301	BANGENNAGARI BHEERU GOWDU	B. Bangennagari Bheeru Gowdu
54	18HR5A0303	EMME SWAROOPA	E. Swaroopa
55	18HR5A0304	GOTTUMUKKALA SAI KRISHNA VARMA	G. Gottumukkala Sai Krishna Varma
56	18HR5A0305	J VIJAYA KUMAR	J. Vijaya Kumar
57	18HR5A0306	MALLELA PURUSHOTHAM REDDY	M. Mallela Purushotham Reddy
58	18HR5A0307	PADATHI KUSHWANTH REDDY	P. Padathi Kushwanth Reddy

59	18HR5A0308	PULLAKARA SRAVAN KUMAR	P. Sravan Kumar .
60	18HR5A0309	SHAIK RAHAMAN	S. Rahaman

R. Sashini 17/12/2019
CO-ORDINATOR

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Coordinator

D. Sree 17/12/2019
HOD
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54	18HR5A0303	EMME SWAROOPA	P	P	P	P	P	P	P	P	P	P	P	P
55	18HR5A0304	GOTTUMUKKALA SAI KRISHNA VARMA	P	P	P	P	P	P	P	P	P	P	P	P
56	18HR5A0305	J VIJAYA KUMAR	P	P	P	P	P	P	P	P	P	P	P	P
57	18HR5A0306	MALLELA PURUSHOTHAM REDDY	P	P	P	P	P	P	P	P	P	P	P	P
58	18HR5A0307	PADATHI KUSHWANTH REDDY	P	P	P	P	P	P	P	P	P	P	P	P
59	18HR5A0308	PULLAKARA SRAVAN KUMAR	P	P	P	P	P	P	P	P	P	P	P	P
60	18HR5A0309	SHAIK RAHAMAN	P	P	P	P	P	P	P	P	P	P	P	P
No. of Absent			3	3	2	2	1	1	0	0	1	4	3	2
Expert Signature:			RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS

R. Sasthi 14/12/2019
CO-ORDINATOR

D. Sree 14/12/2019
HOD

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DEPARTMENT OF MECHANICAL ENGINEERING
ADD ON COURSE:: HYPERMESH (1903AOC02)

III B.TECH, COURSE SCHEDULE ::

Academic year 2019-2020

* * * * *

S.NO.	DAY(S)	DATE	Duration	TIME	TOPIC(S)	EXPERT DETAILS
1	DAY 1	09-12-19	30 mins	09:30-10:00	INAUGURATION	R SASIDHAR REDDY
2			1 hour	10:00-11:00	INTRODUCTION TO HYPER MESH	
3			2 hours	11:00-01:00	GEOMETRY , CREATE NODE, NODE EDIT, TEMP NODES , DISTANCE, DIMENSIONING , LINES	
4			2 hours 30 mins	02:00-04:30	MID – SURFACE EXTRACTION	
5	DAY 2	10-12-19	30 mins	09:30-10:00	GEOMETRY CLEAN – UP SURFACE EDGES	R SASIDHAR REDDY
6			1 hour	10:00-11:00	2D MESHING	
7			2 hours	11:00-01:00		
8	DAY 3	11-12-19	2 hours 30 mins	02:00-04:30	2D MESH QUALITY	A ARUN KUMAR
9			30 mins	09:30-10:00	QUALITY INDEX	
10			1 hour	10:00-11:00		
11			2 hours	11:00-01:00	MANUAL MESH RULED	
12	2 hours 30 mins	02:00-04:30				
13	DAY 4	12-12-19	1 hour 30 mins	09:30-11:00	3D SOLID MESH, 3D TETRA MESHING	A ARUN KUMAR
14			2 hours	11:00-01:00		
15			2 hour 30 mins	02:00-04:30	1D MESH	
16	DAY 5	13-12-19	1 hour 30 mins	09:30-11:00	LINEAR MESHING	SHAIK BAZANI
17			2 hours	11:00-01:00		
18			2 hours 30 mins	02:00-04:30	MODAL, LINEAR STATIC AND BUCKLING ANALYSIS DECK PREPARATION	
19	DAY 6	14-12-19	1 hour 30 mins	09:30-11:00	BUCKLING ANALYSIS DECK PREPARATION	SHAIK BAZANI
20			2 hours	11:00-01:00		
21			1 hour	02:00-03:00	CONDUCTION OF EXAM	
22			1 hour 30 mins	03:00-04:30	DISTRIBUTION OF CERTIFICATES	
23						

Total Duration of Course: 36 hours.

