Mangalore Institute of Technology and Engineering
(An ISO 9001:2015 Certified Institution)
BadagaMijar, Moodabidri-574225, Karnataka

1.1.1 The Institution ensures effective curriculum delivery through a well-planned and documented process.

Documentary Evidences for the Effective Curriculum Delivery Presented for the Academic Year 2018-19

Mangalore Institute of Technology and Engineering

(An ISO 9001:2015 Certified Institution)

BadagaMijar, Moodabidri-574225, Karnataka

Documents Enclosed

Sl. No	Particulars	Page Nos
1	VTU/ Institute/ Department Calendar of Events	1-9
2	Time Table	10-13
3	Academic Record	14-38
4	PAC and DAB Meeting	39-71
5	Remedial Class Details	72-76
6	Support to Advanced Learners	77-95
7	ICT Enabled Tools	96-115
8	Course Sample File	116-131
9	PO/PSO Attainment Details	132-133

1. VTU/ INSITUTE/ DEPARTMENT CALENDAR OF EVENTS

Calendar of events of the affiliating University (VTU), Institute and Department for the academic year 2018-19 ODD & EVEN semester documents

ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ
"ಜ್ಞಾನ ಸಂಗಮ", ಬೆಳಗಾವಿ - ೫೯೦ ೦೧೮, ಕರ್ನಾಟಕ ರಾಜ್ಯ, ಭಾರತ
ದೂರವಾಣಿ : (0831) 2405468
ಫ್ಯಾಕ್ಸ್ : (0831) 2405467
ಇಮೇಲ್ : registrar@vtu.ac.in
ವೆಬ್‌ಸೈಟ್ : www.vtu.ac.in

Dr. H .N. Jagannath Reddy. B.E. M.E., Ph.D
Registrar

Phone: (0831) 2405468
Fax: (0831) 2405467

Ref. No VTU /Aca/Aca-Cal/2018-19/ 3691

Date: 7 AUG 2018

NOTIFICATION

Sub: Academic Calendar for the ODD Semester 2018 – 19
Ref: Hon'ble Vice Chancellor's approval dtd. 06.08.18

The Academic Calendar of the University for the ODD Semester for the academic year 2018-19 is hereby notified as enclosed. The Principals of affiliated Engineering Colleges, a Constituent College (UBDTEC, Davangere),and PG Departments of VTU, conducting BE./ B.Tech./ B.Arch./ M.Tech./ M.Arch./ MBA / MCA courses, are hereby informed to bring the contents of this Notification to the notice of all the concerned.

NOTE: Academic Calendar for First Semester M.Tech. / M.Arch. / MBA / MCA courses will be notified later.

07/08/18

REGISTRAR

To,

1. The Principal Secretary to Government Department of Higher Education, M.S. Building, 5th Floor, Dr. Ambedkar Veedhi, Bengaluru-01.
2. The Executive Director,Karnataka Examinations Authority, 18th Cross Road, Sampige Road, Malleshwaram, Bengaluru -12.
3. Personal Secretary to Hon'ble Minister for Higher Education Minister, Planning, Statistics, Muzarai, Information Technology & Bio-Technology, room No. 315, 3rd Floor Vidhana Soudha, Bengaluru - 01.
4. The Special Officer, Common Entrance Test Cell, 18th Cross Road, Sampige Road, Malleshwaram, Bengaluru -12.
5. The Director of Technical Education Palace Road, Bengaluru- 01.
6. Chief Executive COMEDK, No.132, 2nd Floor , 11th Main, 17th Cross , Malleswaram , Bengaluru-55
7. The Principals of all the Engineering Colleges Affiliated to VTU and UBDTEC, Davanagere Constituent College of VTU.

Copy to:

1. The Hon'ble Vice Chancellor, through Secretary to VC, VTU, Belagavi.
2. The Registrar (Evaluation), VTU, Belagavi.
3. Dean and Faculty of Engineering, VTU, Belagavi
4. The Regional Directors of all Regional Offices of VTU.
5. The Special Officers of Academic Section of VTU, Belagavi.
6. The Special Officer, E-learning Center, Mysuru.
7. The Special Officer, Mysuru Extension Centre, Mangaluru
8. The Physical Education Director of VTU, Belagavi.
9. The Caseworkers of the Academic Section of VTU, Belagavi.
10. PG Cordinators of all PG Centres of VTU ,
11. PG Cordinator , Centre for PG Studies VIAT Muddenahalli, Chikkaballapura.
12. The CNC In-charge, VTU, Belagavi to upload the information in the VTU website.

Visvesvaraya Technological University Belagavi

Academic Calendar for ODD Semester of 2018-2019 (Aug 2018 – Jan 2019)

	I Sem B.E/B.Tech/ B.Arch	III, V Sem B.E/B.Tech III, V VII, & IX Sem B.Arch	VII Sem B.E / B.Tech	III & V Sem MCA	III Sem MBA	III Sem M.Tech	III Sem M.Arch.
Commencement of ODD Semester	13.08.2018	01.08.2018	06.08.2018	01.08.2018	01.08.2018	01.08.2018 [Internship of 16 Weeks]	10.09.2018
Last Working day of ODD Semester	17.01.2019 [Includes 3 Weeks Induction Program]	30.11.2018	04.12.2018	30.11.2018	30.11.2018	30.11.2018	05.01.2019
Practical Examination	21.01.2019 To 30.01.2019	03.12.2018 To 14.12.2018	06.12.2018 To 14.12.2018	03.12.2018 To 07.12.2018	-	-	-
Theory Examinations	04.02.2019 To 18.02.2019	17.12.2018 To 18.01.2019	17.12.2018 To 18.01.2019	10.12.2018 To 28.12.2018	05.12.2018 To 29.12.2018	05.12.2018 To 22.12.2018	09.01.2019 To 22.01.2019
Summer Project / Professional training	-	-	-	-	03.01.2019 To 16.02.2019 [Submission of report to VTU by 08.03.2019]	-	23.07.2018 To 07.09.2018 [Professional training]
Commencement of EVEN Semester	25.02.2019	01.02.2019	01.02.2019	01.02.2019	18.02.2019	28.12.2018	01.02.2019

NOTE

- VII Semester B.E / B.Tech students shall have to undergo Internship for a period of four Weeks.
- I Semester B.E/ B.Tech / B.Arch Students shall compulsorily undergo Induction Program for a period of 3 Weeks as per the schedule given by VTU.

1. The faculty/staff shall be available to undertake any work assigned by the university.
2. If any of the above date is declared to be a holiday then the corresponding event will come into effect on the next working day.
3. Notification regarding Calendar of Events relating to the conduct of University Examination will be issued by the Registrar (Evaluation) from time to time.

REGISTRAR

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

CALENDAR OF EVENTS FOR ODD SEMESTER SESSION: Aug 2018 – Jan 2019

Sl. No	MONTH	MON	TUE	WED	THU	FRI	SAT	NO.OF WORKIG DAYS	REMARKS
1	August			1	2	3	4	4	
2	August	6	7	8	9	10	11	6	
3	August	13	14	15	16	17	18	5	15-Independence day
4	August	20	21	22	23	24	25	5	21-Wednesday time table to be followed 22-Bakrid
5	August/September	27	28	29	30	31	1	6	
6	September	3	4	5	6	7	8	6	
7	September	10	11	12	13	14 T1	15 T1	5	13-Ganesh Chatuthi
8	September	17 T1	18	19	20	21	22 PM	6	PM-Parents meet
9	September	24	25	26	27	28	29	6	
10	October	1	2	3	4	5	6	5	2-Gandhi jayanti
11	October	8	9	10	11	12	13	6	
12	October	15 T2	16 T2	17 T2	18	19	20	4	18-Ayudha Pooja 19- Vijaya Dashami
13	October	22	23	24	25	26	27	6	
14	October/November	29	30	31	1	2	3	5	1-Kannada Rajyotsava
15	November	5	6	7	8	9	10	4	7-Deepavali 8-Balipadyami
16	November	12	13	14	15	16	17	6	
17	November	19	20	21	22	23 T3	24 T3	5	21-Id Milad
18	November/ December	26 T3	27	28	29	30	1 DFIA		
19	December	3	4						
No. of classes		14	15	14	14	16	16		

Dec 2018 – Jan 2019: Practical and theory examination sessions

• T1,T2,T3 – Internal Tests	• TAD1,TAD2– Test Marks & Attendance Display
• H- Holiday	• PM-Students Parents Meet
	• DFIA-Display of Final IA mark

Principal
Mangalore Institute of Technology & Engineering
Badaga Mijar, MOODBIDRI - 574 225

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001:2015 Certified Institution)

Department of Aeronautical Engineering

Department Calendar of Events for Aug 2018 - Dec 2019

Event	Week/ Date
Commencement of Odd Semester	01-08-2018
AURA Inauguration	1st week of September 2018
1st Internal Assessment	14,15&17 Sept.2018
Sending Progress report to the students	20-09-2018
Technical Talk	2nd week of oct.2018
2nd Internal Assessment	15,16&17 oct.2018
Sending Progress report to the students	20-10-2018
Workshop	3rd /4th week oct.2018
Industrial Visit	1st week of Nov. 2018
3rd Internal Assessment	23,24&26 Nov.2018
Final year Project Seminar/ Lab Internals	28,29&30 Nov.2018
Last Working Day	30-11-2018
Practical Exams	3-12-2018 to 14-12-2018 (Tentative)
Theory Exams	17-12-2018 to 18-01 -2019 (Tentative)

HOD-AE
Department of Aeronautical Engg.,
Mangalore Institute of Technology & Engg.,
PO Mijar, Moodabidri - 574225
Mangalore, Karnataka

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ
"Jnana Sangama", Belagavi - 590 018, Karnataka State, INDIA

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Email : registrar@vtu.ac.in
website : www.vtu.ac.in

Dr. H. N. Jagannatha Reddy, B.E.,M.E.,Ph.D
Registrar

Ref. No VTU /Aca/Aca-Cal/2018-19/ 9475

Date: 29 JAN 2019

NOTIFICATION

Sub: Academic Calendar for the EVEN Semester 2018 – 19
Ref: Hon'ble Vice Chancellor's approval dtd. 25.01. 2019

The Academic Calendar of the University for the EVEN Semester for the academic year 2018-19 is hereby notified as enclosed. The Principals of a Constituent College (UBDTEC, Davangere), affiliated Engineering Colleges, Regional Directors of VTU Regional Offices and PG Coordinators of All PG Departments of VTU, are hereby informed to bring the contents of this Notification to the notice of all the concerned.

REGISTRAR

To,
1. The Principal Secretary to Government Department of Higher Education, M.S. Building, 5th Floor, Dr. B. R. Ambedkar Veedhi, Bengaluru-01.
2. The Executive Director, Karnataka Examinations Authority, 18th Cross Road, Sampige Road, Malleshwaram, Bengaluru -12.
3. Personal Secretary to Hon'ble Minister for Higher Education Minister, Planning, Statistics, Muzarai, Information Technology & Bio-Technology, room No. 315, 3rd Floor Vidhana Soudha, Bengaluru - 01
4. The Special Officer, Common Entrance Test Cell, 18th Cross Road, Sampige Road, Malleshwaram, Bengaluru -12.
5. The Director of Technical Education Palace Road, Bengaluru- 01
6. Chief Executive COMEDK, No.132, 2nd Floor , 11th Main, 17th Cross , Malleswaram , Bengaluru-55
7. The Principals a Constituent college UBDTEC, Davanagere and all Affiliated Engineering Colleges of VTU

Copy to:
1. The Hon'ble Vice Chancellor, through Secretary to VC, VTU, Belagavi.
2. The Registrar (Evaluation), VTU, Belagavi.
3. Dean and Faculty of Engineering, VTU, Belagavi
4. The Regional Directors of all Regional Offices of VTU.
5. The Special Officers of Academic Section of VTU, Belagavi.
6. The Special Officer, E-learning Center, Mysuru.
7. The Physical Education Director of VTU, Belagavi.
8. The Caseworkers of the Academic Section of VTU, Belagavi.
9. PG Coordinators of all PG Centers of VTU,
10. PG Coordinator, Centre for PG Studies VIAT Muddenahalli, Chikkaballapura
11. The Special Officer CNC, VTU, Belagavi to upload the information on the VTU website.

Feb 2019

Academic Calendar of VTU, Belagavi for EVEN Semester of 2018-2019 (Feb 2018 – July 2019)

	II Sem B. E. / B. Tech. / B. Arch	IV & VI Sem B. E. /B. Tech. IV, VI,VIII Sem B. Arch.	VIII Sem B.E / B.Tech & X Sem B Arch	IV Sem MCA	VI Sem MCA	IV Sem MBA	IV Sem M. Tech.	IV Sem M. Arch.	II Sem M. Tech.	II Sem MCA	II Sem MBA	II Sem M. Arch.
Commencement of EVEN Semester	25.02.2019	01.02.2019	01.02.2019	01.02.2019	01.02.2019	18.02.2019	28.12.2018	01.02.2019	01.03.2019	01.03.2019	25.02.2019	25.02.2019
Last Working day of EVEN Semester	17.06.2019	23.05.2019	23.05.2019	18.05.2019	18.05.2019	01.06.2019	13.04.2019	18.05.2019	21.06.2019	21.06.2019	17.06.2019	17.06.2019
Practical Examination	19.06.2019 To 29.06.2019	27.05.2019 To 07.06.2019	-	21.05.2019 To 25.05.2019	-	-	-	-	24.06.2019 To 29.06.2019	24.06.2019 To 29.06.2019	-	-
Theory Examinations	01.07.2019 To 16.07.2019	10.06.2019 To 16.07.2019	27.05.2019 To 07.06.2019	27.05.2019 To 15.06.2019	-	03.06.2019 To 28.06.2019	27.05.2019 To 31.05.2019	-	01.07.2019 To 12.07.2019	01.07.2019 To 12.07.2019	20.06.2019 To 04.07.2019	20.06.2019 To 04.07.2019
Viva Voce		-	11.06.2019 To 17.06.2019	-	-	-	-	-	-	-	-	-
Summer Project / Professional training /		-	-	-	20.05.2019 To 29.05.2019 [Submission of report to VTU]	01.04.2019 To 15.04.2019 [Submission of report to VTU]	03.06.2019 To 18.06.2019 [Submission of report to VTU]	-		-	-	
Commencement of ODD Semester	22.07.2019	22.07.2019	-	22.07.2019	-	-	-	-	22.07.2019	22.07.2019	22.07.2019	22.07.2019

NOTE

1. College Time Table shall be arranged for five and a half week days and planned to accommodate EDUSAT transmission slots, the schedule of which will be notified separately.
2. The faculty/staff shall be available to undertake any work assigned by the university.
3. If any of the above date is declared to be a holiday then the corresponding event will come into effect on the next working day.
4. Notification regarding Calendar of Events relating to the conduct of University Examination will be issued by the Registrar (Evaluation) from time to time

REGISTRAR

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

CALENDAR OF EVENTS FOR EVEN SEMESTER SESSION: Feb 2019 - July 2019

(4th, 6th and 8th SEM BE only)

Sl. No	MONTH	MON	TUE	WED	THU	FRI	SAT	NO.OF WORKG. DAYS	REMARKS
1	February					1	2	2	
2	February	4	5	6	7	8	9	6	
3	February	11	12	13	14	15	16	6	
4	February	18	19	20	21	22	23	6	
5	Feb/March	25	26	27	28	1	2	6	2: Sports Day
6	March	4	5	6	7	8 T1	9 T1	6	5-Friday Time table to be followed
7	March	11 T1	12	13	14	15	16	6	
8	March	18	19	20	21	22	23	6	
9	March	25	26	27	28	29	30	6	27 to 30: SENTIA
10	April	1	2	3	4	5	6	5	6-Chandramana Ugadi
11	April	8	9	10	11	12	13	6	
12	April	15	16	17 T2	18 T2	19	20 T2	5	19-Good Friday
13	April	22	23	24	25	26	27	6	27- Project Exhibition
14	April/May	29	30	1	2	3	4	5	1-May Day
15	May	6	7	8	9 LT	10 LT	11 LT	6	
16	May	13 LT	14 LT	15 LT	16	17 T3	18 T3	6	
17	May	20 T3	21	22	23			5	
No. of classes		14	16-1	13	14	12+1	11		

27th May 2019 - July 2019: Practical and theory examination sessions

- T1,T2,T3 – Internal Tests
- H- Holiday
- LT-Lab Test
- TAD1,TAD2– Test Marks & Attendance Display
- PM-First year students Parents Meet
- DFIA-Display of Final IA mark

Principal
Mangalore Institute of Technology & Engineering
Badaga Mijar, MOODBIDRI - 574 225

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001:2015 Certified Institution)

Department of Aeronautical Engineering

Department Calendar of Events for Feb 2019 - July 2019

Event	Week/ Date
Commencement of Odd Semester	1-2-2019
Internship internal evaluation	4th week of Feb.2019
1st Internal Assessment	8,9&11 Mar.2019
Sending Progress report to the students	15-3-2019
Project progress evaluation	3rd week of Mar.2019
Technical Talk	3rd /4th week of Mar.2019
2nd Internal Assessment	17,18&20 Apr.2019
Sending Progress report to the students	25-4-2019
Workshop	4th week of Apr.2019
Industrial Visit	1st week of May.2019
Project exhibition	May.2019
3rd Internal Assessment	17,18&20 May.2019
Final year Project Seminar/ Lab Internals	9-15 May.2019
Last Working Day	23-5-2019
Practical Exams	27-5-2019 to 7-6-2019 (Tentative)
Theory Exams	10-6-2019 to 16-7-2019 (Tentative)

HOD-AE
Department of Aeronautical Engg.,
Mangalore Institute of Technology & Engg.,
P O Mijar, Moodabidri - 574225
Mangalore, Karnataka

2. TIME TABLE

Sample Time Tables for the Department of Aeronautical Engineering for the Academic year 2018-19

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001:2015 Certified Institution)

BADAGA MIJAR, MOODBIDRI-574225

DEPARTMENT OF AERONAUTICAL ENGINEERING

CLASS: III SEM (AUG-DEC 2018) ROOM NO: PGL 101

Time / Day	9:00 to 9:55	10:15 to 11:10	11:10 to 12:05	12:05 to 1:00	LUNCH	2:00 to 2:55	2:55 to 3:50	3:50 to 4:45
Monday	M 3	(M/C SHOP-B1,MMM LAB-B2 BOSCH LAB-B3)				MMM	MOM	MOM
Tuesday	MMM	EOA	ATD	M 3		MOM	FM	FM
Wednesday	M 3	(M/C SHOP-B2,MMM LAB-B3 BOSCH LAB-B1)				EOA		
Thursday	MOM	FM	EOA	ATD		M 3	MMM	ATD
Friday	FM	ATD	EOA	M 3		(M/C SHOP- B3,MMM LAB-B1 BOSCH LAB-B2)		
Saturday	ATD	MOM	MMM	FM				

M-3	15MAT31	Engineering Mathematics-III	Dr.Asha Crasta	M & M LAB	B1	Sahana D.S / Dr. G.Purushotham
EOA	15AE32	Elements of Aeronautics	Srinath.R		B2	Sahana D.S / Srinath R
ATD	15AE33	Aero Thermodynamics	Sujesh kumar		B3	Sahana D.S/Sujesh Kumar
MOM	15AE34	Mechanics Of Materials	Ajith Kumar	MACHINE SHOP	B1	Ashok Kumar/ Dr. G.Purushotham
FM	15AE35	Mechanics Of Fluids	Praneeth H.R		B2	Ashok Kumar/Ajith Kumar
MMM	15AE36	Measurement and Metrology	Ashok Kumar		B3	Ashok Kumar/ Ajith Kumar

19/7/2018.

HOD

Department of Aeronautical Engg.
Mangalore Institute of Technology & Engg.,
P O Mijar Moodabidri - 574225
Mangalore. Karnataka

Dept. of Aeronautical engineering

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001:2015 Certified Institution)

BADAGA MIJAR, MOODBIDRI-574225

DEPARTMENT OF AERONAUTICAL ENGINEERING

CLASS : V SEM (AUG-DEC 2018) **ROOM NO: PGL 102**

Time / Day	9:00 to 9:55	9:55 to 10:50	11:10 to 12:05	12:05 to 1:00	LUNCH	2:00 to 2:55	2:55 to 3:50	3:50 to 4:45
Monday	C&F	M&E	HMT	ICM		(EC&FM LAB –C1,AD LAB-C2,Mini Project-C3)		
Tuesday	HMT	M&E	C&F	ATS		(EC&FM LAB –C2,AD LAB -C3,Mini Project-C1)		
Wednesday	ATS	C&F	M&E	AS-I		ICM	HMT	AS-I
Thursday	C&F	HMT	AS I	ATS		Placement Training		
Friday	AS-I	M&E	ICM	ATS		(SIEMENS LAB- C1,C2,C3)		
Saturday	ICM	(EC&FM LAB –C3,AD LAB -C1 Mini Project-C2)						

M&E	15AE51	Management and Entrepreneurship	Dr. G. Purushotham	EC/ FM Lab	C1	Sujesh Kumar/ Tamilselvam
ICM	15AE52	Introduction to Composite Materials	Tamilselvam N		C2	Sujesh Kumar/Tamilselvam
HMT	15AE53	Heat Mass Transfer	Sujesh Kumar		C3	Sujesh Kumar/ Tamilselvam
AS-I	15AE54	Aircraft Structures	Ajith Kumar	AD Lab	C1	Srinath R/Yathin K L
F&C	15AE551	Fuels and Combustion	Yathin K L/ Srinath R		C2	Srinath R/ Praneeth
ATS	15AE561	Air Transportation Systems	Sahana D S		C3	Srinath R/Ashok Kumar

HOD 19/7/2018

Dept. of Aeronautical Engineering
Mangalore Institute of Technology & Engg.,
PO Mijar Moodbidri 574225
Mangalore Karnataka

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001 : 2015 Certified Institution)
BADAGA MIJAR, MOODBIDRI-574225

DEPARTMENT OF AERONAUTICAL ENGINEERING

CLASS : VII SEM (AUG-DEC 2018) **ROOM NO : PGL 103**

Time / Day	9:00 to 9:55	9:55 to 10:50	11:10 to 12:05	12:05 to 1:00		2:00 to 2:55	2:55 to 3:50	3:50 to 4:45
Monday	CFD	ASC	CE	CE	L	SEMINAR/ PROJECT WORK		
Tuesday	ASC	HD	WTT	CFD	U	SEMINAR/ PROJECT WORK		
Wednesday	CE	WTT	ASC	CFD	N	MA Lab B1/SIM LAB B2		
Thursday	CE	HD	ASC		C	MA Lab B2/ SIM LAB B1		
Friday	CE	HD	WTT	CFD	H	SEMINAR/ PROJECT WORK		
Saturday	WTT	CFD	HD	--				

CE	15AE71	Control Engineering	Yathin K L	Flight Simulation Lab	C1	YATHIN K L/
CFD	15AE72	Computational Fluid Dynamics	Praneeth H R			YATHIN K L/
ASC	15AE73	Aircraft Stability and Control	Tamil Selvam N	Modelling and Analysis lab	C1	PRANEETH H R/
HD	15AE743	Helicopter Dynamics	Sahana D S		C2	PRANEETH H R/
WTT	15AE752	Wind Tunnel Techniques	Ashok Kumar			

HOD
Dept. of Aeronautical Engineering
Department of Aeronautical Engg.,
Mangalore Institute of Technology & Engg.,
P O Mijar, Moodabidri - 574225
Mangalore, Karnataka

3. ACADEMIC RECORD

The sample academic record attached consist the following information

1) Course Details
2) Course Plan
3) Internal Assessment Question paper
4) Scheme of Evaluation
5) Assignment Details
6) Course Results
7) Result Abstract

ACADEMIC RECORD

Name of the Faculty : SRINATH. R

Department : AERONAUTICAL ENGINEERING

Course : ELEMENTS OF AERONAUTICS

Course Code : 17AE32

Semester : III

Section : -

ODD / EVEN : 2018 - 19

MITE

Invent Solutions

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001:2015 Certified Institution)

Badaga Mijar, Moodbidri-574225

Mangalore Institute of Technology & Engineering

Badaga Mijar, Moodbidri

Institute Vision and Mission:

Vision:

"To attain perfection in providing Globally Competitive Quality Education to all our Students and also benefit the global community by using our strength in Research and Development"

Mission:

"To establish world class educational institutions in their respective domains, which shall be Centers of Excellence in their stated and implied sense. To achieve this objective we dedicate ourselves to meet the challenges of becoming Visionary and Realistic, Sensitive and Demanding, Innovative and Practical, and Theoretical and Pragmatic; ALL at the same time"

Department of Aeronautical Engineering

VISION

To be recognized as an innovative leader in aeronautical engineering through excellence in education by imparting the values of research and developments in the upcoming fields of aeronautics.

MISSION

- The Department imparts the technical knowledge, practical skills, entrepreneurial skill to students and the channelized guiding in the varied activities with the aim of transforming the graduates into able engineers of tomorrow.
- To develop each student with an ability and passion to learn, and effective implementation with a strong foundation in skills that are relevant to the challenging world.
- To provide students with strong concepts of their core subjects and an application-oriented overview in their stipulated courses.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

After successful completion of program,

PEO-1:
Graduates will have the scientific and technical knowledge to have successful career in Aeronautical industry.

PEO-2:
Graduates will have competency to analyze challenges and advancements in the focus areas of Propulsion, Structures, Aerodynamics, Flight Mechanics and Avionics.

PEO-3:
Graduates will be motivated and confident to pursue advanced education, research and development and other creative efforts in aeronautical engineering and allied areas.

PEO-4:
Graduates will have higher order thinking and leadership skills to become technology leaders of tomorrow.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1:
Graduates will excel in their professional career in Aeronautical industry and research with highest professional and ethical standards to their activities by acquiring knowledge in basic engineering, mathematics, science and Aeronautical engineering.

PSO2:
Graduates will exhibit professionalism, teamwork in their chosen profession and adapt to current trends, technologies and industrial scenarios by pursuing lifelong learning.

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING
(A unit of Rajalaxmi Education Trust®, Mangalore-575001)

COURSE DETAILS

SUBJECT: ELEMENTS OF AERONAUTICS

CODE: 17AE32

SEMESTER: III

Prerequisites

- MATHEMATICS
- PHYSICS.

Relevance of the course

Aircraft Propulsion, Aerodynamics, Aircraft stability, Aircraft systems

Application areas

Design of Aircraft, working principles and operation of systems, controls of aircraft.

ARTICULATION MATRIX (MAPPING OF CO's TO PO's

Sl No	COURSE OUTCOMES	PROGRAM OUTCOMES												PSO	
		1	2	3	4	5	6	7	8	9	10	11	12	1	2
C.202.1	Describe the classification and working principles of flight vehicles.	3	1											3	
C.202.2	Apply the concepts of fundamentals of flight and aerodynamics during the development of aircraft.	3	2											2	3
C.202.3	Compare the propulsive devices and its techniques used in aircraft industries	2	2				2							2	2
C.202.4	Analyze the motions of an aircraft based on its stability conditions.	2	3	2										2	1
C.202.5	Understand the mechanical and electrical based systems used in aircrafts and its working principles.	2		2			2							2	2

ELEMENTS OF AERONAUTICS

17AE32

Sl. NO	Topic	Date Planned	Date Engaged	Remarks
	MODULE I INTRODUCTION TO AIRCRAFTS			
1.	History of aviation, Atmosphere and its properties.	02/08/18	02/8/18	
2.	Classification of aircrafts	03/08	03/08	
3.	Basic components of an aircraft	07/08	07/08	
4.	Structural members, Aircraft axis system;	08/08	08/08	
5.	Aircraft motions, Control surfaces	09/08	09/08	
6.	High lift devices	10/08	10/08	Completed
7.	Helicopters, their parts and functions.	14/08	14/08	
8.	General types of construction	16/08	16/08	
9.	Monocoque, Semi monocoque and Geodesic	17/08	21/08	
10.	Typical wing and fuselage structure	21/08	24/08	
11.	Metallic and non-metallic materials for aircraft	24/08	28/08	
	MODULE II BASIC PRINCIPLES OF FLIGHT			
12.	Significance of speed of sound	28/08	29/08	
13.	Airspeed and groundspeed; standard atmosphere;	29/08	30/08	
14.	Bernoulli's theorem and its application for generation of lift and measurement of airspeed	30/08	31/08	
15.	Forces over wing section, Pressure distribution	31/08	31/08	
16.	Aerofoil nomenclature	04/09	04/09	Completed
17.	Generation of Lift and drag components	05/09	05/09	
18.	Lift curve, drag curve, types of drag, Problems	06/09	06/09	
19.	Centre of pressure, Aerodynamic centre	07/09	07/09	
20.	Factors affecting lift and drag	07/09	11/09	
21.	Aspect ratio, Mach number and Supersonic flight effects	11/09	12/09	
	MODULE III AIRCRAFT PROPULSION			
22.	Classification based on power plant and location principle of operation.	18/09	18/09	
23.	Turbojet Engines and working principles	19/09	25/09	
24.	Turbofan engines, Turboprop Engines	20/09	28/09	
25.	Ramjets and Scramjets	21/09	04/10	Completed
26.	Performance characteristics	25/09	05/10	
27.	Basic principles of piston.	26/09	05/10	
28.	Brayton cycle and its application	27/09	05/10	
29.	Use of propellers and jets for production of thrust	28/09	10/10	

30.	Comparative merits and limitations of different types of propulsion engines	03/10	11/10	
31.	Principle of thrust augmentation.	03/10	12/10	
	MODULE V AIRCRAFT SYSTEMS			
32.	Hydraulic systems	04/10	24/10	
33.	Pneumatic systems	05/10	25/10	
34.	Environment control system	09/10	30/10	
35.	Fuel system	10/10	31/10	
36.	Oxygen system.	11/10	02/11	
37.	Flight control system	12/10	02/11	
38.	Cockpit instrumentation and displays	24/10	04/11	Completed
39.	Communication systems	25/10	04/11	
40.	Navigation systems	26/10	06/11	
41.	Power generation systems – engine driven alternators	30/10	06/11	
42.	Auxiliary power Module, ram air turbine; power conversion, distribution and management.	30/10	-	
	MODULE IV AIRCRAFT STABILITY			
43.	Forces on an aircraft in flight; static and dynamic stability	31/10	09/11	
44.	Longitudinal, lateral and roll stability; necessary conditions for longitudinal stability	02/11	09/11	
45.	Basics of aircraft control systems	06/11	09/11	
46.	Effect of flaps and stats on lift, control tabs, stalling, gliding, landing	07/11	13/11	Completed
47.	Turning, Aircraft manoeuvres	09/11	13/11	
48.	Performance of aircraft – Power curves, Maximum and Minimum speeds for horizontal flight at a given altitude	13/11	14/11	
49.	Effect of changes in engine power and altitude on Performance	13/11	15/11	
50.	Correct and incorrect angles of bank	14/11	15/11	
51.	Aerobatics, inverted manoeuvre	15/11	16/11	
52.	Manoeuvrability. Simple problems	20/11, 21/11	20/11	

BOOKS (Text / References)

- John D. Anderson, "Introduction to Flight", McGraw-Hill Education, 2011. ISBN 9780071086059.
- Lalit Gupta and O P Sharma, "Fundamentals of Flight Vol-I to Vol-IV", Himalayan Books, 2006, ISBN: 706.
- A.C. Kermode, "Flight without formulae", Pearson Education India, 1989. ISBN: 9788131713891.
- Nelson R.C., "Flight stability and automatic control", McGraw-Hill International Editions, 1998 ISBN 9780071158381

MITE

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001:2015 Certified Institution)

Badaga Miiar. Moodbidri -574225

Department: Aeronautical Engineering — Test I
Subject : Elements of Aeronautics — Subject Code: 17AE32
Semester : III — Section: AE-1
Date: 14-09-18 — Duration: 75 Mins
Name of the Faculty: Srinath R. — Max. Marks: 30

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1) Imagine yourself working as a chief instructor at AIR INDIA, 2nd year students of various Engineering colleges visit the company for an industrial Visit, you are required to explain how aircraft maneuvers with figure during the airshow which took place last week regarding AF show, Indian Air Force, Vibrant Gujarat Summit. (CO1) **10 MARKS**

(OR)

2) As an Experienced pilot you are asked to select the air vehicles for the following conditions (CO1) **10 MARKS**

(a) Imagine a war zone where the war crafts are in requirement of weapons and armories with battle field tanker, showcase your views with type of aircraft and selection of wing.
(b) Consider aircraft manufacturer has a powerful engine which produces enormous amount of thrust to overcome the opposite force where lift is a major concern, he is looking for you as an aero dynamist to design a wing for his aircraft, how will you design it, Explain the same.

3) a) Structure and Design of the major lift generator plays an important role in aircraft, As an Aeronautical Engineer explain how the numberings has an impact over it in regards with classifications. Explain. CO2 05 Marks

b) Explain how the opposing force of forward flight has an impact on aircraft, classify its types. (CO2) 05 MARKS

(OR)

4) a) Equation which relates the physical force formed over an airfoil with the speed term has been used to greater extent in the field of aeronautics, explain how it is been successfully used and also with neat sketches explain the two different type of airfoils with its relevance CO2 05 Marks

b) How do wings produces extra lift, Explain the context with neat figures (CO2) 05 MARKS

5) Vehicles travels at its elevated altitudes, describe on how will you classify the altitude for a particular air vehicle (hint: it includes helicopters, aircrafts, space craft) (CO1) **10 MARKS**

(OR)

6) Imagine a situation that a place is under fire and you have been appointed as chief rescuing officer under air force division, on what basis you would select a pilot, explain the working condition and parts of your own vehicle sent for rescue (CO1) **10 MARKS**

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001: 2015 Certified Institution)

Assessment: Cognitive Level Mapping Format

Course Title: **Elements of Aeronautics** Course Code: **17AE32**

Semester: **03** IA Test : **1**

Q. No.	Cognitive Level (R,U,Ap,An,E,C)	Marks	Course Outcome (CO)	Remarks
1	An	10	CO1	—
2	An	10	CO1	—
3.a	U	05	CO2	—
3.b	U	05	CO2	—
4.a	U	05	CO2	—
4.b	U	05	CO2	—
5	U	10	CO1	—
6	U	10	CO1	—
Total:		60		

Cognitive Level : R-Remember, U-Understand, Ap-Apply, An-Analyze, E-Evaluate, C-Create

Consolidated marks:

Cognitive Level	Marks for each level	% of Marks	Remarks
U	40	66	—
An	20	34	—

Remarks:

Approved ☑ **Not approved** ☐

Reason for not approval: - Nil -

Course Instructor:

Mr. Srinath R

10/09/18

Name & Signature of Scrutinizer

Dr. G. Purushotham

Department of Aeronautical Engg.,
Mangalore Institute of Technology & Engg.,
P.O. Mijar, Moodabidri - 574225
Mangalore, Karnataka

Signature of Course Instructor

MITE

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001:2015 Certified Institution)

Badaga Mijar, Moodbidri -574225

Scheme of Evaluation of First Internal Assessment

Sub: Elements of Aeronautics Sub. code: 17AE32

Question No	Solution	Marks
1)	Aircraft and its Parts/ classification.	02
	Figure of Aircraft & labelling.	02
	Explanation about parts of A/c.	02
	Primary & secondary Control surface.	02
	Manoeuvring of A/c.	02
		10
2)	Selection of Wing High / Low & expl'n	02
	Different types of Wing.	02
	Aspect ratio & its impact on A/c.	01
	Biplanes - Figure	02
	Explanation of biplane &	01½
	Advantages & Disadvantages.	01½
		10
3.a	NACA - Abbreviation.	02
	NACA series of Aerofoils.	02
		04
3.b	Explanation on NACA Nomenclature	03
	Drag & types of drag.	02
		05

4, a	Bernaullis principle & equation	02
	Its impact on production of lift.	01
	Symmetric & Cambered Airfoil	02
		05
4, b	Figure & explanation	012
	High lift devices & parts	012
	Figure & explanation	02
		05
5,	Atmosphere - regions of atmosphere	03
	Five regions of atmosphere	05
	Explanation on regions / temperature range.	02
		10
6,	Helicopter - optional vehicle	02
	Figure & parts of helicopter.	03
	Working condition of helicopter.	03
	Imaginative Answers & figures.	02
		10

Signature of the Faculty

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001:2015 Certified Institution)

Department: Aeronautical Engineering | Test II
Subject : Elements of Aeronautics | Subject Code: 17AE32
Semester : III | Section: AE-I
Date: 17-10-18 | Duration: 75 Mins
Name of the Faculty: Srinath R. | Max. Marks: 30

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1. a. List all the metallic and nonmetallic components used in aircrafts. Mention the applications of the same (CO2) **05 MARKS**

   b. Assume that you are given the assignment of designing an aircraft which flies over a crucial war zone, which should attack your foe's aircraft as well as it should hold a missile of 20 tones, how will you construct it, explain your views. (CO2) **05 MARKS**

(OR)

2. a. (i)Draw and indicate the common wing forms. (ii) Enumerate the main structural parts of a wing (CO2) **05 MARKS**

   b. An aircraft manufacturer came out with a plan of manufacturing an aircraft where strength is more concerned than weight, surprisingly the aircraft was not that heavy but a bit heavier than aluminum, what would have been the material or the alloys chosen, explain the context. (CO2) **05 MARKS**

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3. Imagine that you are the pilot of an Warcraft and you are left out only with excess of fuel in your tank and unarmed, how will you escape the situation with the advanced techniques the aircraft possess. (CO3) **10 MARKS**

(OR)

4. a. With a neat figure explain how an turbo fan engine produces thrust, also explain all the working parts of basic jet engine (CO3) **07 MARKS**

   b. Explain in brief about the arrangement of cylinders in a piston engine (CO3) **03 MARKS**

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5. List out the classification of different types of propulsion system used in Aeronautical industries also explain the principle of RAM and SCRAM jet engines (CO3) **10 MARKS**

(OR)

6. Roll your views on why composite materials have gained the prime importance in aerospace industries along with its types. (CO3) **10 MARKS**

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001: 2015 Certified Institution)

Assessment: Cognitive Level Mapping Format

Course Title: **Elements of Aeronautics** Course Code: **17AE32**

Semester: **03** IA Test : **2**

Q. No.	Cognitive Level (R,U,Ap,An,E,C)	Marks	Course Outcome (CO)	Remarks
1.a	U	05	CO2	—
1.b	Ap	05	CO2	—
2.a	U	05	CO2	—
2.b	Ap	05	CO2	—
3	U	10	CO3	—
4.a	U	07	CO3	—
4.b	U	03	CO3	—
5	Ap	10	CO3	—
6	Ap	10	CO3	—
Total:		60		

Cognitive Level : R-Remember, U-Understand, Ap-Apply, An-Analyze, E-Evaluate, C-Create

Consolidated marks:

Cognitive Level	Marks for each level	% of Marks	Remarks
U	30	50	—
Ap	30	50	—

Remarks:

Approved ☑ **Not approved** ☐

Course Instructor:

Mr. Srinath R

Reason for not approval: - Nil -

Name & Signature of Scrutinizer

(Dr. G. Ramachandra)

Department of Aeronautical Engg.,
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P O Mijar, Moodabidri - 574225
Mangalore, Karnataka

14/10/18

Signature of Course Instructor

MITE

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001:2015 Certified Institution)
Badaga Mijar, Moodbidri-574225

Scheme of Evaluation of Second Internal Assessment

Sub: Elements of Aeronautics Sub code: 17AE32

Question No	Solution	Marks
1. a.	Different type of materials.	01
	Metals < Ferrous / Non-Ferrous.	01
	Types of metals and Alloys.	01
	Types of Non-metals & Use in A/c.	01
	Al and Ti Alloys.	01
		05
1 b.	Different types of A/c construction	01
	Mono Coque & Semi Monocoque	01
	Parts and Load Acting	01
	Geodesic type of construction.	02
		05
2. a.	Wing structure - Figure & parts.	01
	Parts and Loads Acting	01
	Different type of Wing structure.	01
	Cantilever, Semi Cantilever.	01
	High, Low & Mid.	01
		05

2 b.	Majorly used materials in Alc.	02
	Al & its alloys and properties	01
	Titanium - properties	01
	Ti α, β, $\alpha+\beta$ Alloys.	01
		05
3.	Thrust Augmentation Techniques.	02
	Water + Alcohol injection method and Working	03
	After burner principle & Working.	04
	Thrust eqn; $F = Ma$.	01
		10
4 a.	Turbofan engine - Figure	02
	Working principle & parts.	02
	By passing & By pass ratio.	01
	Different Cylinder Arrangement.	01
	5 type of cylinder Arrangement	01
		07
4. b.	Figure of cylinder & Working.	03
		03
5.	RAM Jet & SCRAM jet engine Figure	05
	Working principle ; Advantages & Dicadv.	05
		10
6.	Composite materials and its structure	05
	Types of composities & properties.	05.
		10

Signature of the Faculty

MITE 025

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001:2015 Certified Institution)

Department: Aeronautical Engineering
Subject : Elements of Aeronautics
Semester : III
Date: 26-11-18
Name of the Faculty: Srinath R.

Test III
Subject Code: 17AE32
Section: AE-1
Duration: 3:30-4:45pm
Max. Marks: 30

---

1. Write a short note on different types of fuel systems and navigation systems used in aircraft (CO5) **10 MARKS**

(OR)

2. Explain how hydraulic and pneumatic systems helps in safe and proper flight (CO5) **10 MARKS**

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3. a. Define Static and Dynamic stability with appropriate figures. (CO4) **05MARKS**

   b. Derive and explain in detail about the pull up and pull down maneuvers (CO4) **05 MARKS**

(OR)

4. Analyze the performance of aircraft with the help of power curves for min and max speeds of aircraft at a given altitude (CO4) **10 MARKS**

---

5. With basic figures of instrument panel in cockpit explain how instruments guides the pilot for a safe flight (CO5) **10 MARKS**

(OR)

6. With neat figures explain the effects of flaps, slats & slots on lift (CO5) **10 MARKS**

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001: 2015 Certified Institution)

Assessment: Cognitive Level Mapping Format

Course Title: **Elements of Aeronautics** Course Code: **17AE32**

Semester: **03** IA Test : **3**

Q. No.	Cognitive Level (R,U,Ap,An,E,C)	Marks	Course Outcome (CO)	Remarks
1	R	10	CO5	—
2	R	10	CO5	—
3.a	Ap	05	CO4	—
3.b	AP	05	CO4	—
4	An	10	CO4	—
5	U	10	CO5	—
6	U	10	CO5	—
Total:		**60**		

Cognitive Level : R-Remember, U-Understand, Ap-Apply, An-Analyze, E-Evaluate, C-Create

Consolidated marks:

Cognitive Level	Marks for each level	% of Marks	Remarks
R	20	33	—
U	20	33	—
Ap	10	17	—
An	10	17	—

Remarks:

Approved ☑ **Not approved** ☐

Course Instructor:

Mr. Srinath R

Reason for not approval: -Nil-

Name & Signature of Scrutinizer

(Dr. G. Punnaiah)

Department of Aeronautical Engg.,
Mangalore Institute of Technology & Engg.,
P O Mijar, Moodabidri - 574225
Mangalore, Karnataka

23/11/18

Signature of Course Instructor

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001:2015 Certified Institution)
Badaga Mijar, Moodbidri-574225

Scheme of Evaluation of Third Internal Assessment

Sub: Elements of Aeronautics Sub code: 17AE32

Question No	Solution	Marks
5	Fuel systems - Gravity feed and Pressure feed } expl'n	02
	Figurative representation	01
	Primer, Filter, Advantages & Conc.	01
	Central tank, Main tank.	01
	Navigation — Types - radio, ↓ (DME, VOR, NDB)	03
	Satellite	02
	Inertial and Combination	
		10
6	Hydraulic → High pressure system, Low pressure system	02
	Working condition of both system	02
	Diagram and types.	02
	Pneumatic - types (High, Low)	01
	Figure, Explanation →	03
		10

Question No	Solution	Marks
3, a.	Static – Stable, Unstable, Neutral.	01
	Dynamic – Phugoid, short periodic	02
	Figure	01
b.	Pull up and Pull down manuever.	01
	Derivation Part.	02
	Figure and final equation	02
		10
4.	Power curves – Figure / graph.	02
	Max Velocity & min Velocity	2
	Power required & Available equation	02
	Equation of Power required.	02
		10
5.	Instruments – Airspeed	02
	Altimeter	02
	Figures → Vertical speed. (expln)	02
	Artificial horizon.	02
	Direction indicator.	02
	Ke Turn Co-ordinator	
		10
b.	Flaps – Types – Plain, split, slot, Fowler, — slots and slats.	03
	Explanation and figure →	07
		10

Signature of the Faculty

Course: Elements of Aeronautics Course code: 17AE32

ASSIGNMENT 1 (Seminar and G.D). [10 Marks]

1, → Classification of Aircrafts based on speed / Mach No.