R. Sashini 14/12/2019
CO-ORDINATOR

D. Sree 14/12/2019
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DEPARTMENT OF MECHANICAL ENGINEERING ADD ON COURSE:: HYPERMESH (1903AOC02) QUESTION PAPER ACADEMIC YEAR 2019-2020

ANSWER ALL THE FOLLOWING QUESTIONS EACH CARRY EQUAL MARKS

15X2=30MARKS

1. What do u understand by CAE?
2. What are other similar techniques available & how they r different from them ?
3. What do u mean by liner & nonlinear analysis?
4. When need to use nonlinear analysis ?
5. What type of nonlinearity exist ?
6. What type of elements available in Hypermesh & application of different type of elements?
7. What do u understand by one d element & what is special engineering applications of it?
8. How u discretize a model ?
9. What are basic rules to start mesh ?
10. How u decide element size & density ?
11. What do u means by stress concentration & u mesh for such regions?
12. What are shape functions ?
13. What are iso-parametric elements and why do you use them ?
14. What is hour glassing ?
15. Talk about various types of elements.

R. Sashini 14/12/2019
CO-ORDINATOR

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D. Sree
HOD 14/12/2019

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DEPARTMENT OF MECHANICAL ENGINEERING ADD ON COURSE:: HYPERMESH(1903AOC02) III B.TECH, STUDENT EVALUATION FORM Academic Year - 2019-2020

* * * * *

S.NO.	REGD. NO.	NAME OF THE STUDENT	GRADE
1	17HR1A0301	A LOKESWARI	A
2	17HR1A0302	A RUPESH	A
3	17HR1A0303	ANAGONDI MANJUNATHA	A
4	17HR1A0304	B DHANUNJAYA	B
5	17HR1A0305	B HARIKRISHNA	C
6	17HR1A0306	B MOULI REDDY	C
7	17HR1A0307	B R PUNEETH	A
8	17HR1A0309	BODAYYAGARI NAGESH REDDY	B
9	17HR1A0310	BONUGOULLA LOKESH	A
10	17HR1A0311	C TEJA REDDY	A
11	17HR1A0312	CHADABAVI MURALI	B
12	17HR1A0313	D MANIKANTA	B
13	17HR1A0314	D NAVEEN KUMAR	B
14	17HR1A0315	DESIREDDI KALYAN KUMAR REDDY	A
15	17HR1A0316	G GANESH	B
16	17HR1A0317	GOTAPPAGARI PRAVEENKUMAR	C
17	17HR1A0318	GOVINDARAJGARI VYSHNAVI	B
18	17HR1A0319	H V PAVANKUMAR	D
19	17HR1A0320	K G KUMAR	A
20	17HR1A0322	K VAMSI	A
21	17HR1A0323	KALEEMULLA ABDUL RAZAK	A
22	17HR1A0324	KAMASANI MURALIDHAR	B
23	17HR1A0325	KANTE UDAY KIRAN	A
24	17HR1A0326	KAVALI SUDHARSHAN	A

25	17HR1A0328	KONETI PRATHAP REDDY	A
26	17HR1A0329	KOPPALA PURUSHOTHAM REDDY	A
27	17HR1A0331	MUGHAL WASIM AKRAM	B
28	17HR1A0332	MALLELA SANTHOSH	B
29	17HR1A0333	MAMIDIGUMPULA KARTHIK KUMAR REDDY	A
30	17HR1A0335	MUMMIDI LOKESH	A
31	17HR1A0336	N BHANU PRAKASH	C
32	17HR1A0337	N SAIRAM	B
33	17HR1A0338	NARALLA PRUDHVI RAJ	A
34	17HR1A0339	P BABU REDDY	A
35	17HR1A0340	P Harish	B
36	17HR1A0341	P Pavan	B
37	17HR1A0342	P SESHUWARDHANA REDDY	B
38	17HR1A0343	PAGADALA REDDY ROHITH	A
39	17HR1A0344	POOLA SHABARISH KUMAR	D
40	17HR1A0345	POTHAGANI DIVYA JYOTHI	B
41	17HR1A0347	PULAGANTI JHANSI	A
42	17HR1A0348	RAYALAPETA DIVYA	A
43	17HR1A0351	S MUNWAR	B
44	17HR1A0352	S PRAKASH BABU	B
45	17HR1A0353	S SAMEER	C
46	17HR1A0354	SHEIK JAFFAR ALI	A
47	17HR1A0355	SHAIK SYFALLI	B
48	17HR1A0356	T E YESHWANTH KUMAR	A
49	17HR1A0357	THAMMIREDDYGARI SIVAPRASAD REDDY	B
50	17HR1A0358	V N NAVEEN KUMAR	C
51	17HR1A0359	VARIDIREDDY MEGHANATH	A
52	17HR1A0360	Y RAJKUMAR	B
53	18HR5A0301	BANGENNAGARI BHEERU GOWDU	C
54	18HR5A0303	EMME SWAROOPA	A
55	18HR5A0304	GOTTUMUKKALA SAI KRISHNA VARMA	A
56	18HR5A0305	J VIJAYA KUMAR	B
57	18HR5A0306	MALLELA PURUSHOTHAM REDDY	A
58	18HR5A0307	PADATHI KUSHWANTH REDDY	A