2, → Helicopter - Usage, Working condition, Advantages.

3, → History of Aircrafts and its development.

ASSIGNMENT 2 [10 Marks]

4 Define and explain in detail about lift and drag curves.

2, Classify drag and explain in detail about each type.

3, Define with figure about Aerodynamic Center, Aspect ratio and Diff types of Wings.

4, How Air speed are measured, Classify and define it.

Course: Elements of Aeronautics Course code: 17AE32

ASSIGNMENT 3 [10 Marks]

1) Explain in detail about Ideal and Actual Brayton Cycle.

2) With Neat figure explain the Working of Turbojet engine

3) Turbofan engine

4) Turboprop engine

5) Ramjet engine.

ASSIGNMENT 4 [10 Marks]

1) With Proper equation derive basic flight equation

2) Define Power curves, explain pull up and Pull down maneuvering

3) Numericals - Reynolds No, Lift and drag Calculation

4) Calculation of pressure co-efficient

ASSIGNMENT 5 [10 Marks]

1) Derive equation for speed of sound. for adiabatic and Isothermal Condition

2) Explain the working of Pneumatic and Hydraulic system

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

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Badaga Mijar, Moodbidri-574225

COURSE RESULTS

Course: Elements of Aeronautics.

Course Code: 17AE32 **Sem & Sec:** III

Max. IA Marks: 030 + 010 = 040 **Max. External Marks:** 060

Sl. No.	USN	NAME	T1	T2	T3	Test avg	Assign. Marks	IA Marks	External Exam Marks/ Grade	Total
1	4MT17AE001	AAMNA ASLAM	16	08	15	13	10	23	21	44
2	4MT17AE002	ABDUL ZUNAID	14	AB	12	09	10	19	21	40
3	4MT17AE003	ADARSH T SWATHIRAJ	19	14	14	16	10	26	21	47
4	4MT17AE004	AKASH KIRAGI	12	17	12	14	10	24	21	45
5	4MT17AE005	AKSHAY KAMATH	18	18	05	14	10	24	23	47
6	4MT17AE006	AMARESH WAVARE	10	AB	13	09	10	19	23	42
7	4MT17AE007	APOORVA B R	25	16	14	18	10	28	21	49
8	4MT17AE008	KOTIAN ASHISH	15	10	9	12	10	22	14	36
9	4MT17AE009	CALVIN JOSEPH	16	23	17	19	10	29	24	53
10	4MT17AE010	CHARAN J	14	10	18	14	10	24	25	49
11	4MT17AE011	DSOUZA DELSON	18	15	16	16	10	26	21	47
12	4MT17AE012	FAHAD ABDULLA	10	—	—	—	—	—	—	
13	4MT17AE013	FAYUNA	27	15	12	18	10	28	21	49
14	4MT17AE014	GOURI PRADEEP KATTI	30	20	21	24	10	34	27	61
15	4MT17AE015	INAYAT ULLAH BABA	20	23	27	23	10	33	23	56
16	4MT17AE016	JAVEED KHAJESA	18	18	15	17	10	27	21	48
17	4MT17AE017	JAYANTHA	21	13	22	19	10	29	22	51
18	4MT17AE018	KAVYASHREE C	16	14	18	16	10	26	24	50
19	4MT17AE019	KIRAN K	24	15	15	18	10	28	23	51

20	4MT17AE020	KRISHNA V SANAGIN	19	16	21	19	10	29	23	72
21	4MT17AE021	MADHUKIRAN N	09	12	8	10	10	20	16	36
22	4MT17AE022	MAHANTESH M E	14	16	23	18	10	28	24	52
23	4MT17AE023	MANJUSHREE D	24	23	28	25	10	35	27	62
24	4MT17AE024	MANJOJ KUMAR B N	20	18	18	19	10	29	17	46
25	4MT17AE025	MOHD. OBAIS	20	12	10	14	10	24	21	45
26	4MT17AE026	MOHD.THANHEEM	19	16	15	17	10	27	21	48
27	4MT17AE027	MOHD. ZAHUR ASHRAF	29	18	19	22	10	32	26	58
28	4MT17AE028	MUTTAPPA AGASAR	21	15	14	17	10	27	24	51
29	4MT17AE029	NIHAL RAJESH	19	13	15	16	10	26	23	49
30	4MT17AE030	NITHYASHREE U	19	17	17	18	10	28	21	49
31	4MT17AE031	PAVAN KUMAR E	23	07	08	13	10	23	21	44
32	4MT17AE032	PRACHI SAHU	25	23	26	24	10	34	23	57
33	4MT17AE033	PRAJWAL DSA	18	21	22	20	10	30	21	51
34	4MT17AE034	PRAKHYATH M S	21	17	28	20	10	30	23	53
35	4MT17AE035	PRATAP	17	15	24	19	10	29	21	50
36	4MT17AE036	PREETHIKA SHIFALI	23	22	18	21	10	31	24	55
37	4MT17AE037	RAHUL	24	16	24	23	10	33	23	56
38	4MT17AE038	RAHUL UPADYA R	20	13	09	14	10	24	26	50
39	4MT17AE039	RAKSHIJA J	10	24	17	17	10	27	21	48
40	4MT17AE040	RASHID AHMED	25	14	07	16	10	26	21	47
41	4MT17AE041	JERE RIDDHI VISHRAM	19	19	18	19	10	29	23	52
42	4MT17AE042	SAPALYA THILAKRAJ	26	19	21	22	10	32	24	56
43	4MT17AE043	SARIN C S	25	20	14	20	10	30	24	54
44	4MT17AE044	SHAHID FAROOQ	24	23	28	25	10	35	30	65
45	4MT17AE045	SHASHWATH	25	17	23	22	10	32	21	53
46	4MT17AE046	SHIVASHANKAR	14	16	18	16	10	26	23	49
47	4MT17AE047	SHREYA S	30	23	24	26	10	36	29	65
48	4MT17AE048	SIDHARTHA PRABHU								

49	4MT17AE049	S M SHANTH KUMAR	17	10	10	12	10	22	24	46
50	4MT17AE050	SRISHA K J	22	20	21	21	10	31	23	54
51	4MT17AE051	SUSHANTH S	18	19	23	20	10	30	23	53
52	4MT17AE052	SUSHMITHA	15	24	14	18	10	28	23	51
53	4MT17AE053	T J UMAR FAROOQ	17	12	14	14	10	24	21	45
54	4MT17AE054	TANIYA SARKAR	27	19	27	24	10	34	23	57
55	4MT17AE055	THANUSHRI H	15	18	09	14	10	24	25	49
56	4MT17AE056	VENKATESH P	20	19	20	20	10	30	21	51
57	4MT17AE057	VIKAS N	17	20	15	17	10	27	23	50
58	4MT17AE058	VINAYKUMAR	19	15	13	16	10	26	21	47
59	4MT17AE059	VISHAL	19	24	21	21	10	31	23	54
60	4MT17AE060	VISHNU KUSHAL P	21	11	15	16	10	26	21	47
61	4MT17AE061	YAJNESHA G	23	22	30	25	10	35	34	69
62	4MT17AE062	YUKTHA N GOWDA	27	25	25	26	10	36	21	57
63	4MT17AE063	ZAYAN S M	21	17	15	18	10	28	22	50
~~58~~	~~4MT16AE003~~	~~AKASH M M~~	~~17~~	~~AB~~	~~17~~		~~10~~		~~10~~	P
64	4MT17AE064	SADHWI PADIVAL	21	14	13	16	10	26	24	50
65	4MT16AE022	JUNAID	13	AB	13	9	10	19	21	40
66	4MT16AE057	OMESH KUMAR	13	04	12	10	10	20	17	37
63										
64										
65										
66										
67										
68										

RESULT ABSTRACT

Course : Elements of Aeronautics

Course Code: 17AE32 **Sem:** 03 **Sec:** –

Sl. No.	Particulars	
1	Total No. of Students	65
2	No. of Students appeared	65
3	Absentees	NIL
4	S (90-100)	NIL
5	A (80 - 89)	NIL
6	B (70 - 79)	01
7	C (60 - 69)	04
8	D (45-59)	51
9	E (40 - 44)	05
10	% of Pass	94%

No: of students failed (F) : 4

Course Topper Name : KRISHNA V SANGAIN

USN: 4MT17AE020

Signature of the Faculty

Department of Aeronautical Engg.,
Mangalore Institute of Technology & Engg.,
P.O. Mijar, Moodabidri - 574225
Mangalore, Karnataka

4. Program Assessment Committee (PAC)
&
Department Advisory Board (DAB) Meeting

Proceedings and sample documents of PAC and DAB meeting for the Department of Aeronautical Engineering for the Academic year 2018-19.

Department of Aeronautical Engineering

Programme Assessment Committee
Meeting-1

Odd semester 2018-19

MITE

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MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

(A unit of Rajalaxmi Education Trust®, Mangalore-575001)

Department of Aeronautical Engineering

Date: 03/07/2018

MEETING NOTICE

Subject: Meeting of Program Assessment Committee (PAC)

With reference to the above subject, meeting of the Program Assessment Committee for Aeronautical Engineering is convened on 04/07/2018 at 2:00 PM in the HoD chamber to discuss on the following agenda:

- Discussion of Department Vision, Mission and PSOs.
- Discussion on the assessment procedures and attainment process of POs/PSOs to be followed for the upcoming academic year 2018-19.
- Discussion the roles and responsibilities of stream and course coordinators.
- Preparation of set of academic procedures document for DAB approval.
- Any other academic matters with the permission of chairman.

The following members are requested to make it convenient to attend the Program Assessment Committee meeting.

Name of the Faculty	*Designation*	*Role in PAC*
Dr. G. Purushotham	Head of the Department	Chairman
Mr. Yathin K. L	Sr. Asst. Professor	Member
Mr. N Tamil Selvam	Asst. Professor	Member
Mr. Sujesh Kumar	Asst. Professor	Member
Mr. Srinath R	Asst. Professor	Member
Mr. Praneeth H R	Asst. Professor	Member

HoD 3/7/2018

Dept. of Aeronautical Engineering

Head of the Department of
Aeronautical Engineering,
Mangalore Institute of Technology & Engg.,
P O Mijar, Moodabidri - 574225
Mangalore, Karnataka

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MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

(A unit of Rajalaxmi Education Trust®, Mangalore-575001)

Department of Aeronautical Engineering

Minutes of Program Assessment Committee (PAC) Meeting

Venue:	HOD Chamber
Date:	04/07/2018
Time:	3:00 PM to 5:00 PM

Agenda:

- Discussion of Department Vision, Mission and PSOs.
- Discussion on the assessment procedures and attainment process of POs and PSOs to be followed for the upcoming academic year 2018-19.
- Discussion the roles and responsibilities of stream and course coordinators.
- Preparation of set of academic procedures document for DAB approval.
- Any other academic matters with the permission of chairman.

Proceedings:

The following points were discussed in the PAC meeting held at HOD Chamber, MITE, on04/07/2018.

- ✓ The vision and Mission of the department were discussed and same statements were retained with no further changes is forwarded to DAB for approval.
- ✓ The courses and syllabus for the upcoming year were discussed and the faculties were allotted with their respective choice of course based on their stream of degrees and expertise.
- ✓ The difficulties in the new scheme (15 Scheme, 17 Scheme, 18 scheme) introduced by VTU were discussed and the highlights of each modules should be discussed by stream and course coordinators.
- ✓ Changes to be incorporated for 2017 scheme for II year Students were discussed and assessment methods also defined.
- ✓ The courses allotted to each faculty based on the preferences given by the faculties and the seniority level.
- ✓ Course Coordinators and stream coordinators were allotted based on the experience.
- ✓ Stream coordinators were handed over with the responsibility of conducting the official meeting with course coordinators once in a month or two regarding the process of attainment of COs with PO/PSOs.
- ✓ Course coordinators should prepare the course outcomes of their respective courses of new scheme as well as old scheme if revised and present it to stream coordinators regarding the attainment level in accordance to NBA.
- ✓ Stream coordinator is responsible for CO-PO attainments and should be processed to HOD before the commencement of the semester.

- ✓ Course plans and materials for the courses should be prepared well in advance and to be discussed with senior members / HOD for the further improvements.
- ✓ Previous year CO-PO attainment was discussed and the files regarding the attainment was reviewed and corrected.
- ✓ Discussions regarding the PO attainment and the process to reach the attainment were discussed.
- ✓ Importance of PEO should be delivered to the students before the commencement of the academic year.
- ✓ SAR Committee was formed and the faculties were assigned with individual criteria.
- ✓ The Criteria Coordinator should be held responsible for the collection of data and documents for their respective criteria.
- ✓ Collection of data for NBA should be filed and approved by the respective Incharge.
- ✓ CO-PO/PSO matrix to be prepared, curriculum gaps are identified and the proposed actions are to be forwarded for DAB approval by the NBA Coordinator.
- ✓ Set of academic procedure and assessment tools for the academic year 2018-19 is prepared and forwarded to DAB for approval.
- ✓ Implement the industry oriented programs like internships, workshops, trainings and technical talks to be organized for students.

The Following Faculty members were present in the Meeting:

Name of the Faculty	*Role in PAC*	*Signature*
Dr. G. Purushotham	Chairman	
Mr. Yathin K. L	Member	
Mr. N Tamil Selvam	Member	
Mr. Sujesh Kumar	Member	
Mr. Srinath R	Member	
Mr. Praneeth H R	Member	

4/7/2018

PAC Chairman

Dept. of Aeronautical Engineering

Head of the Department of
Aeronautical Engineering,
Mangalore Institute of Technology & Engg.,
P.O. Mijar, Moodabidri - 574225
Mangalore, Karnataka

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(A unit of Rajalaxmi Education Trust®, Mangalore-575001)

Department of Aeronautical Engineering

Date: 04/07/2018

Stream Coordinators for the Academic Year 2018-19

Name of Faculty	***Name of the Stream***
Mr. Ajith Kumar	Aircraft Structures
Mr. Sujesh Kumar	Aircraft Propulsion
Mr. Srinath R	Aerodynamics
Mr. Yathin K L	Flight control and Avionics
Dr. G. Purushotham	Materials/ Management

Responsibilities of Stream Coordinators:

- Five Course Outcomes (one CO for each module) should be framed for each course of (2015 and 2017 scheme) by the course coordinator and has to be approved by the stream coordinator.
- The respective Stream coordinators conduct evaluation sessions with each individual course coordinators for identifying and evaluate extent of compliance of the course with POs and PSOs.
- The Stream coordinators conduct discussion with the respective course handling course coordinator to develop the CO's and to establish the correlation between course outcomes with POs and PSOs.
- Discuss with course coordinator on identifying curriculum gaps and proposes the action to fulfil the curriculum gap by analysing course POs & PSOs mapping matrix.
- Any other matters/proposals for the betterment of course delivery of the respective streams to be brought to the notice of the HoD/ NBA coordinator for further actions.

4/7/2018

PAC Chairman

Aeronautical Engineering

Head of the Department of
Aeronautical Engineering,
Mangalore Institute of Technology & Engg.
P.O. Moodabidri 574225

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MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

(A unit of Rajalaxmi Education Trust®, Mangalore-575001)

Department of Aeronautical Engineering

Date: 05/07/2018

The Programme Assessment committee has assigned the stream coordinator in-charges for the Academic year 2018-2019 as listed in the below table. All steam coordinators are hereby requested to cooperate and do the needful.

Stream Coordinators:

Name of Faculty	***Name of the Stream***	***Signature***
Mr. Ajith Kumar	Aircraft Structures	
Mr. Sujesh Kumar	Aircraft Propulsion	
Mr. Srinath R	Aerodynamics	
Mr. Yathin K L	Flight control and Avionics	
Dr. G. Purushotham	Materials/ Management	

Responsibilities of Stream Coordinators:

- Five Course Outcomes (one CO for each module) should be framed for each course of (2015 and 2017 scheme) by the course coordinator and has to be approved by the stream coordinator.
- The respective Stream coordinators conduct evaluation sessions with each individual course coordinators for identifying and evaluate extent of compliance of the course with POs and PSOs.
- The Stream coordinators conduct discussion with the respective course handling course coordinator to develop the CO's and to establish the correlation between course outcomes with POs and PSOs.
- Discuss with course coordinator on identifying curriculum gaps and proposes the action to fulfil the curriculum gap by analysing course POs & PSOs mapping matrix.
- Any other matters/proposals for the betterment of course delivery of the respective streams to be brought to the notice of the HoD/ NBA coordinator for further actions.

HOD 5/7/2018

Dept. of Aeronautical Engineering
Head of the Department of
Aeronautical Engineering,
Mangalore Institute of Technology & Engg
P.O. Moodabidri
Mangalore-574225

Department of Aeronautical Engineering

DAB Documents

2018-19

Department of Aeronautical Engineering

Date: 02/07/2018

Department Advisory Board (DAB) Constituted for the Academic Year 2018-19

Sl. No.	Name	Designation	Role in DAB
1.	Dr. G. Purushotham	Head of the Department	Chairman
2.	Dr. G L Easwara Prasad	Head of the Institution	Member
3.	Mr. Sujesh Kumar	Assistant Professor	Member
4.	Mr. Yathin K L	Sr. Assistant Professor	Member
5.	Dr. Ramesh M R	Academic Expert, Professor, Department of Mechanical Engineering, NITK Surathkal	Member
6.	Mr. Vedaprakash Saralaya	Industry Expert Head , Samraksha Integrated Security Solutions, Mangalore	Member
7.	Mr. Srinath R	Assistant Professor/NBA Coordinator	Member
8.	Mr. Praneeth H R	Assistant Professor	Member
9.	Mr. Amar Alva	Alumni (2013-17)	Member
10.	Mr. Akshay Udupa	Alumni (2014-18)	Member

HoD 2/7/2018

Dept. of Aeronautical Engineering
Head of the Department of
Aeronautical Engineering,
Mangalore Institute of Technology & Engg.
P.O. Mijar, Moodabidri - 574225
Mangalore, Karnataka

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

(A unit of Rajalaxmi Education Trust®, Mangalore-575001)

Department of Aeronautical Engineering

Date: 06/07/2018

MEETING NOTICE

Subject: Meeting of Department Advisory Board (DAB) for the academic year 2018-19

With reference to the above subject, meeting of the Department Advisory Board for Aeronautical Engineering is convened on 19/07/2018 at 9:00 AM to discuss on the following agenda:

- Brief deliberation by Principal on Institution achievements and activities.
- Department presentation by HoD.
- Discussion on modification/revision of Vision, Mission, PEO, PSOs if any.
- Review of CO-PO/PSO mapping.
- Curriculum gap Identification and propose action plan.
- Attainment of POs/PSOs of previous academic year.
- Approval of set of Assessment tools and academic procedures for the academic year 2018-19
- Any other academic matter with the permission of the chairman.

Meeting Date: 19/07/2018 **Time:** 09:00 AM to 1:00 PM **Venue:** Conference Hall-II, MITE

On behalf of Department of Aeronautical Engineering, I would like to invite you to Department Advisory Board meeting. Your involvement in this process provides an opportunity to discuss, give your valuable inputs for the continuous improvement and growth of the Department of Aeronautical Engineering to achieve the academic excellence.

The following are the chairman and members of the Department Advisory Board.

Sl. No	Name	Designation	Role in DAB
1.	Dr. G. Purushotham	Head of the Department	Chairman
2.	Dr. G L Easwara Prasad	Head of the Institution	Member
3.	Dr. Ramesh M R	Academic Expert	Member
4.	Mr. Vedaprakash Saralaya	Industry Expert	Member
5.	Mr. Yathin K L	Sr. Assistant Professor	Member
6.	Mr. Srinath R	Assistant Professor/NBA Coordinator	Member
7.	Mr. Praneeth H R	Assistant Professor	Member
8.	Mr. Sujesh Kumar	Assistant Professor	Member
9.	Mr. Amar Alva	Alumni (2013-17)	Member
10.	Mr. Akshay Udupa	Alumni (2014-18)	Member

We look forward to your presence in the meeting.

HoD 6/7/2018

Dept. of Aeronautical Engineering
Head of the Department of
Aeronautical Engineering,
Mangalore Institute of Technology & Engg.
P.O. Mijar, Moodabidri - 574225
Mangalore, Karnataka

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

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Department of Aeronautical Engineering

Date: 06/07/2018

To,

Dr. Ramesh M R,
Professor, Department of Mechanical Engineering,
NITK Surathkal, Mangalore.

Respected Sir,

Subject: **Meeting of Department Advisory Board (DAB) for the Academic Year 2018-19**

With reference to the above subject, meeting of the Department Advisory Board for Aeronautical Engineering is convened on **19/07/2018** to discuss on the following agenda:

- Brief deliberation by Principal on Institution achievements and activities.
- Department presentation by HoD.
- Discussion on modification/revision of Vision, Mission, PEO & PSOs if any.
- Review of CO-PO/PSO mapping.
- Curriculum gap Identification and propose action plan.
- Attainment of POs/PSOs of previous academic year.
- Approval of set of Assessment tools and academic procedures for the academic year 2018-19
- Any other academic matter with the permission of the chairman.

Time: 09:00 AM to 1:00 PM **Venue:** Conference Hall-II, MITE

On behalf of Department of Aeronautical Engineering, I would like to invite you to Department Advisory Board meeting. Your involvement in this process provides an opportunity to discuss, give your valuable inputs for the continuous improvement and growth of the Department of Aeronautical Engineering to achieve academic excellence.

The acceptance letter for the meeting is attached along with this invitation. Please confirm your presence latest by **13 /07/2018.** I am looking forward to your presence in the meeting.

Sincerely,

HoD, 6/7/2018

Dept. of Aeronautical Engineering

Head of the Department of
Aeronautical Engineering,
Mangalore Institute of Technology & Engg.,
P.O. Mijar, Moodabidri - 574225
Mangalore, Karnataka

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ACCEPTANCE LETTER

Dear Sir/ Madam,

I hereby **Accept / Do not Accept** your invitation for the Department advisory board meeting on **19/07/2018**

Please select to confirm your presence

☑ **YES** ☐ **NO**

Reason for not attending (if any)

Signature of the invitee

(Dr. Ramesh M.R.)

Please send the acceptance letter to the below mentioned address or bring the same during your visit to the College / Meeting.

Head of the department,

Department of Aeronautical Engineering,

Mangalore Institute of Technology and Engineering,

Moodabidri-574225

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

(A unit of Rajalaxmi Education Trust®, Mangalore-575001)

Department of Aeronautical Engineering

Minutes of Department Advisory Board Meeting for the Academic Year 2018-19

Date: 19/07/2018 | ***Time:*** *9:00AM-1:00PM* | **Venue:** *Conference Hall-II, MITE*

Agenda

- Brief deliberation by principal on Institution achievements and activities.
- Department presentation by HoD.
- Discussion on modification/revision of vision, mission, PEOs and PSOs if any.
- Review of CO-PO/PSO mapping.
- Curriculum gap Identification and propose action plan.
- Attainment of POs/PSOs of previous academic year.
- Approval of set of Assessment tools and academic procedures for the academic year 2018-19
- Any other academic matter with the permission of the chairman.

Proceedings:

✓ The DAB committee members are welcomed by the Principal and he also gave a brief deliberation on the activities conducted and achievements of the Institution.

✓ Head of the Department presented the annual report for the previous academic year and highlighted the academic achievements/Ranks, Results, KSCST sponsored projects and other achievements by students. He also presented the activities conducted for students such as technical talks, workshops, industrial visits and internships details for the previous academic year.

✓ Head of the Department expressed his views on the Vision, Mission, PEOs and PSOs approved by PAC and stated that they are relevant and asked for further modification if any to be suggested by members of DAB. DAB members shared their opinions and queries over the statements of Vision, Mission, PEOs and PSOs of the department and Board has collectively agreed to approve the same statements for the academic year 2018-19.

- ✓ NBA Coordinator presented the CO-PO/PSO Matrix for the academic year 2018-19 and DAB reviewed the documents and corrective actions are communicated.

- ✓ Curriculum gap was identified based on the CO-PO/PSO Mapping average values and action plan for filing the gap was discussed. Dr. Ramesh M R and Mr. Vedaprakash Saralaya insisted to implement the industry oriented programs like internships, workshops, trainings and technical talks to fill the curriculum gaps.

- ✓ Attainment of POs/PSOs of previous academic year was presented by NBA Coordinator. DAB suggested setting higher target level and aiming at enhanced attainments of POs/PSOs.

- ✓ The committee has reviewed assessment tools and the set of procedures forwarded by PAC for the academic year 2018-19 is approved by DAB and queries raised by the DAB members were resolved. Following contents are mentioned in the set of procedures to be followed for both 15 and 17 schemes,
  - Internal assessment marks allotment and the maximum weightage of marks given in each schemes.
  - Internal Test assessment procedure to be followed and the target level for various schemes.
  - Finalization of Assignment assessment procedures for different schemes.
  - Percentage allocation for Summative and Formative assessment.
  - Laboratory Conduction procedure and its assessment techniques.
  - Seminars and final year projects assessment procedures.
  - Finalization of number of phases for project assessments and maximum weightage of marks.
  - Direct Assessment Calculations for Semester end Examination
  - Indirect assessment calculations.
- ✓ Dr. Ramesh M R emphasized on research activities in the department and highlighted the importance of research publications.
- ✓ Mr. Vedaprakash Saralaya suggested to implement innovative teaching methods such as flipped class, project based learning and industry oriented trainings.
- ✓ Alumni Mr. Amar Alva suggested to conduct alumni interaction with students to share their thoughts on job perspectives and career guidance.

- ✓ It is also been advised by DAB that PAC should review the assessments and outcomes attained by the end of every semester.
- ✓ By end of the discussion, it was concluded to follow the attached assessment tools and procedures to be followed for Internal/ Assignment/ Project/ Seminar Assessment for the current academic year 2018-19.

Head of the Department concluded the meeting with a vote of thanks and the external members were taken for a campus visit.

The undersigned do hereby declare that as a result of an official action with effect to meeting conducted on 19/07/2018 the Statements and procedures to be followed, attached along (approved by PAC) will be practiced for the academic year 2018-19.

Signature of the Department Advisory Board Members

Sl No.	Name	Designation	Signature
1.	Dr. G. Purushotham	Head of the Department	
2.	Dr. G L Easwara Prasad	Head of the Institution	
3.	Mr. Sujesh Kumar	Assistant Professor	
4.	Mr. Yathin K L	Sr. Assistant Professor/NBA Coordinator	
5.	Dr. Ramesh M R	Academic Expert	
6.	Mr. Vedaprakash Saralaya	Industry Expert	
7.	Mr. Srinath R	Assistant Professor/NBA Coordinator	
8.	Mr. Praneeth H R	Assistant Professor	
9.	Mr. Amar Alva	Alumni (2013-17)	
10.	Mr. Akshay Udupa	Alumni (2014-18)	

Table: Program level CO-PO matrix of all courses including first year courses for the Academic Year 2018-19

Subject Code	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
18MAT11	C101	3.00	2.00	-	-	-	-	-	-	-	-	-	-	-	-
18PHY12	C102	3.00	1.40	-	-	-	-	-	-	-	-	-	-	-	-
18ELE13	C103	3.00	3.00	-	-	-	-	-	-	-	-	-	-	-	-
18CIV14	C104	3.00	3.00	-	-	-	3.00	-	-	-	-	-	-	-	-
18EGDL15	C105	3.00	-	-	-	3.00	-	-	-	-	1.00	-	-	-	-
18PHYL16	C106	3.00	1.00	-	-	-	-	-	-	1.00	-	-	-	-	-
18ELEL17	C107	3.00	3.00	-	-	-	-	-	-	-	-	-	-	-	-
18EGH18	C108	-	-	-	-	-	-	-	-	-	3.00	-	-	-	-
18MAT21	C109	3.00	2.00	-	-	-	-	-	-	-	-	-	-	-	-
18CHE12	C110	3.00	1.00	-	-	-	-	-	-	-	-	-	-	-	-
18CPS13	C111	3.00	2.00	1.00	-	-	-	-	-	-	-	-	-	-	-
18ELN14	C112	3.00	2.80	-	-	-	-	-	-	-	-	-	-	-	-
18ME15	C113	3.00	-	-	-	-	1.00	1.00	-	-	-	-	-	-	-
18CPL17	C114	3.00	2.00	-	-	-	-	-	-	-	-	-	-	-	-
18CHEL16	C115	3.00	-	1.00	-	-	-	-	-	-	-	-	-	-	-
17MAT31	C201	3.00	2.00	-	-	-	-	-	-	-	-	-	-	-	-
17AE32	C202	2.40	2.00	2.00	-	-	2.00	-	-	-	-	-	-	2.20	2.00
17AE33	C203	2.80	2.00	2.60	1.00	-	-	-	-	-	-	-	-	1.00	-
17AE34	C204	3.00	1.80	1.00	-	-	-	-	-	-	-	-	-	1.80	-
17AE35	C205	2.80	2.40	1.80	1.33	-	-	1.00	-	-	-	-	1.50	1.60	1.00
17AE36	C206	3.00	-	-	-	-	-	-	-	-	-	-	2.00	-	1.00
17AEL37A	C207	3.00	-	-	-	-	-	-	-	1.75	-	-	-	-	1.75
17AE37	C208	2.00	-	-	-	-	-	-	1.00	3.00	-	-	-	1.50	1.00
17MAT 41	C209	3.00	2.00	-	-	-	-	-	-	-	-	-	-	-	-
17AE47	C210	2.20	2.40	1.33	1.33	-	-	-	-	-	-	-	-	2.60	2.00
17AE43	C211	3.00	2.50	-	-	-	1.20	1.00	-	-	-	-	-	2.60	-
17AE44	C212	3.00	2.00	1.00	1.00	-	-	-	-	-	-	-	-	1.60	-
17AE45	C213	3.00	-	-	-	-	-	-	-	-	1.00	-	2.00	3.00	-
17AE46	C214	3.00	1.20	-	2.00	1.20	-	-	-	-	-	-	-	1.00	-
17AEL47A	C215	3.00	-	-	-	-	-	-	1.00	3.00	-	-	1.25	2.00	-
17AE48	C216	2.33	2.33	-	-	1.66	-	-	-	2.00	-	-	-	-	2.00
15AE51	C301	2.60	-	-	-	-	-	-	2.00	-	2.25	2.60	2.00	1.00	1.60
15AE52	C302	2.40	2.00	2.00	1.00	-	2.00	1.00	-	-	2.00	-	1.75	1.80	-

Department of Aeronautical Engineering

15AE53	C303	3.00	2.00	1.67	1.00	2.00	-	-	-	-	-	-	-	1.00	-
15AE54	C304	3.00	2.00	1.00	-	-	-	-	-	-	-	-	-	1.80	-
15AE551	C305	3.00	-	-	3.00	-	2.00	2.33	-	-	-	-	-	1.67	1.50
15AE563	C306	2.40	-	-	-	-	-	2.40	-	-	2.25	-	1.75	-	2.40
15AEL57	C307	2.25	2.00	-	-	-	-	-	1.50	1.75	-	-	-	-	2.25
15AEL58	C308	3.00	2.00	-	-	-	-	-	1.25	2.50	-	-	-	1.25	-
15AE61	C309	2.80	2.00	-	1.50	-	-	-	-	-	-	-	-	2.00	1.00
15AE62	C310	3.00	1.20	-	2.00	1.20	-	-	-	-	-	-	-	1.00	-
15AE63	C311	3.00	2.00	1.00	-	-	-	-	-	-	-	-	1.00	3.00	-
15AE64	C312	2.80	1.40	1.00	1.00	-	-	-	-	-	-	-	-	2.00	2.00
15AE65	C313	3.00	2.00	1.00	-	1.00	-	-	-	-	-	-	-	1.80	-
15AE66	C314A	3.00	1.00	1.00	-	-	1.00	-	-	-	1.00	-	1.40	3.00	-
15AEL67	C315	3.00	-	-	1.00	-	-	-	1.00	3.00	-	-	-	3.00	-
15AEL68	C316	3.00	-	-	-	-	-	-	1.00	1.00	-	-	1.00	1.00	1.00
15AE71	C401	2.20	3.00	-	-	1.00	-	-	-	-	-	-	-	1.00	1.00
15AE72	C402	2.00	3.00	1.75	2.00	-	-	-	-	-	-	-	-	1.20	1.40
15AE73	C403	3.00	2.00	1.00	1.00	-	-	-	-	-	-	-	-	3.00	-
15AE743	C404	3.00	1.00	3.00	-	-	-	-	-	-	-	-	-	1.00	-
15AE752	C405	2.40	1.40	-	-	1.33	-	-	1.00	-	-	-	-	2.20	2.60
15AEL76	C406	1.25	-	-	2.75	3.00	-	-	1.25	-	-	-	-	1.25	1.00
15AEL77	C407	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15AEP78	C408	2.00	3.00	3.00	3.00	3.00	1.50	1.50	3.00	1.60	3.00	3.00	1.00	2.50	3.00
15AE81	C409	2.20	-	-	-	2.00	1.75	1.20	-	-	-	-	1.00	2.80	2.00
15AE82	C410	3.00	-	2.50	-	-	-	-	-	-	-	-	-	2.00	1.00
15AE831	C411	3.00	-	-	2.50	-	-	-	1.80	-	-	-	-	1.40	1.50
15AE84	C412	2.00	2.00	1.00	1.00	2.00	2.00	1.00	2.00	2.00	3.00	2.00	2.00	2.00	3.00
15AEP85	C413	2.00	3.00	3.00	3.00	3.00	1.50	1.50	3.00	1.60	3.00	3.00	1.00	2.50	3.00
15AES86	C414	2.00	-	-	-	3.00	3.00	3.00	3.00	3.00	3.00	-	3.00	1.50	3.00
Sum (S)		**161.83**	**83.83**	**35.65**	**32.41**	**28.39**	**21.95**	**16.93**	**23.80**	**27.20**	**24.50**	**10.60**	**23.65**	**70.57**	**45.00**
No of Courses mapped (T)		**59**	**40**	**22**	**19**	**14**	**12**	**11**	**14**	**13**	**11**	**4**	**15**	**38**	**25**
Avg. (A)		**2.74**	**2.04**	**1.62**	**1.71**	**2.03**	**1.83**	**1.54**	**1.70**	**2.09**	**2.23**	**2.65**	**1.58**	**1.9**	**1.80**
Gap in Percentage(G)				**9.97**	**5.23**			**14.49**	**5.56**				**12.41**		

Table: Identification of Curriculum Gaps for the Academic Year 2018-19(CAY)

Gap	PO/PSO	Avg(A)/ Sum(S)	Gap (G) in %	Action Planned for identified Gaps
Gap1	**PO3:** Design/development of solutions	**1.62**	**9.97**	Technical Talks/ Projects
Gap 2	**PO4:** Conduct Investigation of complex problems	**1.71**	**5.23**	Invited Lectures/ Projects
Gap 3	**PO7:** Environment and Sustainability	**1.54**	**14.49**	Guest lecture
Gap 4	**PO8:** Ethics	**1.70**	**5.56**	Internship/ Guest lectures
Gap 5	**P12:** Life-long Learning	**1.58**	**12.41**	Invited lecture

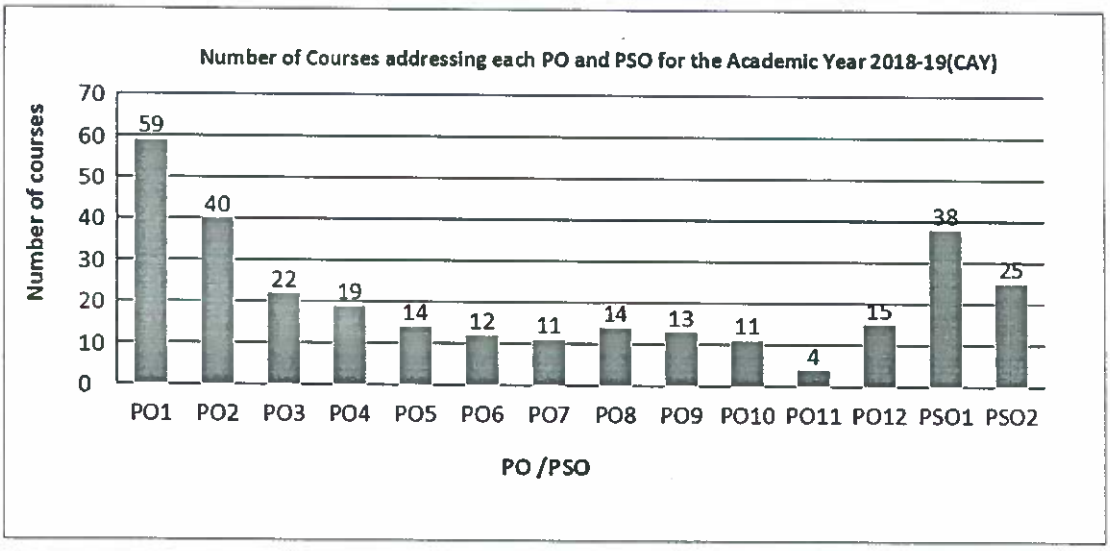

Figure: Number of courses mapped against POs and PSOs for the academic year 2018-19

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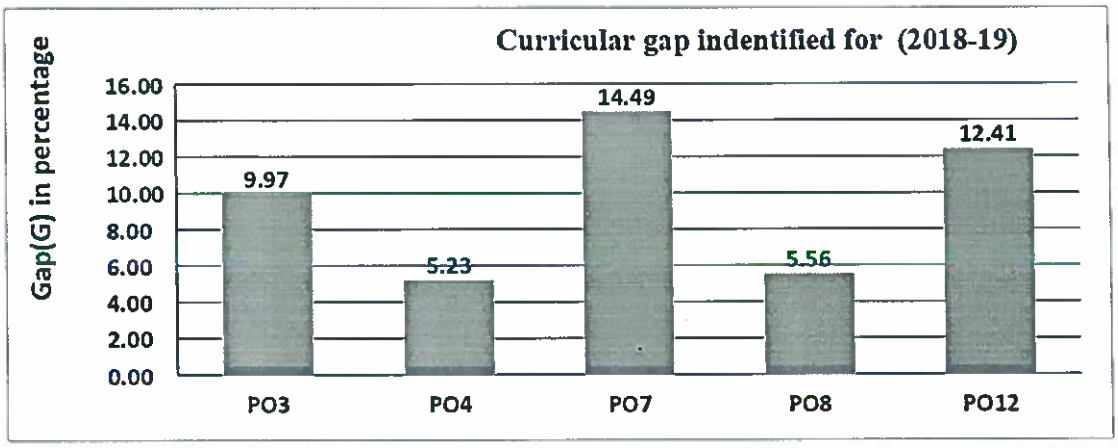

Figure: Curricular gap identified for the academic year 2018-19

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Aeronautical Engineering,
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Department of Aeronautical Engineering

Set of Procedures and Assessment Tools for the Academic Year 2018-19 Approved By DAB

Mangalore Institute of Technology & Engineering

Department of Aeronautical Engineering

DAB approved Vision, Mission, PEO, PSO statements, Assessment tools and Academic procedures for the academic year 2018-19 as on 19/07/2018

VISION

"To be recognized as an innovative leader in Aeronautical Engineering through excellence in education by imparting the values of research and developments in the upcoming fields of aeronautics"

MISSION

- *The Department imparts the technical knowledge, practical skills, entrepreneurial skill to students and the channelized guiding in the varied activities with the aim of transforming the graduates into able engineers of tomorrow.*
- *To develop each student with an ability and passion to learn and effective implementation with a strong foundation in skills that are relevant to the challenging world*
- *To provide students with strong concepts of their core subjects and an application-oriented overview in their stipulated courses.*

Program Educational Objectives (PEOs)

After successful completion of program,

PEO-1: *Graduates will have the scientific and* ***technical knowledge*** *to have successful career in Aeronautical industry.*

PEO-2: *Graduates will have competency to* ***analyze challenges and advancements in the focus areas*** *of Propulsion, Structures, Aerodynamics, Flight Mechanics and Avionics.*

PEO-3: *Graduates will be* ***motivated and confident to pursue advanced education, research and development*** *and other creative efforts in aeronautical engineering and allied areas.*

PEO-4*: Graduates will have* ***higher order thinking and leadership skills*** *to become technology leaders of tomorrow.*

Program Specific Outcomes (PSOs)

PSO-1: *Graduates will excel in their* ***professional career in Aeronautical industry and research with highest professional and ethical standards*** *to their activities by acquiring knowledge in basic engineering, mathematics, science and Aeronautical engineering.*

PSO-2: *Graduates will exhibit* ***professionalism, team work in their chosen profession and adapt to current trends,***

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Department of Aeronautical Engineering

Internal Test Procedure

The maximum weightage of marks given different CBCS scheme as follows:

- Choice Based Credit System (2015 scheme): There shall be maximum of 20 marks for internal assessment.
- Choice Based Credit System (2017 Scheme): There shall be maximum of 40 marks for internal assessment.
- On the fulfilment three IAs, (in case of 2015 scheme) the final marks will be figured based on the average of the best of two IA.
- In the case of 2017 scheme, the final marks will be the average of three Internal assessments conducted.
- For 2015 scheme, IA will be conducted for 30 marks and later the same will be converted to 15 marks where the Assignment, Module test, Quiz etc.., comprising of 5 marks adds up to make it to total of 20 marks.
- For 2017 scheme IA will be conducted for 30 marks, where the Assignment, Module test, Quiz etc.., comprising of 10 marks adds up to make it to total of 40 marks.