59	18HR5A0308	PULLAKARA SRAVAN KUMAR	A
60	18HR5A0309	SHAIK RAHAMAN	A

Grade A>75%, B>65%, C>50%, D-FAIL

R. Sashini
CO-ORDINATOR 14/12/2019

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Coordinator

D. Sree
HOD 14/12/2019

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DEPARTMENT OF MECHANICAL ENGINEERING
ADD ON COURSE:: HYPERMESH (1903AOC02)

Academic Year 2019-2020

Feedback Form

Name of the Staff: 1. R.SASIDHAR REDDY

2. A.ARUN KUMAR

3. SHAIK BAZANI

Choose:

- 5- Excellent
- 4- Very Good
- 3- Good
- 2- Fair
- 1- Poor

S.No	Description	5	4	3	2	1
1	Organization of Subject in Logical Sequence		✓			
2	Clarity and audibility of Speech	✓				
3	Method of Explanation with proper Illustrations & Examples		✓			
4	Way of Raising doubts & Effective clarification of doubts	✓				
5	Relevance of the lecture to the topic announced	✓				
6	Overall Performance	✓				

Suggestions if any: *no suggestions*

[Signature]
Signature (Optional)
19/12/2019



Pavan

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DEPARTMENT OF MECHANICAL ENGINEERING
ADD ON COURSE:: HYPERMESH (1903AOC02)

Academic Year 2019-2020

Feedback Form

Name of the Staff: 1. R.SASIDHAR REDDY

2. A.ARUN KUMAR

3. SHAIK BAZANI

Choose:

- 5- Excellent
- 4- Very Good
- 3- Good
- 2- Fair
- 1- Poor

S.No	Description	5	4	3	2	1
1	Organization of Subject in Logical Sequence		✓			
2	Clarity and audibility of Speech	✓				
3	Method of Explanation with proper Illustrations & Examples		✓			
4	Way of Raising doubts & Effective clarification of doubts	✓				
5	Relevance of the lecture to the topic announced		✓			
6	Overall Performance	✓				

Suggestions if any: *Good Teaching*

Pavan
14-12-2019
Signature (Optional)



DEPARTMENT OF MECHANICAL ENGINEERING

ADD ON COURSE:: HYPERMESH (1903AOC02)

Academic Year 2019-2020

Feedback Analysis

Number of students submitted Feedback Forms: 60

Total number of Points: 300

S.No	Description	Excellent	Very Good	Good	Fair	Poor	%
1	Organization of Subject in Sequence	51	07	02	00	0	96.33333
2	Clarity and audibility of Speech	49	09	02	00	0	95.66667
3	Method of Explanation with proper Illustrations & Examples	47	08	05	00	0	94
4	Way of Raising doubts & Effective clarification of doubts	50	08	02	00	0	96
5	Relevance of the lecture to the topic announced	51	09	00	00	0	97
6	Overall Performance	48	10	02	00	0	95.33333
Total(Average)							95.72%

- Total Points ≥ 90 → Excellent (5 Points)
Total Points ≥ 80 → Very Good (4 Points)
Total Points ≥ 70 → Good (3 Points)
Total Points ≥ 50 → Fair (2 Points)
Total Points ≤ 49 → Poor (1 Points)

Feedback analysis report: The Add on course was excellent based on the feedback percentage that was given by the student

D. Sashini 14/12/2019
CO-ORDINATOR

D. Sashini 14/12/2019
HOD/ME
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Mechanical Engineering
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PALAMANER - 517 408.



DEPARTMENT OF MECHANICAL ENGINEERING

Report-On ADD ON COURSE:: HYPERMESH(1903AOC02) Academic Year 2019-20

* * * * *

The Department of Mechanical engineering has conducted a add on course on HYPERMESH organized for students of III Year Mechanical Engineering students during 9th Dec to 14th Dec 2019 2018 to enhance the student knowledge to meet the future industrial demand. The faculties has given mix of theory and practical knowledge on hyper mesh.

This program was organized by Dr.D.Sreenivasulu Reddy, Head of the department with the co-ordination of R.Sasidhar Reddy,Assistant Professor, ME Department, A.Arun Kumar Assistant Professor, ME Department, Shaik Bazani, Associate Professor, ME Department.

The add on course was organized for six days effective from 9.12.2019 to 14.12.2019 with a total duration of 36 hrs Sixty students from Third year Mechanical Engineering were benefitted from this program. The program was held in Mechanical Seminar Hall for inauguration. Theory and technical session practical's were conducted in Communication lab.