Internal Assessment Tool

- It has been decided at the department level to set the target level for all three IA as 60% approved by Program Assessment Committee.
- Target level for each question in all three IA will be calculated by the course Instructors.
- Mark scored is compared with the target marks for each question.
- If the attempted question reached the target level, then mark as "3".
- If the attempted question does not reach the target level, then marked as "2 or 1".
- If a student does not attend any question pertaining to particular CO or absent for the IA, then mark as "0".
- Count the number of "3", for each course outcome.
- CO attainment of the respective question has been calculated as shown below,
- IA Test Class Average= Number of '3's/(Total number of actual students present or attempting the particular CO)
- If percentage of students scored above
- Class Average in CIA>=60% Attainment level is 3
- Else if <60% but >= 50% Attainment level is 2
- Else if <50% but >= 40% Attainment level is 1
- Else Attainment level is 0

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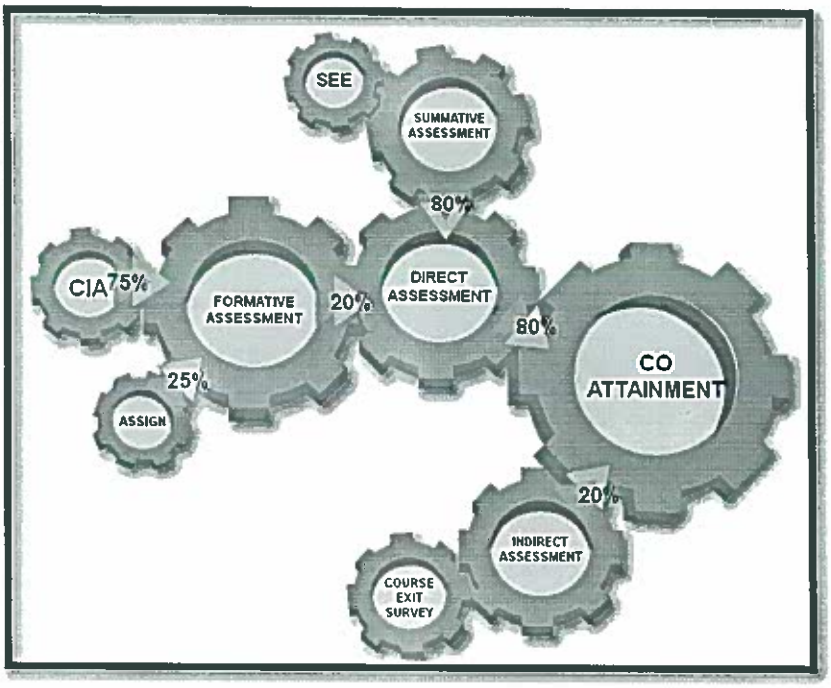
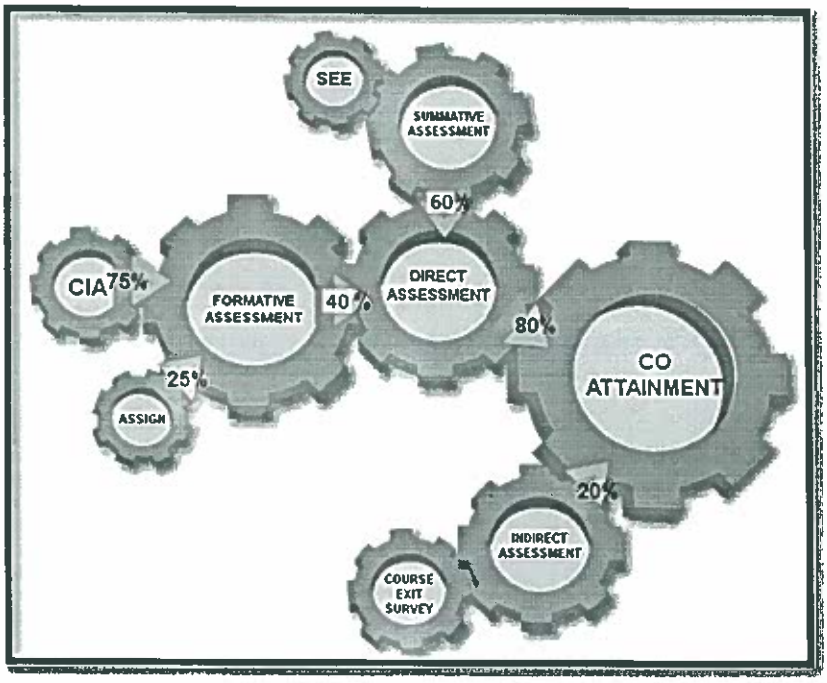


CO Attainment Calculation Procedure –CBCS 2015 scheme



CO Attainment Calculation Procedure –CBCS 2017 scheme

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Laboratory Marks Distributions

Continuous evaluation of marks for laboratory experiments is categorized based on the scheme released by university as follows.

Scheme	Conduction Marks	Record Marks	Viva Voce	Internal Assessment	Total
15	04	04	04	8	20
17	10	10	4	16	40

Laboratory Tests

Laboratory in-charge faculties will follow rubrics, which is set by the department for evaluation of laboratory courses.

Laboratory Continuous Assessment Procedure

- It has been decided at the department level to set the target level for all the lab evaluation as 60%.
- Target level for each experiment will be calculated by the course instructors.
- Marks scored are compared with the target marks for each experiment.
  - If the respective experiment marks reached the target level, then marks are "3".
  - If the respective experiment marks have not reached the target level, then marks are "2" or "1".
  - If a student is absent for the experiment, and then marks are "0".
- Count the number of "3" for each course outcome.
- CO attainment of the respective question has been calculated as shown below.

  Lab continuous assessment attainment average = Number of '3's / (Total number of students attempting the particular CO)

- If the percentage of students scored above the class average then the attainment is calculated as given below;
  - Lab continuous assessment attainment average>=**60%,** Attainment level is 3
  - Else if <60% but >=50%, Attainment level is 2
  - Else if <50% but >=40%, Attainment level is 1
  - Else attainment level is 0

Lab IA Test Procedure

It has been decided at the department level to set the target level for lab test based on the class average of lab test obtained marks in the respective course.

If the percentage of student's marks is above class average then the attainment is calculated as given below;

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- Lab test attainment average >=60%, Attainment level is 3
- Else if <60% but >=50%, Attainment level is 2
- Else if <50% but >=40%, Attainment level is 1
- Else attainment level is 0

Semester End Examination (SEE) Attainment

- It has been decided to set target level for Semester End Examination (SEE) based on the class average of university SEE obtained marks in the respective course, approved by Program Assessment Committee (PAC).
- The department has to access the marks obtained by each student in the course. The percentage of students scored above the class average mark in the SEE is considered for attainment calculation.
- If percentage of students scored above class Average in **Semester End Examination (SEE)** is
  - ≥60% Attainment level is 3
  - Else if <60% but ≥50% Attainment level is 2
  - Else if <50% but ≥40% Attainment level is 1
  - Else Attainment level is 0

In case of Choice Based Credit System (CBCS) scheme, the result on individual subject in SEE is available as grade letters such as S^+ for marks ≥90%, S for marks <90% and ≥80%, A for marks <80% and ≥70%, B for marks <70 and ≥60%, C for marks <60% and ≥50%, D for marks <50% and ≥45%, E for marks <45% and ≥40% and F for fail (<40%).

In this case the percentage of students scored above 60% the average grade values are extracted and subtracted with obtained CIA of the respective subjects.

- If percentage of students scored above class Average in **SEMESTER END EXAMINATIONS (SEE) CLASS AVERAGE**
  - ≥60% Attainment level is 3
  - Else if <60% but ≥50% Attainment level is 2
  - Else if <50% but ≥40% Attainment level is 1
  - Else Attainment level is 0

Seminar Work Evaluation:

Marks Allotment for Seminar Presentation (100 MARKS)	
Evaluation Parameter	*Maximum Marks*
Topic And Background Survey	20
Presentation Skills	20
Viva	20
Seminar Report	40

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Project Evaluation Procedure 2018-19

valuation	Marks Allotted as per VTU curriculum (2010 scheme)	Phases of evaluation
Internal	100	• Problem definition • Literature study and objectives • Progress with respect to methodology • Data collection and implementation • Data Analysis • Results and discussion • Overall Execution of the project • Project Documentation
External	100	Project Viva-Voce

Evaluation	Marks Allotted as per VTU curriculum (2015 scheme)	Phases of evaluation
Internal	200	• Problem definition • Literature study and objectives • Progress with respect to methodology • Data collection and implementation • Data analysis • Results and Discussion • Overall Execution of the project • Project Documentation
External	100	Project Viva-Voce

Evaluation	Marks Allotted as per VTU curriculum (2017 scheme)	Phases of evaluation
Internal	200	• Problem definition • Literature study and objectives • Progress with respect to methodology • Data collection and implementation • Data analysis • Results and Discussion • Overall Execution of the project • Project Documentation
External	100	Project Viva-Voce

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Department of Aeronautical Engineering

Marks Allotment for Project Work(2010 Scheme)			
PHASE	**Evaluation Parameter**	**Evaluator**	**Maximum Marks(100)**
PHASE-I	Problem definition Literature study and objectives	Guide & Evaluation Panel	**10**
PHASE-II	Progress with respect to methodology Data collection and implementation	Guide & Evaluation Panel	**20**
PHASE-III	Data analysis Results and discussion	Guide & Evaluation Panel	**20**
EVALUATION BY GUIDE	Overall Execution of the project Project Documentation	Guide	**40**
TECHNICAL EXPO/PUBLICATION	Participate in technical Expo or Publication in standard conference	Guide	**10**

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2015 Scheme

Marks Allotment for Project Work (2015 scheme)			
Project work Phase- I [7th Semester]			
PHASE	***Evaluation Parameter***	***Evaluator***	***Maximum Marks (200)***
PHASE-I.a	Submission of Synopsis	Guide and Evaluation Panel	**10**
	Problem definition		**25**
PHASE I.b	Literature study and objectives	Guide and Evaluation Panel	**10**
	Progress with respect to methodology		**25**
EVALUATION BY GUIDE in Phase I	Execution of the project	Guide	**30**
	Interim Project Report		
Allocation of Marks Phase I			**100**
Project Work Phase II [8th Semester]			
Phase-II.a	Data collection, Design and implementation	Guide and Evaluation Panel	**25**
Phase-II.b	Data analysis	Guide and Evaluation Panel	**25**
	Results and discussion		
Evaluation by Guide in Phase-II	Overall Execution of the project	Guide	**40**
	Project Documentation		
Technical EXPO/PUBLICATION	Participate in technical Expo or Publication in standard conference	Guide	**10**
Allocation of Marks Phase –II			**100**
Allocation of Marks			
Phase I +Phase II			**200**
External Viva Voce			**100**
Total			**300**

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2017 Scheme

Marks Allotment for Project Work (2017 scheme)			
Project work Phase- I [7th Semester]			
PHASE	***Evaluation Parameter***	***Evaluator***	***Maximum Marks (200)***
PHASE-I.a	Submission of Synopsis	Guide and Evaluation Panel	**10**
	Problem definition		**25**
PHASE I.b	Literature study and objectives	Guide and Evaluation Panel	**10**
	Progress with respect to methodology		**25**
EVALUATION BY GUIDE in Phase I	Execution of the project	Guide	**30**
	Interim Project Report		
Allocation of Marks Phase I			**100**
Project Work Phase II[8th Semester]			
Phase-II.a	Data collection, Design and implementation	Guide and Evaluation Panel	**25**
Phase-II.b	Data analysis	Guide and Evaluation Panel	**25**
	Results and discussion		
Evaluation by Guide in Phase-II	Overall Execution of the project	Guide	**40**
	Project Documentation		
Technical EXPO/PUBLICATION	Participate in technical Expo or Publication in standard conference	Guide	**10**
Allocation of Marks Phase –II			**100**
Allocation of Marks			
Phase I +Phase II			**200**
External Viva Voce			**100**
Total marks			**300**

DAB APPROVED Department of Aeronautical Engineering

Department of Aeronautical Engineering

Programme Assessment Committee
Meeting-2

Even semester 2018-19

MITE

Invent Solutions

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

(A unit of Rajalaxmi Education Trust®, Mangalore-575001)

Department of Aeronautical Engineering

Date: 14/01/2019

MEETING NOTICE

Subject: Meeting of Program Assessment Committee (PAC)

With reference to the above subject, meeting of the Program Assessment Committee for Aeronautical Engineering is convened on 16/01/2019 at 3:00 PM in the HoD chamber to discuss on the following agenda:

- Discussion on the assessment procedures and attainment process of POs and PSOs to be followed for the upcoming semester of academic year 2018-19.
- Discussion the roles and responsibilities of stream and course coordinators.
- Discussion on course files and attainment values of previous academic years
- Any other academic matters with the permission of chairman.

The following members are requested to make it convenient to attend the Program Assessment Committee meeting.

Name of the Faculty	*Designation*	*Role in PAC*
Dr. G. Purushotham	Head of the Department	Chairman
Mr. Yathin K. L	Sr. Asst. Professor	Member
Mr. N Tamil Selvam	Asst. Professor	Member
Mr. Sujesh Kumar	Asst. Professor	Member
Mr. Srinath R	Asst. Professor	Member
Mr. Praneeth H R	Asst. Professor	Member

HOD 14/01/2019

Dept. of Aeronautical Engineering

Head of the Department of
Aeronautical Engineering,
Mangalore Institute of Technology & Engg.,
P.O. Mijar, Moodabidri - 574225
Mangalore, Karnataka

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

(A unit of Rajalaxmi Education Trust®, Mangalore-575001)

Department of Aeronautical Engineering

Minutes of Program Assessment Committee Meeting

Venue:	HOD Chamber
Date:	16/01/2019
Time:	3:00 PM to 5:00 PM

Agenda

- Discussion on the assessment procedures and attainment process of POs and PSOs to be followed for the upcoming semester of academic year 2018-19.
- Discussion the roles and responsibilities of stream and course coordinators.
- Discussion on course files and attainment values of previous academic years
- Any other academic matters with the permission of chairman.

Proceedings

The following points were discussed in the PAC meeting held at HOD Chamber, MITE, on16/01/2019.

- ✓ PO/PSO attainment for the previous academic year was presented by the NBA Coordinator and the same has been discussed for further improvement.
- ✓ The courses and syllabus for the upcoming semester were discussed and the faculties were allotted with their respective choice of course based on their stream of degrees and expertise.
- ✓ The courses allotted to each faculty based on the preferences given by the faculties and the seniority level.
- ✓ Course Coordinators and stream coordinators were allotted based on the experience.
- ✓ Stream coordinators were handed over with the responsibility of conducting the discussion with course coordinators regarding the process of attainment of COs with PO/PSOs.
- ✓ Course coordinators should prepare the course outcomes of their respective courses of new scheme as well as old scheme if revised and present it to stream coordinators regarding the attainment level in accordance to NBA.
- ✓ Stream coordinator is responsible for CO-PO/PSO mapping and should be approved by HOD before the commencement of the semester.
- ✓ Course plans and materials for the courses should be prepared well in advance and to be discussed with senior members / HOD for the further improvements.

- ✓ Previous academic year CO–PO/PSO attainment discussed and the Course files regarding the attainment was reviewed and corrected.
- ✓ Discussions regarding the PO attainment and the process to reach the attainment were discussed.
- ✓ The Criteria Coordinator should be held responsible for the collection of data and documents for their respective criteria.
- ✓ Collection of data for NBA should be filed and approved by the respective heads.
- ✓ Implement the industry oriented programs like internships, workshops, trainings and technical talks to be organized for students.

The Following Faculty members were present in the Meeting:

Name of the Faculty	*Role in PAC*	*Signature*
Dr. G. Purushotham	Chairman	
Mr. Yathin K. L	Member	
Mr. Tamil Selvam	Member	
Mr. Sujesh Kumar	Member	
Mr. Srinath R	Member	
Mr. Praneeth H R	Member	

16/01/2019

HOD

Dept. of Aeronautical Engineering
Head of the Department of
Aeronautical Engineering,
Mangalore Institute of Technology & Engg.,
P.O. Mijar, Moodabidri - 574225
Mangalore, Karnataka

5. REMEDIAL CLASS DETAILS

Sample documentary evidence presented for remedial class conduction for the slow learners.

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(ISO 9001:2015 Certified Institution)

Badaga, Mijar,Moodbidri.

Department of Aeronautical Engineering

Date: 18-9-2018

Notice: Regarding remedial class (17AE34)

Course Name: Mechanics of Materials (17AE34) **Semester: 3**

Academic year: 2018-19

The following students are identified for remedial classes based on their performance in first internal assessment marks (≤ 12 marks). Remedial classes will commence from 21/9/2018, all the students are hereby informed to attend the same in class the room PGL 101 from 4.00 to 5.00 pm.

USN	NAME	IA MARKS
4MT16AE003	AKASH KARIAPPA M M	7
4MT16AE022	JUNAID M J	AB
4MT16AE057	UMESHKUMAR P	5
4MT17AE001	Aamna Aslam	9
4MT17AE002	Abdul Zunaid	12
4MT17AE003	Adarsh T Swathiraj	4
4MT17AE004	Akarsh Kiragi	14
4MT17AE005	AKSHAY KAMATH	3
4MT17AE006	Amaresh Wavare	0
4MT17AE007	APOORVA BR	15
4MT17AE008	ASHISH P KOTIAN	7
4MT17AE009	Calvin Joseph Dsouza	15
4MT17AE010	Charan J	13
4MT17AE011	Dsouza Delson Dolphy	9
4MT17AE013	Fayuna	15
4MT17AE014	Gouri Pradeep Katti	5
4MT17AE015	Inayat Ullah Baba	25
4MT17AE016	Javeeda Khajesaba Bagayana	13
4MT17AE017	Jayantha	8
4MT17AE018	Kavyashree C Mundasad	13
4MT17AE019	Kiran K	16
4MT17AE020	Krishna V Sanagin	7
4MT17AE021	Madhukiran N	10
4MT17AE022	Mahantesh M E	6
4MT17AE023	Manjushree P	19
4MT17AE024	Manjoj Kumar B N	19
4MT17AE025	Mohammed Obais	4

4MT17AE026	Mohammed Thanheem Nazar P K	0
4MT17AE027	Mohammed Zahur Ashraf	20
4MT17AE028	Muttappa Agasar	13
4MT17AE029	Nihal Rajesh	5
4MT17AE030	Nithyashree U	15
4MT17AE031	Pavan Kumar E	5
4MT17AE032	Prachi Sahu	13
4MT17AE033	Prajwal Dsa	17
4MT17AE034	Prakhyath M S	14
4MT17AE035	Pratap	16
4MT17AE036	Preethika Shifali	17
4MT17AE037	Rahul	18
4MT17AE038	Rahul Upadya R	5
4MT17AE039	Rakshija J	14
4MT17AE040	Rashid Ahmed	16
4MT17AE041	RIDDHI	15
4MT17AE042	Sapalya Thilakraj Shivaram	14
4MT17AE043	Sarin C S	4
4MT17AE044	Shahid Farooq	13
4MT17AE045	Shashwath Kodavoor	16
4MT17AE046	Shivashankar	18
4MT17AE047	Shreya S	19
4MT17AE049	SM SHANTH KUMAR	14
4MT17AE050	Srisha K J	15
4MT17AE051	Sushanth S	16
4MT17AE052	Sushmitha	13
4MT17AE053	T J Umar Farooq	0
4MT17AE054	Taniya Sarkar	13
4MT17AE055	Thanushri H	16
4MT17AE056	Venkatesh P Kibageri	4
4MT17AE057	Vikas N	16
4MT17AE058	Vinaykumar Doddamani P	18
4MT17AE059	Vishal	16
4MT17AE060	Vishnu Kushal P	0
4MT17AE061	Yajnesha G	26
4MT17AE062	Yuktha N Gowda	16
4MT17AE063	Zayan S M	0
4MT17CS088 (CB)	Sadhwi Padival	19

Course Instructor

HOD-AE 18/9/2018

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Mangalore, Karnataka

Mangalore Institute of Technology and Engineering

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Department of Aeronautical Engineering

Course Name: Mechanics of Materials (17AE34)

Semester: 3

Academic Year: 2018-19

Students are identified for Remedial classes based on their Performance in first internal assessment marks.

Attendance Report for Remedial Classes

SI NO	USN	NAME	IA-1															Sign
1	4MT17AE001	AAMNA ASLAM	9	1	2	3	4	5	A	6	7	8	9	10	A	11		
2	4MT17AE002	ABDUL ZUNAID	12	1	2	3	4	5	6	7	8	9	10	11	A	12		
3	4MT17AE003	ADARSH T SWATHIRAJ	4	1	2	A	3	4	5	6	7	8	9	10	11	12		
4	4MT17AE005	AKSHAY KAMATH	3	1	2	3	4	5	6	7	A	8	9	10	11	12		
5	4MT17AE006	AMARESH WAVARE	0	A	1	A	2	3	4	5	A	6	7	8	A	9		
6	4MT17AE008	KOTIAN ASHISHPURANDAR	7	1	2	3	4	5	6	7	8	9	A	10	11	12		
7	4MT17AE011	DSOUZA DELSON DOLPHY	9	1	2	3	4	5	6	7	8	9	10	A	11	12		
8	4MT17AE014	GOURI PRADEEP KATTI	5	1	2	3	A	4	5	A	6	7	8	9	10	11		
9	4MT17AE017	JAYANTHA	8	A	1	2	A	3	4	5	6	7	8	9	10	11		
11	4MT17AE020	KRISHNA V SANAGIN	7	1	2	3	4	5	6	7	8	A	9	10	11	12		
12	4MT17AE021	MADHUKIRAN N	10	A	1	2	3	4	5	6	A	7	8	9	A	10		
13	4MT17AE022	MAHANTESH M E	6	1	2	3	A	4	5	6	7	8	9	10	11	12		
14	4MT17AE025	MOHAMMED OBAIS	4	1	2	3	4	A	5	6	A	A	8	9	10	11		
15	4MT17AE026	MOHAMMEDTHANHEEM	0	A	A	1	2	3	4	5	A	A	6	7	8	9		
16	4MT17AE029	NIHAL RAJESH	5	1	2	3	4	5	6	7	8	9	A	10	11	12		
17	4MT17AE031	PAVAN KUMAR E	5	1	2	3	4	5	6	A	7	8	9	10	11	12		
18	4MT17AE038	RAHUL UPADYA R	5	A	1	2	3	4	5	6	A	7	A	8	9	10		
20	4MT17AE043	SARIN C S	4	1	A	2	3	4	5	6	A	7	8	9	10	11		
21	4MT17AE053	T J UMAR FAROOQ	0	1	2	3	4	5	A	6	7	8	9	10	11	12		
22	4MT17AE056	VENKATESH P KIBAGERI	4	A	1	2	3	4	5	6	7	8	A	9	10	11		
23	4MT17AE060	VISHNU KUSHAL P	0	1	2	3	4	5	A	6	7	8	9	10	11	12		
24	4MT17AE063	ZAYAN S M	0	1	2	3	A	4	5	6	A	7	8	9	10	11		
25	4MT16AE003	AKASH KARIAPPA M M	7	1	2	3	4	5	6	7	8	9	10	A	A			
26	4MT16AE057	UMESH KUMAR P	5	1	2	3	A	4	5	A	6	7	8	A	9	10		
27	4MT16AE022	JUNAID M J	ab	1	A	A	2	3	4	5	A	6	7	A	8	9		

Course Instructor

HOD

Department of Aeronautical Engg.,
Mangalore Institute of Technology & Engg.,
P.O. Mijar, Moodabidri - 574225
Mangalore, Karnataka

Mangalore Institute of Technology and Engineering

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Department of Aeronautical Engineering

Remedial Class Assessment Report

Course Name: Mechanics of Materials (17AE34)

Semester: 3

Academic Year: 2018-19

Sl NO	USN	NAME	IA-1	IA-2	IA-3	SEE (100) Result	
1	4MT17AE001	AAMNA ASLAM	9	19	12	45	P
2	4MT17AE002	ABDUL ZUNAID	12	4	14	35	
3	4MT17AE003	ADARSH T SWATHIRAJ	4	10	15	32	
4	4MT17AE005	AKSHAY KAMATH	3	13	13	87	
5	4MT17AE006	AMARESH WAVARE	0	16	16	51	P
6	4MT17AE008	KOTIAN ASHISHPURANDAR	7	20	10	44	P
7	4MT17AE011	DSOUZA DELSON DOLPHY	9	20	13	47	P
8	4MT17AE014	GOURI PRADEEP KATTI	5	11	15	42	P
9	4MT17AE017	JAYANTHA	8	13	26	48	P
11	4MT17AE020	KRISHNA V SANAGIN	7	22	22	54	P
12	4MT17AE021	MADHUKIRAN N	10	8	12	26	
13	4MT17AE022	MAHANTESH M E	6	20	21	52	P
14	4MT17AE025	MOHAMMED OBAIS	4	8	18	41	P
15	4MT17AE026	MOHAMMEDTHANHEEM	0	7	10	29	
16	4MT17AE029	NIHAL RAJESH	5	23	10	38	
17	4MT17AE031	PAVAN KUMAR E	5	24	13	48	P
18	4MT17AE038	RAHUL UPADYA R	5	18	14	46	P
20	4MT17AE043	SARIN C S	4	25	18	55	P
21	4MT17AE053	T J UMAR FAROOQ	0	8	21	42	P
22	4MT17AE056	VENKATESH P KIBAGERI	4	25	15	53	P
23	4MT17AE060	VISHNU KUSHAL P	0	16	7	29	
24	4MT17AE063	ZAYAN S M	0	15	13	41	P
2	4MT17AE003	AKASH KARIAPPA M M	7	10	13	23	
2	4MT17AE057	UMESH KUMAR P	5	16	10	41	P
2	4MT17AE022	JUNAID M J	ab	10	19	42	P

Result: Pass % = 63

Instructor

HOD

Department of Aeronautical Engg.,
Mangalore Institute of Technology & Engg.,
P O Mijar, Moodabidri - 574225
Mangalore, Karnataka

6. SUPPORT TO ADVANCED LEARNERS

Sample documentary evidence presented for the Academic Year 2018-19

Support System for Advanced Learners

The cognitive and intellectual capabilities of students vary significantly across all the programmes. Hence, the institute has a process to assess the learning levels of the students and accordingly extend support. The process starts with an orientation programme followed by an induction programme for the new batch of students every year. These programmes would help students and parents to get familiar with the institution, curricular and co-curricular activities, facilities, rules and regulations etc. Further, during the course of study, students are identified as **advanced learners** based on their performance in Continuous Internal Evaluation (CIE) and involvement in acadamic performance.Advanced learners are nurtured beyond curriculum by encouraging them to,

- Undertake MOOCs (Massive Open Online Courses) offered by NPTEL, Coursera, Udemy, Edx etc.
- Take key responsibilities in department and college level activities to enhance their leadership skills and team building ability.
- Take competitive exams and to pursue higher studies.
- Participate in Conferences.
- Participate in State and National Level Project competitions and club activities at college level.
- Take part in the cultural Committee
- Take part in editorial boards for Department Newsletters.

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

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Badaga, Mijar,Moodbidri.

Department of Aeronautical Engineering

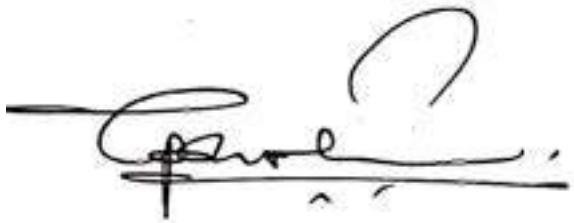
Student list for advanced learners: 2018-19

Students are identified as advanced learners based on their Continuous Internal Evaluation and involvement in academic activities as highlighted below.

Sl. No	USN	Student Name
1	4MT16AE004	Akshay kumar Ksheerasagar
2	4MT16AE005	Anjum M Channapattana
3	4MT16AE006	Ankitha D V
4	4MT16AE007	Arpith Jain
5	4MT16AE008	Arpitha Holla C
6	4MT16AE009	Ashirwad Rachappa Atnoor
7	4MT16AE010	Ashwanth Dhanish M
8	4MT16AE011	Ashwatharama Prabhu K
9	4MT16AE012	Clavin Anton Rodrigues
10	4MT16AE013	Dacklen Sundeep D'souza
11	4MT16AE014	Damodar Venkatramana Devadiga
12	4MT16AE015	Dane Hubert Saldanha
13	4MT16AE016	Darshan Chavan S
14	4MT16AE018	Dharshan S R
15	4MT16AE019	Glen Shannaon Dsouza
16	4MT16AE020	Goutham V V
17	4MT16AE021	Granvil Aush Dsouza
18	4MT16AE024	Kavitha K
19	4MT16AE025	Keerthi Nandan R
20	4MT16AE026	Kumar Aravind Hiremath
21	4MT16AE028	Madhurima R Londhe
22	4MT16AE029	Madhusudhan C
23	4MT16AE032	Mithul Das
24	4MT16AE035	Pooja N
25	4MT16AE036	Poornachandra S Goudar
26	4MT16AE037	Prajwal Raj J

27	4MT16AE038	Priyanka Lokesh
28	4MT16AE039	Queena Menezes
29	4MT16AE041	Rahul S Balimane
30	4MT16AE042	Rajput Yash
31	4MT16AE043	Rakshith T M
32	4MT16AE044	Sanjay M V
33	4MT16AE045	Savi Shetty A H
34	4MT16AE046	Sayed Naushan Ali
35	4MT16AE047	Clavin Wilton Sequeira
36	4MT16AE050	Sonu N
37	4MT16AE052	Stanvil Dsouza
38	4MT16AE054	T D Teeshma
39	4MT16AE055	Tejaswini D
40	4MT16AE056	Tulaskar Sanjana Damodar
41	4MT16AE059	Vishalakshi T Bandiwad
42	4MT15AE002	Abdul Hameed Khan
43	4MT15AE004	Aditya R
44	4MT15AE005	Adithya
45	4MT15AE006	Akash Mahagaonkar
46	4MT15AE008	Ambareesh
47	4MT15AE013	Feroz
48	4MT15AE014	Hansel Hansie Fernandes
49	4MT15AE015	Jasmin Momin
50	4MT15AE016	Jenita Flora Cutinha
51	4MT15AE017	Karthik P Raj
52	4MT15AE018	Lohith Naik R
53	4MT15AE020	Manish C Poojari
54	4MT15AE021	Manjunath Reddy Y S
55	4MT15AE022	Megha D M
56	4MT15AE023	Mohammed Abrar Hussain
57	4MT15AE025	Naveen S Yankanchi
58	4MT15AE026	Nikhil Jason Correa
59	4MT15AE027	Pavan Kumar V
60	4MT15AE028	Prajwal A C
61	4MT15AE029	Pratheeksha P
62	4MT15AE030	Pratheeksha Mohandas Poojary

63	4MT15AE035	Rashmi G Raikar
64	4MT15AE036	Renoll Destin Fernades
65	4MT15AE038	S Chandini
66	4MT15AE042	Saraswathi
67	4MT15AE043	Sheril Rachel Ammanna
68	4MT15AE044	Shreeraksha V R
69	4MT15AE046	Shridhar Ramesh Ranoji
70	4MT15AE047	Shwetha S
71	4MT15AE050	Sudarshan Narsing Rao
72	4MT15AE052	Tulasimani Kavita
73	4MT15AE055	Vishnu Chandroth
74	4MT15AE057	Wilson N Upkare
75	4MT15AE058	Rathan Nayak



HOD-AE
Department of Aeronautical Engg.,
Mangalore Institute of Technology & Engg.,
P O Mijar. Moodabidri - 574225
Mangalore, Karnataka

Sample Documentary Evidences Enclosed for participation and encouragement for the Advanced Learners

1. Online Certifications / NPTEL.
2. Class Committee.
3. Office Bearers of AURA.
4. Guidance for participation in Conferences.
5. Guidance to participate in innovative Project Competitions.
6. Club Activities.
7. Cultural Committee.
8. Newsletter Editorial Board.

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

SANJAY MV

for successfully completing the course

Design of Fixed Wing Unmanned Aerial Vehicles

with a consolidated score of **56** %

Online Assignments	20.00/25	Proctored Exam	36/75

Total number of candidates certified in this course: **134**

T V Prabhakar

Prof. T. V. Prabhakar
Chairman
Center for Continuing Education, IITK

Aug-Oct 2018
(8 week course)

Satyaki Roy

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur

Indian Institute of Technology Kanpur

swayam

Roll No: NPTEL18AE07S11630212

To validate and check scores: https://nptel.ac.in/noc

Department of Aeronautical Engineering

Date: 12-2-2019

The class committee for the academic year 2018-19 (Even semester) has been constituted with the following members.

Class	Name	Designation / Role
	Dr. G Purushotham	HoD
IV Year	Mr. Praneeth H R Mr. Yathin K L	Class Advisor (8AE)
	Mr. Hansel Hansie Fernandes Ms. Megha D M	Class Representatives (8AE)
III Year	Mr. Sujesh Kumar Ms. Sahana D S	Class Advisor (6AE)
	Mr. Clavin Anton Rodrigues Ms. Vishalakshi T Bandiwad	Class Representatives (6AE)
II Year	Mr. Ajith Kumar Mr. Srinath R	Class Advisor (4AE)
	Mr. Zahur Ashraf Ms. Apoorva B R	Class Representatives (4AE)

HoD 12/2/2019

Department of Aeronautical Engg.,
Mangalore Institute of Technology & Engg.,
P.O. Mijar, Moodabidri - 574225
Mangalore, Karnataka

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Badaga Mijar, Moodabidri-574225, Karnataka

Department of Aeronautical Engineering

"Aeronautical Union for Rising Aviators (AURA)"

Date: 19/08/2019

The following students have been selected/elected as office bearers for the department association for the academic year 2019-20.

Sl. No.	USN	Name of the student	Position
1	4MT16AE044	Sanjay M V	President
2	4MT16AE045	Savi Shetty	Secretary
3	4MT16AE011	Ashwathrama	Treasurer
4	4MT16AE008	Arpitha Holla	Cultural Coordinator
5	4MT16AE042	Yash Rajput	Sports Coordinator
6	4MT16AE007	Arpith Jain	Student Placement Coordinator

Name of the Faculty Coordinator: Mr. Ajith Kumar

19/8/2019

Signature of the HoD

Department of Aeronautical Engg.,
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Mangalore, Karnataka

MITE

Invent Solutions

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GLOBAL CONFERENCE ON ADVANCED SMART & SUSTAINABLE TECHNOLOGIES IN ENGINEERING

[redacted]

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(A Unit of Rajalaxmi Education Trust®, Mangalore)

PAPER PRESENTATION CERTIFICATE

This is to certify that **Mr. Manjunath Reddy Y S** has presented a paper entitled ***Study of Free Vibration Characteristics of Hybrid Polymer Composites*** in the Global Conference on Advanced Smart & Sustainable Technologies in Engineering held at MITE, Moodabidri, India on January 30th & 31st, 2020.

Dr. Rajashekar [illegible]
Co-ordinator

[illegible]
Principal

ANNUAL CONFERENCE SERIES E2F2'20 EDITION 4.0

Sree Buddha College of Engineering
Pattoor P.O, Alappuzha-690529
Website: www.sbce.ac.in

RAMMTS'20

CERTIFICATE OF PRESENTATION

This is to certify that Dr./Mr./Ms. Rahul Subramanya Balimane
of Mangalore Institute of Technology and Engineering has participated in the Two day Online National Conference on "Recent Advances in Materials, Manufacturing and Thermal Sciences (RAMMTS '20) organized by Department of Mechanical Engineering, Sree Buddha College of Engineering, Pattoor, Alappuzha, Kerala on 18th and 19th June, 2020 and presented a research paper titled Performance evaluation of Spherical Double hole and Spherical Five hole Flow Analyzer for subsonic flow

Dr. M. S. Senthil Saravanan
Organizing Secretary RAMMTS 20

Dr. Saji Varghese
HoD & Conference Chair, RAMMTS 20

Dr. S. Suresh Babu
Principal SBCE

NAAC

IMENSION DESIGN ANALYSIS

KSCST

Government of Karnataka

DST - GOI

Karnataka State Council for Science and Technology

Indian Institute of Science Campus, Bengaluru - 560 012

Telephone: 080-23341652, 23348848, 23348849 ♦ Website: www.kscst.org.in

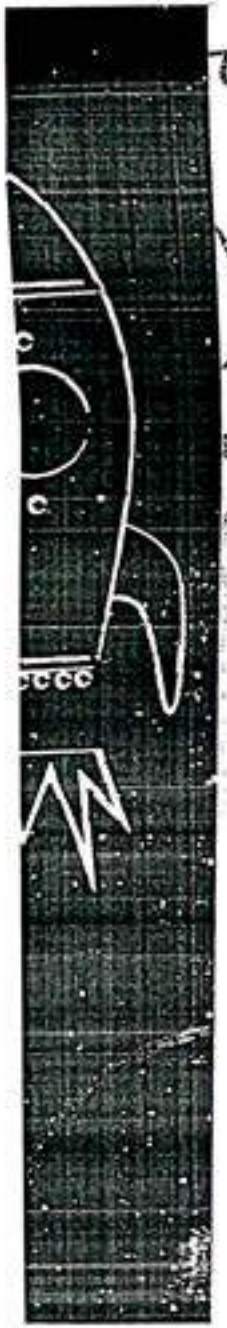
Certificate

This is to certify that Mr. SANJAY M.V., Mr. CLAVIN WILTON SEQUEIRA, Mr. T.D. TEESHMA *and* Ms. VISHALAKSHI T. BANDIWAD *students of* MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING, MOODABIDRE *participated in the Student Project Programme (SPP) during the year 2019 - 2020 (43rd Series) and completed the project entitled* DESIGN AND MODELLING OF A VERTICAL AXIS WIND TURBINE TO EXTRACT WIND ENERGY FROM HIGHWAYS TO POWER ELECTRIC VEHICLE CHARGING STATIONS *under the guidance of* Mr. VISHWARETHA K.R. *This project was adjudged as during the online evaluation of projects held during July - August 2020. This program was supported by Department of Science and Technology, Government of Karnataka and Department of Science and Technology, Government of India.*

Prof. Ashok M. Raichur
Secretary, KSCST and
Professor, Department of Materials Engineering, IISc

G. Rangarajan

Prof. Govindan Rangarajan
Director, Indian Institute of Science and
Vice-President, KSCST



CHANDIGARH UNIVERSITY

Discover. Learn. Empower.

SP PHIG

Certificate Of Achievement

This is awarded to

Dr./Mr./Ms/Mrs. Rashid Ahmed

achieved Second award/poši

for his / her paper / project titled —

in the event of Launch Your Rocket

during Spacephilia 2019 organised by UIE - Aerospace Engineer Chandigarh University on 6th oct 2019.

A Report on event of Team Altimas Racing

Team Altimas is a go kart building motorsport team from MITE which has been designing and fabricating go karts for the past 5 years. We have participated in various National and International Level competitions and have had successful seasons.

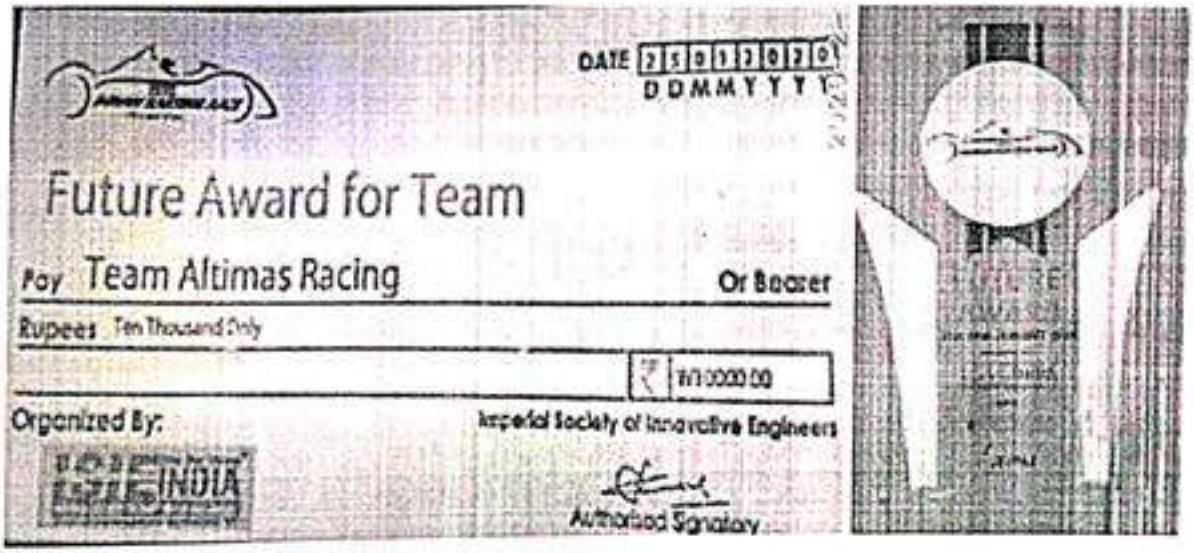
TEAM ALTIMAS RACING, Participated in **Indian Karting Race 2020** organized by ISIE from 21-25 January, 2020 at RPM circuit Bhopal. **Garuda V 6.0 Awarded "FUTURE AWARD" & Cash Prize of ₹10K**

Team Deatails

Name	USN
P U Shodhan Shetty	4MT17ME093
AAKARSH PAI	4MT17ME001
ABHISHEK B SHETTY	4MT17ME007
ABHIDEEP G SHETTY	4MT17ME004
VIKAS NAYAK	4MT17ME161
DEEKSHITH	4MT17ME035
AKASH SHETTY	4MT17ME016
AKHIL	4MT17ME017
ABHIJITH K C	4MT17ME006
KARAN RAJ	4MT17ME054
VINISH S SHETTIGAR	4MT17ME163
RAKSHITH	4MT17ME108
NIKHIL	4MT17ME087
DINESH KUMAR	4MT17ME036
GAGAN J	4MT17ME040
TARUN D SHETTY	4MT18ME133
CHINTHAN SHETTY	4MT18ME028

Team Altimas Racing with Garuda 6.O

Award Received by Team Altimas Racing



CULTURAL COMMITTEE FOR THE ACADEMIC YEAR 2019-20

Role	Name & Designation
Chairperson	Dr. G L Easwara Prasad, Principal
Student Coordinator	Mr. Clavin Anton Rodrigues, Dept. of Aeronautical Engg./ Student Coordinator
	Ms. Velsa Sophia Pinto, Dept. of Mechanical Engg. /Student Coordinator
Members	Mr. Ashil Sam, Dept. of Mechatronics & Engg./ Member
	Mr. Deepak Baburaj, Dept. of Mechanical Engg./ Member
	Ms. Savi Shetty, Dept. of Aeronautical Engg./ Member
	Mr. Omkar Manjare, Dept. of Mechatronics Engg./ Member
	Ms. Mahita Bangera, Dept. of Electronics and Communication Engg./ Member
	Mr. Akshay, Dept. of Mechanical Engg./ Member
	Ms. Fareen Sheikh, Dept. of Computer Science& Engg./ Member
Faculty Coordinator	Mr. Glenson Toney, Assistant Professor, Dept. of Mechatronics Engg.
Convener	Dr. Asha Crasta, Associate Professor and Head, Department of Mathematics

Convener
Dr. Asha Crasta,
Associate Professor and
Head, Department of Mathematics

EDITORIAL COMMITTEE

"The moment you doubt whether you can fly, you seize forever to be able to do it!

Chief - Editor

Dr. G Purushotham

(Head of the Department,
Dept. of Aeronautical Engineering)

Editor

N Tamilselvam

(Senior Asst. Professor,
Dept. of Aeronautical Engineering)

Designer

Clavin Anton Rodrigues

Editorial Team

Lohith Naik
Aditya
Nikhil Correa
Savi Shetty
Dacklen D'Souza
Arpith Jain
Queena Menezes
Glenn Shannon D'Souza
Ashwatharama Prabhu
Zahur Ashraf
Manjushree Doreswamy

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N Tamilselvam
(Senior Asst. Professor, Dept. of Aeronautical Engineering)

Editor

Yunus
(Cultural Co-ordinator, AURA)

Designers

Clavin Anton Rodrigues
Zohith R Naik

Editorial Team

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Dacklen D'Souza
Arpith Jain
Queena Menezes
Sanjana Tulaskar
Glenn Shannon D'Souza
Ashwatharama Prabhu
Kavitha
Vikas N Suvarna
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Kavita Tulasiman

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National Students' Space Challenge

5th-7th October 2018

Certificate Of Merit

Reg. no.: NSSC18/PI 2475

This is to certify that Mr./Ms Dacklen Sundeep Dsouza from the institute Mangalore Institute of Technology & Engineering has secured 1st position in the event Hoverpod at National Students' Space Challenge 2018, IIT Kharagpur.