TOPICS COVERED

UNIT I

Introduction to Hyper mesh, Introduction about Hyper mesh, Introduction to CAE, Application of CAE Software, Advantages and Theory of FEM, Geometry, Create node, Node edit, Temp nodes, Distance, Dimensioning , Lines, Creation of surfaces and surface edit, Translate, Mid Surface Extraction, De featuring.

UNIT II

Geometry Clean Up Surface edges, Visualization tool bar, Display tool bar, Clean up using quick edit, 2D Meshing, Introduction to meshing , Auto meshing, Size & Biasing, Density and mesh style, Replace, re meshing, Current and surface components.

UNIT III

2d Mesh Quality, Quality Criteria, Aspect Ratio, Reducing The Trias Percentage, Quality index, T Connections, Free – Edges, Manual mesh Ruled Elem Offset.

UNIT IV

Tools, Number And Mass Calculation, Project , Position, 3d Hex Meshing , Introduction To 3d Meshing , Types Of 3d Elements, 3d Solid Mesh, Solid Map Commands, 3d Tetra Meshing, Tetra Parameters, Tet Collapse.

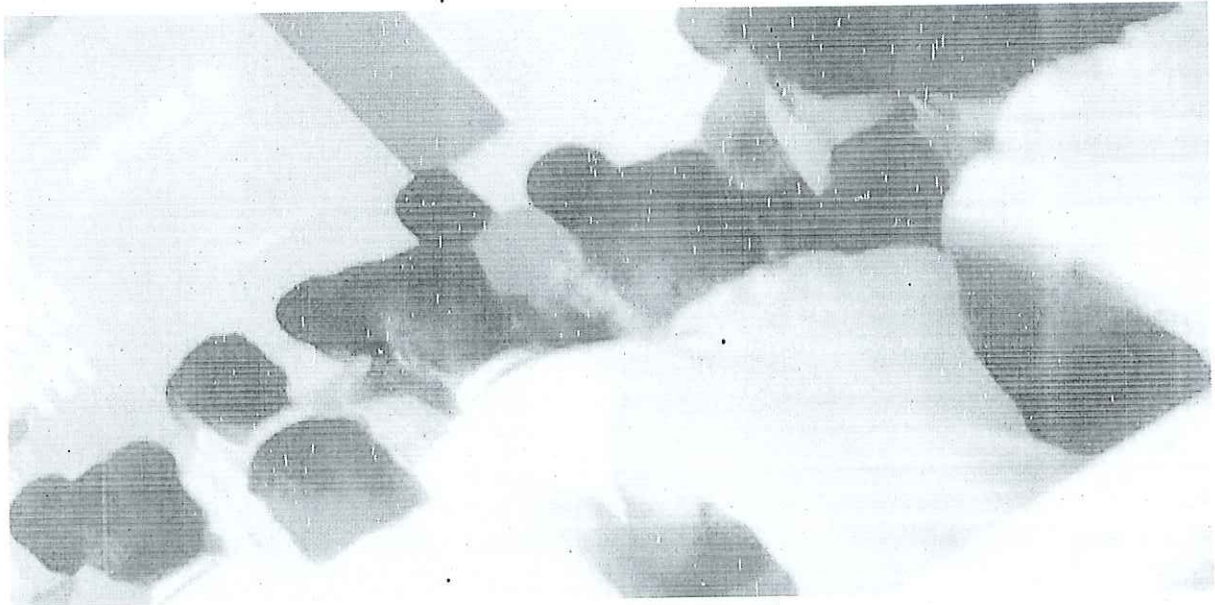
UNIT V

1d Mesh, Beam Elements, Bars, Rods, Rbe2 & Rbe3 Elements, Welding & Bolt Creation, Linear Meshing, Create Collectors, Material Properties, Load Constraints, Modal, Linear Static And Buckling Analysis, Deck Preparation, Material And Properties Assignment, Assign of Loads And Constraints, Saving The File Formats.

The add on course is successfully completed with the cooperation of each and every faculty member of the department and student participants.

Course Outcomes:

- Students were able to create hexa and penta mesh.
- Students were able to prepare models for analysis and geometry for meshing.



During lecture session

R. Sashi 14/12/2019
CO-ORDINATOR

Mother Theresa Institute of Engineering and Technology



(Approved by AICTE, New Delhi and Affiliated to JNTUA, Anantapuramu)

Melumoi (Post), Palamaner-517408, Chittoor Dist., A.P.

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Certificate

This is to Certify that Mr./Ms. A LOKESWARI Reg, No. 17HR1A0301 Dept. of Mechanical Engineering has successfully completed a course in "HYPERMESH", conducted by the department of Mechanical Engineering, MTIET, Palamaner from 9th December 2019 to 14th December 2019 and has obtained A grade.

R. Seshi

CO-ORDINATOR

D. Sree

HOD

[Signature]

PRINCIPAL

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Certificate

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R. Sathi

CO-ORDINATOR

D. Sree

HOD

[Signature]

PRINCIPAL