P. Charan Koushik

Potti Charan Koushik
Governor,
Space Technology Students' Society

Dipanjita Roy Chowdhury

Prof. D. Roychowdhury
Chairman,
Kalpana Chawla Space Technology Cell

Indian Institute of Technology, Kharagpur

7. ICT ENABLED TOOLS

List of ICT Enabled tools used by the faculty for effective curriculum delivery

Different ICT Tools used by faculty for effective curriculum Delivery

Sl. No	Name of the ICT Tool	Brief Description of the ICT tool
1	Projector	Used by the faculties for slides, video, animation and graphic to teach students about a variety of subjects.
2	PowerPoint Presentations	For display of lecture contents and visual aids to enhance the learning experience of students.
3	Google Class	Used for online quizzes, assignments, announcements and sharing study materials.
4	Google meet	Used for online class conduction, internal evaluations, webinars and presentations.
5	Edmodo	Used for online quizzes, assignments, announcements and sharing study materials.
6	Flipped classroom	Used to Allow students for self-paced learning. An instructional strategy and a type of blended learning that reverses the traditional learning environment by delivering instructional content, often online, outside of the classroom.
7	Virtual Lab	Used to enhance the understanding of the subjects using simulation based learning, Self Evaluation will help students to assess their understanding. Higher order assignment questions encourage students to learn more on each concept.

8	E-learning study Materials	Study materials for each course will be shared in the Department website for easy access to students.
9	Pen Tablet	Used for effective teaching with real-time audio/video, text communication.
10	CodeZinger	Used the online learning portal to encourage students to practice programming
11	SCILAB	Used for simulation and demonstration of some digital modulation techniques.3-Microwave and antenna patterns.
12	Electronic Design Automation (EDA)	Used for Simulation based study on Verification of Ampere's Circuital Law, Divergence, Laplace Equation, Curl & Vector Potential.
13	Moodle (gnomio)	Used for Collaborative Learning, Interactive Quiz and Simulation based Learning and assessment
14	Hortonworks Sandbox Virtual Machine	Used for conducting live experiments on big data tools
15	edaplayground.com	Used for Verilog Programming using the edaplayground.com. Online simulator helps students to understand the basic concepts in a better way.

Principal
Mangalore Institute of Technology & Engineering
Badaga Mijar, MOODBIDRI - 574 225

Innovative Teaching and Learning Methods

Department of Aeronautical Engineering

Course Name: Mechanisms and Machine Theory
Course Code: 17AE44
Academic Year: 2018-19
Presented by: Ajith Kumar

Tools Used

For Innovative Teaching

- Flipped classroom/ Video based learning
- Edmodo
- Virtual labs
- Google meet

Flipped classroom/Video based learning

Objective:

· Allow for self-paced learning

Methodology:

An instructional strategy and a type of blended learning that reverses the traditional learning environment by delivering instructional content, often online, outside of the classroom.

Outcome:

· Student will achieve higher learning outcomes compared to traditional method.

Video Based learning Materials Shared for Each Module

Module1

https://www.youtube.com/watch?v=MJeRFzs4oRU#action=share

https://www.youtube.com/watch?v=EVqBzOGQlkI#action=share

https://www.youtube.com/watch?v=GF5C8dH4f5o#action=share

https://www.youtube.com/watch?v=fMLLoY7jxM0#action=share

https://www.youtube.com/watch?v=hcr8qwmYvDg#action=share

https://www.youtube.com/watch?v=-cUOMEJ8lPs#action=share

https://www.youtube.com/watch?v=2r-ormpcLsI#action=share

https://www.youtube.com/watch?v=8X0f6fIyhzQ#action=share

https://www.youtube.com/watch?v=E-r2EDS0uP4#action=share

https://www.youtube.com/watch?v=vtY8Sn3wuRU#action=share

https://www.youtube.com/watch?v=w-KtSxnMsMQ#action=share

https://www.youtube.com/watch?v=R5Xkl9nDRxA#action=share

https://www.youtube.com/watch?v=jZi70tsqGqI#action=share

https://www.youtube.com/watch?v=ClbHCRRklOE#action=share

https://www.youtube.com/watch?v=-VlWfc5c6y0#action=share

Module2

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/index.php

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/2.php

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/3.php

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/4.php

Module3

https://www.youtube.com/watch?v=8E70qjdE6fI#action=share

https://www.youtube.com/watch?v=c_kU_lqaFRk#action=share

https://www.youtube.com/watch?v=a6O861Et2aQ#action=share

Video Based learning Materials Shared for Each Module

Module 4

Balancing of Rotating Masses

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/9.php

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/10.php

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/11.php

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/12.php

Balancing of reciprocating mass

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/21.php

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/22.php

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/23.php

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/24.php

Module 5

Governors

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/25.php

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/26.php

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/27.php

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/28.php

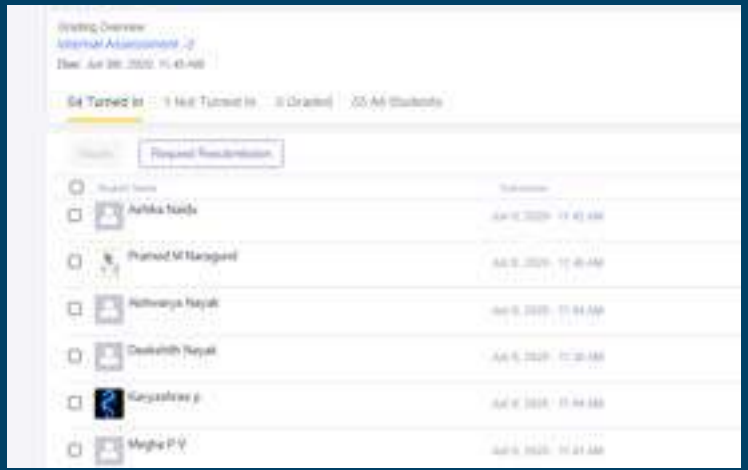
Gyroscope

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/17.php

http://nptel.vtu.ac.in/econtent/courses/ME/10ME54/18.php.

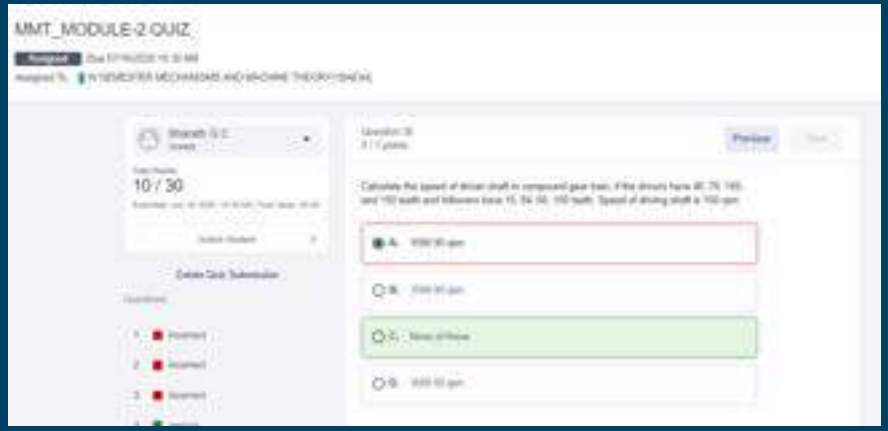
Edmodo

Study materials
Internal Assessments



Edmodo

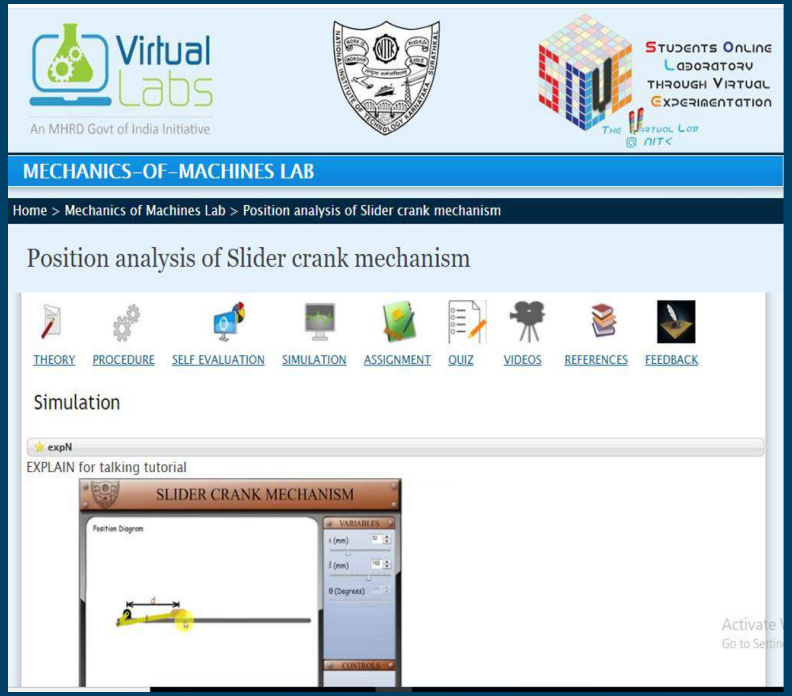
Assignment/ Quiz Submissions



Virtual Lab

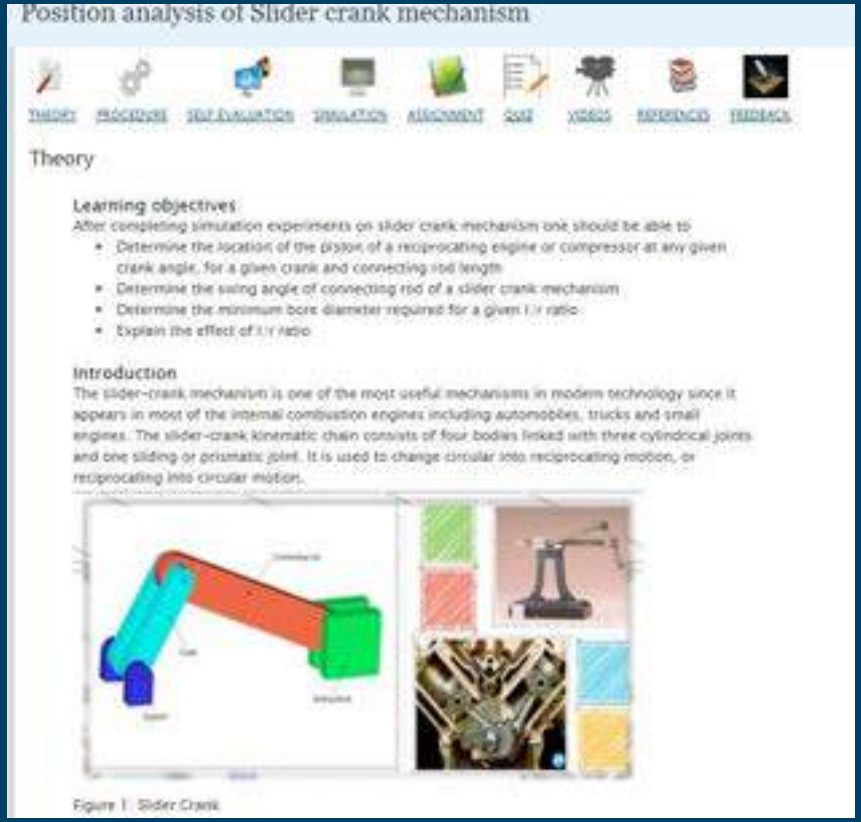
Simulation

https://mm-nitk.vlabs.ac.in/exp7/index.html#



Virtual Lab

- To enhance the understanding of the mechanisms using simulation based learning
- Self Evaluation will help students to assess their understanding
- High level assignment questions encourages students to learn more on each concepts.



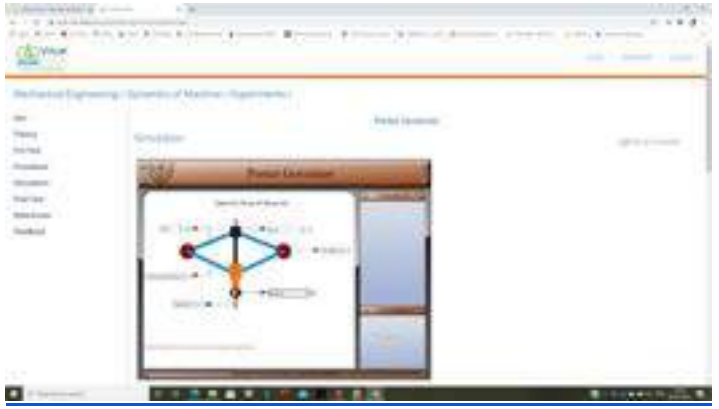
Google meet

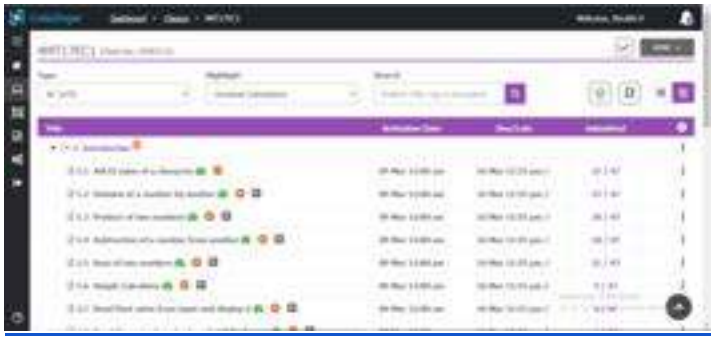
For online class conduction
Recorded sessions will be shared to students

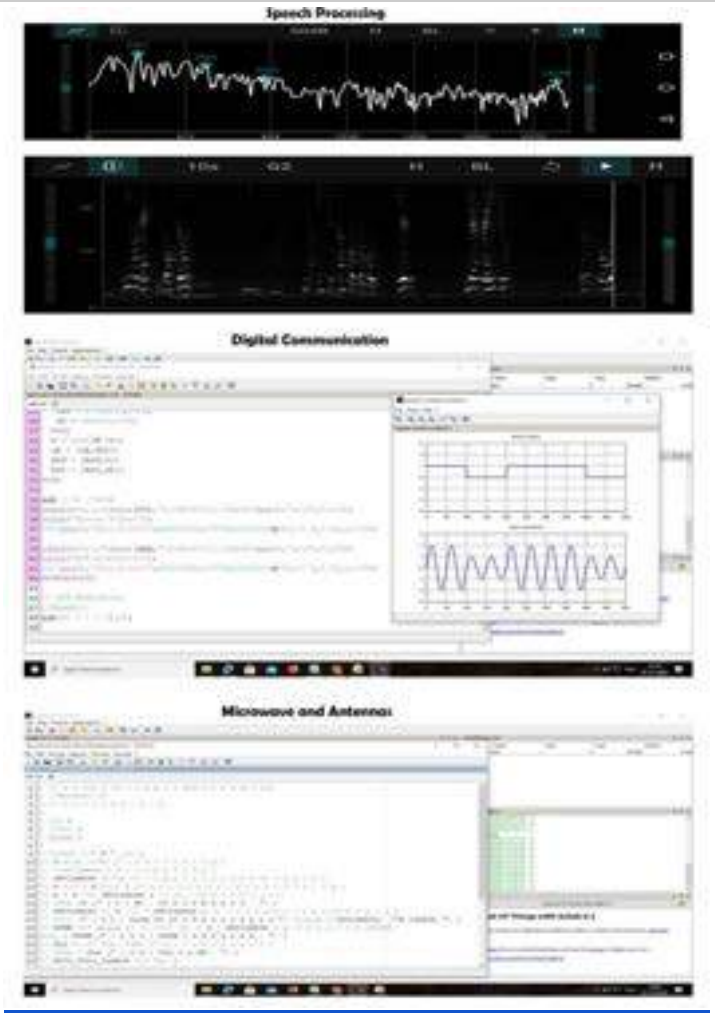
Sample recorded session

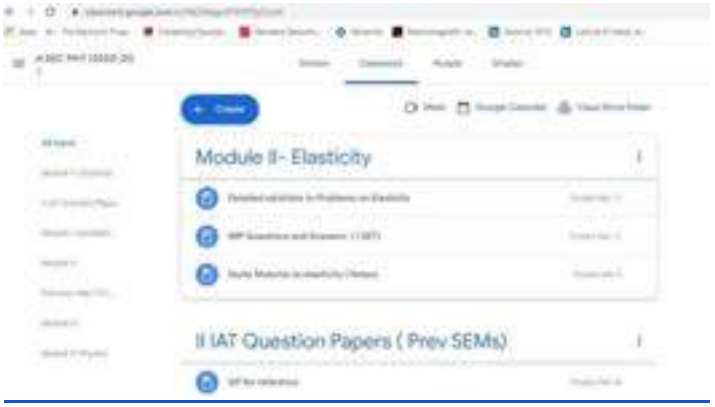
https://drive.google.com/file/d/1GAMAi_w0MSgBRjoAnND6VNhOahhHqgtA/view?usp=sharing

ICT Tools

Sl. No	Faculty Name	Dept	Subject	Sem	Description on Usage of ICT	Photo/Screen Shot
1.	Madhusudhan B	Mechanical Engg	Design Lab	VII	Usage of virtual labs for better understanding of the laboratory procedures in an online mode during pandemic situation	
2.	Sujesh Kumar	Aeronautical Engg	Aerothermodynamics	III	applied flipped classroom method for Aerothermodynamics - 3rd sem students.	

3.	Dr.Shreekumar T	Computer Sc & Engg	Automata Theory and Computability	V	Used Writing pad, google classroom	
4.	Ms. Shruthi D	Information Sc & Engg	Data Structures Using C++	VI	used an online learning portal (CodeZinger) to encourage students to practice programming	

5.	Dony Armstrong DSouza	Electronics & Commn Engg	Speech Processing(8th), Digital Communication(6th sem), Microwaves and antennas(7th).	VII	1- Google classroom and Spectroid tool for viewing sound waves in domains. Speech Processing(15EC832) 2- Digital Communication 15EC61- SCILAB tool used for simulation and demonstration of some digital modulation techniques. 3-Microwave and Antennas(15EC71)- SCILAB tool used for simulation and demonstration of antenna patterns.	
6.	Ms. Anusha Jain	Civil Engg	Basic Geotechnical Engineering	V	• Google Classroom used for conducting Online Classes, Sharing Study Materials, Posting Assignments, Announcements and conducting assessments	

					• Virtual Lab is used for conducting experiments.	
7.	Dr. ANTHONI PRAVEEN MENEZES	Physics	ENGINEERING PHYSICS	I	• GOOGLE CLASS ROOM is used for sharing the study material and practicing numerical problems. • EDMODO - For conducting quiz and sharing the study material.	
8.	SOUMYA P M	Electronics & Commn Engg	ANALOG CIRCUITS	IV	Simulation based approach was initiated to to analyze a few topics using Multisim and Proteus Softwares towards providing the practical exposure on the concepts handled in the class	

9.	Vinayambika S Bhat	Electronics & Commn Engg	Electromagnetic Waves	V	EDA tool is used for Simulation based study on Verification of Amperes Circuital Law, Divergence, Laplace Equation, Curl & Vector Potential.	
10.	Taranath H B	Electronics & Commn Engg	Verilog HDL	V	Moodle (gnomio) tool is used for Collaborative Learning, Interactive Quiz and Simulation based Learning and assessment.	

11.	RAMANANDA MALLYA K	Information Sc & Engg	INFORMATION & NETWORK SECURITY	VII	A Blog was developed and maintained for providing study materials.	

12.	Rishma Mary George	Electronics & Commn Engg	Electromagnetic Waves	V	EDA Tool is used for Simulation based study on Verification of Amperes Circuital Law, Divergence, Laplace Equation, Curl & Vector Potential.	
13.	Swapna Srinivasan	Electronics & Commn Engg	Verilog HDL	V	• Online simulator is used to write codes and test benches. • Verilog Programming was learnt using the edaplayground.com • Online simulator helped students to understand the basic concepts in a better way. https://edaplayground.com/x/7nCX	

8. COURSE FILE-SAMPLE

Contents in course file

1. Course details
2. Course plan
3. Course execution
4. Attainment calculation
5. Action proposed

ACADEMIC YEAR 2018-19

Course File

Course: Elements of Aeronautics

Course Code: 17AE32 (C202)

Submitted by

Srinath R

DEPARTMENT OF AERONAUTICAL ENGINEERING

MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001:2015 Certified Institution)

Badaga Mijar, Solapur -Mangalore Highway, Near Moodabidre, Mangalore, Karnataka 574225

1. COURSE DETAILS

1.1 Preliminary Information

Course Name	ELEMENTS OF AERONAUTICS
Course Code/Course Index	17AE32/ C202
Academic Year	2018-19
Semester	3
Course Coordinator	SRINATH R

Objectives

1. To know the history and basic principle of aviation
2. To understand the foundation of flight and principles of aerodynamics
3. To get familiarized with the concepts of aerospace of technologies
4. To understand the aircraft structures, material and
5. Understand the difference between different aircraft propulsion devices
6. To develop an understanding stability of an aircraft along with its different systems

Internal assessment (IA) marks

- There shall be a maximum of 40 internal assessment marks.
- The internal assessment marks shall be based on three IA generally conducted at the end of 6^{th}, 10^{th} and 14^{th} weeks of the semester for 30 marks.
- Average of all the three internal assessment tests plus the assignment mark (Max. 10 marks) shall be the internal assessment marks.

Eligibility for passing

- For a pass in the subject, the candidate shall secure minimum of 35% of the maximum marks prescribed in the university examination and 40% of marks in the aggregate inclusive of the internal assessment mark.

- The candidates who do not satisfy the above condition shall be deemed to have failed in the subject and may reappear for the university examination in the subsequent examinations. However, the internal assessment marks awarded to the candidates at first attempt in the subject will be carried forward.

Prerequisites

- ✓ Physics
- ✓ Mathematics
- ✓ Basic knowledge on aircrafts
- ✓ Basic principles of flight

Relevance of the course: Aircraft Propulsion, Aerodynamics, Aircraft stability, Aircraft systems

Application areas

Design of Aircraft, working principles and operation of systems, controls of aircraft.

Program Educational Objectives (PEOs):

After successful completion of program, the graduates will be

PEO 1	Graduates will have the scientific and technical knowledge to have successful career in Aeronautical industry
PEO 2	Graduates will have competency to analyze challenges and advancements in the focus areas of Propulsion, Structures, Aerodynamics, Flight Mechanics and Avionics
PEO 3	Graduates will be motivated and confident to pursue advanced education, research and development and other creative efforts in aeronautical engineering and allied areas.
PEO 4	Graduates will have higher order thinking and leadership skills to become technology leaders of tomorrow

Program Outcomes (POs)

Engineering Graduates will be able to

1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. **Problem analysis**: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and

modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development

8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. **Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

At the end of the program, Aeronautical Engineering graduates will be able to	
PSO1	Graduates will excel in their professional career in Aeronautical industry and research with highest professional and ethical standards to their activities by acquiring knowledge in basic engineering, mathematics, science and Aeronautical engineering.
PSO2	Graduates will exhibit professionalism, team work in their chosen profession and adapt to current trends, technologies and industrial scenarios by pursuing lifelong learning.

Course	Elements of Aeronautics				
IA Marks	40	Sub Code	17AE32	Exam hours	3hr
Total Hours	4hrs/week	Total Hours	50	Exam Marks	60

Unit No	Contents	Teaching Hours
1	Introduction to Aircrafts History of aviation; Atmosphere and its properties; Classification of aircrafts; Basic components of an aircraft; structural members; aircraft axis system; aircraft motions; control surfaces and high lift devices; classification of aircraft; conventional design configurations; principle of operation of each major part; Helicopters, their parts and functions. Aircraft Structures and Materials: Introduction; general types of construction; monocoque, semi monocoque and geodesic structures; typical wing and fuselage structure; metallic and non-metallic materials for aircraft application.	10
2	Basic principles of flight – significance of speed of sound; airspeed and groundspeed; standard atmosphere; Bernoulli's theorem and its application for generation of lift and measurement of airspeed; forces over wing section, aerofoil nomenclature, pressure distribution over a wing section. Lift and drag components – generation of lift and drag; lift curve, drag curve, types of drag, factors affecting lift and drag; centre of pressure and its significance; aerodynamic centre, aspect ratio, Mach number and supersonic flight effects; simple problems on lift and drag	10
3	Aircraft Propulsion: Aircraft power plants, classification based on power plant and location and principle of operation. Turboprop, turbojet and turbofan engines; ramjets and scramjets; performance characteristics. Aircraft power plants – basic principles of piston, turboprop and jet engines; Brayton cycle and its application to gas turbine engines; use of propellers and jets for production of thrust; comparative merits and limitations of different types of propulsion engines; principle of thrust augmentation.	10
4	Aircraft Stability: Forces on an aircraft in flight; static and dynamic stability; longitudinal, lateral and roll stability; necessary conditions for longitudinal stability; basics of aircraft control systems. Effect of flaps and stats on lift, control tabs, stalling, gliding, landing, turning, aircraft manoeuvres; stalling, gliding, turning. Simple problems on these. Performance of aircraft – power curves, maximum and minimum speeds for horizontal flight at a given altitude; effect of changes in engine power and altitude on performance; correct and incorrect angles of bank; aerobatics, inverted manoeuvre, manoeuvrability. Simple problems.	10
5	Aircraft Systems: Mechanical systems and their components; hydraulic and pneumatic systems; oxygen System; environmental Control System; fuel system. Electrical systems, flight deck and cockpit systems; navigation system, communication system. Aircraft	10

	systems (Mechanical) – hydraulic and pneumatic systems and their applications; environment control system; fuel system, oxygen system. Aircraft systems (Electrical) – flight control system, cockpit instrumentation and displays; communication systems; navigation systems; power generation systems – engine driven alternators, auxiliary power Module, ram air turbine; power conversion, distribution and management. .	

Text Books:
1. Anderson, J.D., "Introduction to Flight", McGraw-Hill, 1995
2. Lalit Gupta and Dr. O. P. Sharma: Fundamentals of Flight Vol-I to VolIV Himalayan Books, 2006
Reference Books:
1Kermode, A.C., "Flight without Formulae", McGraw-Hill, 1997. Hill, 1993. Education, 2005.
2. Kroes, Michael J and Rardon, James R "Introduction to Aircraft Basic Science", 7thEdition, Macmillan / McGraw

COURSE PLAN

2.1 Course Outcomes:

	Student will be able to
C.202.1	Describe the classification and working principles of flight vehicles.
C.202.2	Apply the concepts of fundamentals of flight and aerodynamics during the development of aircraft.
C.202.3	Compare the propulsive devices and its techniques used in aircraft industries
C.202.4	Analyze the motions of an aircraft based on its stability conditions.
C.202.5	Understand the mechanical and electrical based systems used in aircrafts and its working principles.

2.2 Validation of Course Outcomes

	CL	CH	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C202.1	R	**10**	**5**	**1**	-	-	-	-	-	-	-	-	-	-	**4**	-
C202.2	U	**10**	**3**	**2**	-	-	-	-	-	-	-	-	-	-	**2**	**3**
C202.3	U	**10**	**2**	**2**	-	-	-	**2**	-	-	-	-	-	-	**2**	**2**
C202.4	Ev	**10**	**2**	**3**	**2**	-	-		-	-	-	-	-	-	**2**	**1**
C202.5	AP	**10**	**2**	-	**2**	-	-	**2**	-	-	-	-	-	-	**2**	**2**

Note:CL:Cognitive Level;CH: Class Hours

- If ≥30% of Class Hours addressing a particular PO, it is considered that PO is addressed at Level 3
- If 15 to 30% of Class Hours addressing a particular PO, it is considered that PO is addressed at Level 2
- If <15% of Class Hours addressing a particular PO, it is considered that PO is addressed at Level 1

2.3Mapping of COs with POs

CO-PO matrices: **Correlation Levels:**1: Low 2: Medium 3: High

Program Outcomes	Engineering Knowledge	Problem Analysis	Design Development	Investigations	Modern Tools Usage	Engineer and Society	Environment and Sustainability	Ethics	Individual and Team work	Communication	Project Management	Life Long Learning
Course Outcome	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
C.202.1	**3**	**1**	-	-	-	-	-	-	-	-	-	-
C.202.2	**3**	**2**		-	-	-	-	-	-	-	-	-
C.202.3	**2**	**2**	-	-	-	**2**	-	-	-	-	-	-
C.202.4	**2**	**3**	**2**	-	-		-	-	-	-	-	-
C.202.5	**2**		**2**	-	-	**2**	-	-	-	-	-	-
Target(AVG)	**2.4**	**2**	**2**	-	-	**2**	-	-	-	-	-	-

2.4 Mapping of COs with PSOs

Course Outcomes	PSO1	PSO2
C.202.1	**3**	**-**
C.202.2	**2**	**3**
C.202.3	**2**	**2**
C.202.4	**2**	**1**
C.202.5	**2**	**2**
Target(AVG)	**2.2**	**2**

2.5 Methodology for CO Assessment

The course outcome assessments are carried out by two methods:

a. Direct method

b. Indirect method

2.5.1 Direct method of assessment

Sl No	Assessment method	Weightage	Justification
1	Formative assessment	0.4	Continuous Internal Assessment (CIA)
2	Summative assessment	0.6	Semester End Exam conducted by University (SEE)

- **Formative assessment**

The Formative assessment tools to be used for 2017-18 are as follows

SI.No.	Tool	Frequency	Weightage
1	Internal assessment (IA)	3	0.75
2	Assignment/ Seminar/Quiz/Unit test	1	0.25

- **Summative Assessment**

Measuring Course Outcomes attained through performance in University Semester End Examination (SEE)

Sl No	Tool	Frequency	Details of Measurement
1	SEE	At the end of each semester	Performance in SEE measured using attainment level

2.5.2 Indirect method of assessment

Indirect attainment of COs is determined from Course Exit Survey of the respective courses. The course exit survey from more than 60% of students is taken for the individual COs at the end of the respective semester.

❖ **Course Exit Survey (CES) Questionnaire**

Q No	Question	Good	Fair	Average	Poor
		3	2	1	0
1	Rate yourself in understanding different types of aircraft and its services				
2	Rate yourself in understanding the different classification of aircraft and the materials used				
3	How good are you in aerodynamics and its flow concepts?				
4	Are you confident about the forces and moments created by a flow field over arbitrary bodies?				
5	How do you rate yourself in understanding the concepts of Aircraft Propulsion systems and its merits and demerits				
6	Rate your knowledge level on aircraft propulsion and its techniques.				
7	Evaluate yourself over the concepts of aircraft stability and control.				
8	Rate yourself about the maneuverability.				
9	How confident are you in aircraft mechanical systems and its working principle?				
10	How good are you at aircraft instrumentation and electrical systems?				

3. Course Execution (Do Process)

❖ Teaching Learning Materials [Hard or Soft Copy of Notes]
❖ Academic record
❖ Attendance Register/Status
❖ Question Papers of IA tests, SEE Question Paper etc.
❖ Scheme and solution of IA etc.

4. Attainment Calculation

4.1 Assessment Tools defined

- Continuous Internal Assessment (CIA)
- Semester End Examination (SEE)

4.2 Assessment data

SUBJECT NAME		EOA	Number of students in the course						65
SUBJECT CODE		17AE32							
S.N	USN	Student's Name	T1	T2	T3	IA Avg	ASSIGN	TOTAL	SEE
1	4MT17AE001	AAMNA ASLAM	16	8	15	13	10	**23**	**21**
2	4MT17AE002	ABDUL ZUNAID	14	A	12	9	10	**19**	**21**
3	4MT17AE003	ADARSH T S	19	14	14	16	10	**26**	**21**
4	4MT17AE004	AKASH KIRAGI	12	17	12	14	10	**24**	**21**
5	4MT17AE005	AKSHAY KAMATH	18	18	5	14	10	**24**	**23**
6	4MT17AE006	AMARESH WAVARE	10	A	13	9	10	**19**	**23**
7	4MT17AE007	APOORVA B R	25	16	14	18	10	**28**	**21**
8	4MT17AE008	KOTIAN ASHISH	15	10	9	12	10	**22**	**14**
9	4MT17AE009	CALVIN JOSEPH	16	23	17	19	10	**29**	**24**
10	4MT17AE010	CHARAN J	14	10	18	14	10	**24**	**25**
11	4MT17AE011	DSOUZA DELSON	18	15	16	16	10	**26**	**21**
12	4MT17AE013	FAYUNA	27	15	12	18	10	**28**	**21**
13	4MT17AE014	GOURI PRADEEP	30	20	21	24	10	**34**	**27**
14	4MT17AE015	INAYAT ULLAH	20	23	27	23	10	**33**	**23**
15	4MT17AE016	JAVEED A	18	18	15	17	10	**27**	**21**
16	4MT17AE017	JAYANTHA	21	13	22	19	10	**29**	**22**
17	4MT17AE018	KAVYASHREE C M	16	14	18	16	10	**26**	**24**
18	4MT17AE019	KIRAN K	24	15	15	18	10	**28**	**23**
19	4MT17AE020	KRISHNA Y S	19	16	21	19	10	**29**	**43**
20	4MT17AE021	MADHUKIRAN N	9	12	8	10	10	**20**	**16**
21	4MT17AE022	MAHANTESH M E	14	16	23	18	10	**28**	**24**
22	4MT17AE023	MANJUSHREE D	24	23	28	25	10	**35**	**27**
23	4MT17AE024	MANJOJ KUMAR B N	20	18	18	19	10	**29**	**17**
24	4MT17AE025	MOHAMMED OBAIS	20	12	10	14	10	**24**	**21**
25	4MT17AE026	MOHD. THANHEEM	19	16	15	17	10	**27**	**21**
26	4MT17AE027	MOHAMMED ZAHUR	29	18	19	22	10	**32**	**26**
27	4MT17AE028	MUTTAPPA AGASAR	21	15	14	17	10	**27**	**24**

28	4MT17AE029	NIHAL RAJESH	19	13	15	16	10	**26**	**23**
29	4MT17AE030	NITHYASHREE U	19	17	17	18	10	**28**	**21**
30	4MT17AE031	PAVAN KUMAR E	23	7	8	13	10	**23**	**21**
31	4MT17AE032	PRACHI SAHU	25	23	25	24	10	**34**	**23**
32	4MT17AE033	PRAJWAL DSA	18	21	22	20	10	**30**	**21**
33	4MT17AE034	PRAKHYATH M S	21	17	23	20	10	**30**	**23**
34	4MT17AE035	PRATAP	17	15	24	19	10	**29**	**21**
35	4MT17AE036	PREETHIKA SHIFALI	23	22	18	21	10	**31**	**24**
36	4MT17AE037	RAHUL	27	16	27	23	10	**33**	**23**
37	4MT17AE038	RAHUL UPADYA R	20	13	9	14	10	**24**	**26**
38	4MT17AE039	RAKSHIJA J	10	24	17	17	10	**27**	**21**
39	4MT17AE040	RASHID AHMED	25	14	7	16	10	**26**	**21**
40	4MT17AE041	JERE RIDDHI	19	19	18	19	10	**29**	**23**
41	4MT17AE042	SAPALYA T S	26	19	21	22	10	**32**	**24**
42	4MT17AE043	SARIN C S	25	20	14	20	10	**30**	**24**
43	4MT17AE044	SHAHID FAROOQ	24	23	28	25	10	**35**	**30**
44	4MT17AE045	SHASHWATH K	25	17	23	22	10	**32**	**21**
45	4MT17AE046	SHIVASHANKAR	14	16	18	16	10	**26**	**23**
46	4MT17AE047	SHREYA S	30	23	24	26	10	**36**	**29**
47	4MT17AE049	S M SHANTH KUMAR	17	10	10	12	10	**22**	**24**
48	4MT17AE050	SRISHA K J	22	19	21	21	10	**31**	**23**
49	4MT17AE051	SUSHANTH S	18	19	23	20	10	**30**	**23**
50	4MT17AE052	SUSHMITHA	15	24	14	18	10	**28**	**23**
51	4MT17AE053	T J UMAR FAROOQ	17	12	14	14	10	**24**	**21**
52	4MT17AE054	TANIYA SARKAR	27	19	27	24	10	**34**	**23**
53	4MT17AE055	THANUSHRI H	15	18	9	14	10	**24**	**25**
54	4MT17AE056	VENKATESH P K	20	19	20	20	10	**30**	**21**
55	4MT17AE057	VIKAS N	17	20	15	17	10	**27**	**23**
56	4MT17AE058	VINAYKUMAR D P	19	15	13	16	10	**26**	**21**
57	4MT17AE059	VISHAL	19	24	21	21	10	**31**	**23**
58	4MT17AE060	VISHNU KUSHAL P	21	11	15	16	10	**26**	**21**

59	4MT17AE061	YAJNESHA G	23	22	30	25	10	**35**	**34**
60	4MT17AE062	YUKTHA N GOWDA	27	25	25	26	10	**36**	**21**
61	4MT17AE063	ZAYAN S M	21	17	15	18	10	**28**	**22**
62	4MT16AE003	AKASH KARIAPPA	17	A	-	-	-	-	-
63	4MT17AE064	SADHWI PADIVAL	21	14	13	16	10	**26**	**24**
64	4MT16AE057	UMESH KUMAR P	13	4	12	10	10	**20**	**17**
65	4MT16AE022	JUNAID M J	13	A	13	9	10	**19**	**21**

Class Average in SEE=22.06

4.3 Attainment in SEE

Subject Name	No of students appeared for SEE	Class Average Marks in SEE	Number of Students scoring above Class Average in SEE	Percentage of students scored above Class Average	Attainment level (ALE)
Elements of Aeronautics	**65**	**22.06**	**36**	**55.38**	**2**

If percentage of students scored above class Average in **Semester EndExamination (SEE)** is

- ≥60% Attainment level is 3
- Else if <60% but ≥50% Attainment level is 2
- Else if <50% but ≥40% Attainment level is 1
- Else Attainment level is 0

4.4 Over all CO Attainment

	% of students scored >=60% IA	Attainment level through IA	Percentage of students scored above Class Average	Attainment level (ALE) THROUGH SEE	Direct CO = 0.6*SEE+0.4*CIA	Direct CO Attainment level (DAL)
CO1	**71.72**	**3**	**55.38**	**2**	**58.65**	**2.00**
CO2	**91.39**	**3**	**55.38**	**2**	**62.59**	**3.00**
CO3	**69.26**	**3**	**55.38**	**2**	**58.16**	**2.00**
CO4	**96.88**	**3**	**55.38**	**2**	**63.68**	**3.00**
CO5	**89.77**	**3.00**	**55.38**	**2**	**62.26**	**3.00**
Avg.	**83.80**	**3.00**	**55.38**	**2.00**	**61.07**	**2.60**

Average Direct CO Attained=2.60

Note:

- if value obtained in the column Direct CO attainment is>=**60% T**he CO Attainment level is 3
- Else if value obtained in the column Direct CO attainment is<**60%**but>=50%The CO Attainment level is 2

- Else if value obtained in the column Direct CO attainment is <5**0%**but>=40%The CO Attainment level is 1
- Else The CO Attainment level is 0

4.5 Gap Identification

CO	Direct CO attainment = 0.6*SEE+0.4*CIA	Target	Observation
CO1	**58.65**	**60**	Target Not attained
CO2	**62.59**	**60**	Target attained
CO3	**58.16**	**60**	Target Not attained
CO4	**63.68**	**60**	Target attained
CO5	**62.26**	**60**	Target attained

4.6 Direct CO Attainment Level

Target Level	Attainment Level	Observations
3	2.60	85% ATTAINED

4.7 PO Attainment-Direct

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Target	**2.40**	**2.00**	**2.00**			**2.00**							**2.20**	**2.00**
PO Attained	**1.46**	**1.23**	**1.26**			**1.20**							**1.34**	**1.23**
Normalized Value	**0.61**	**0.61**	**0.63**			**0.60**							**0.61**	**0.62**

4.8 PO Attainment-Indirect

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Target	2.40	2.00	2.00			2.00							2.20	2.00
PO Attained	**1.95**	**1.63**	**1.59**			**1.61**							**1.79**	**1.60**
Normalized Value	**0.81**	**0.81**	**0.80**			**0.80**							**0.82**	**0.80**

4.9 Overall PO Attained

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Target	**2.40**	**2.00**	**2.00**			**2.00**							**2.20**	**2.00**
PO Attained	1.56	1.31	1.33			1.28							1.43	1.30
Normalized Value	**0.65**	**0.65**	**0.66**			**0.64**							**0.65**	**0.65**

5. Action

Sl . No	Course Outcomes	Target	Attainment	Action Proposed to bridge the Gap
1	C.202.1	3	2.00	More emphasis can be given towards basics of aircrafts
2	C.202.2	3	3.00	Target achieved
3	C.202.3	3	2.00	Propulsion topics can be explained more through videos
4	C.202.4	3	3.00	Target achieved
5	C.202.5	3	3.00	Target achieved

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9. PO/ PSO ATTAINMENT DETAILS

Sample PO/PSO attainment presented for the Aeronautical Engineering Programme

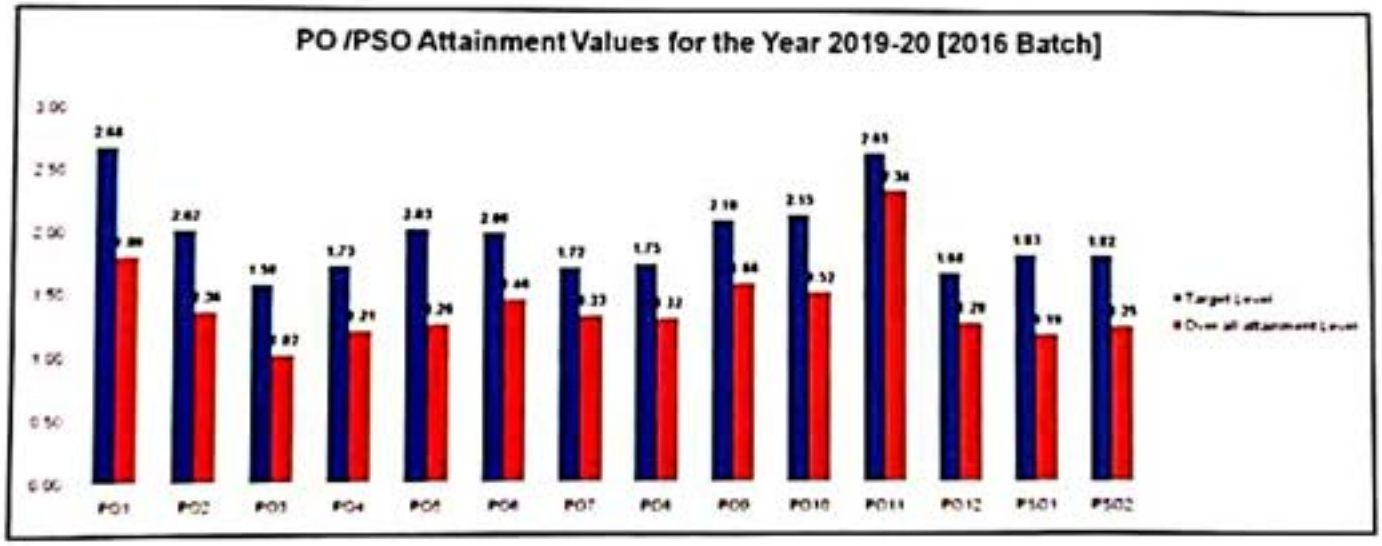
MANGALORE INSTITUTE OF TECHNOLOGY AND ENGINEERING

(An ISO 9001 :2015 Certified Institution)

Department of Aeronautical Engineering

PO/PSO Attainment for the Academic Year 2019-20 [2016 Batch Students]

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Target Level	2.68	2.02	1.58	1.73	2.03	2.00	1.72	1.75	2.10	2.15	2.65	1.68	1.83	1.82
Direct attainment Level	1.74	1.28	0.99	1.12	1.26	1.45	1.44	1.25	1.47	1.64	2.30	1.28	1.12	1.23
Indirect attainment level	2.39	1.82	1.39	1.62	1.42	1.62	1.53	1.37	1.95	2.10	2.76	1.61	1.55	1.52
Over all attainment Level	1.80	1.36	1.02	1.21	1.26	1.46	1.33	1.32	1.60	1.52	2.34	1.28	1.19	1.25



HOD-AE

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