

# DEPARTMENT OF

# MECHANICAL ENGINEERING

Accredited by Institution of Engineers (India)

Saintgits College of Engineering Kottukulam Hills, Pathamuttom P 0, Kottayam

> Department Handbook 2015-16

#### Personal Profile

Name.

Designation:

Contact No. :

E-mail ID :

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#### ABOUT MECHANICAL ENGINEERING

Mechanical Engineering is a versatile branch encompassing the dimensions of all other engineering branches viz. Structural Engineering, Electrical Engineering, Robotics Engineering, Mechatronics, and Energy Science & Engineering. The Mechanical Technology which drives various machines around the globe is undoubtedly a rudimentary one. In present scenario Mechanical Engineering incorporates and makes use of the developments in the Electronics and Information Technology field in order to reign as the most productive and beneficial realm of Engineering.

#### ABOUT THE DEPARTMENT

The Mechanical Engineering Department was established in the year 2002 with an intake of 66 students. The four year B.Tech course consists of 8 semesters integrated with theoretical and practical sessions. Currently the yearly intake is 120 students and they are allocated in 2 batches, ME - A & ME - B. M.Tech course in Machine Design was started in 2008 with a yearly intake of 18 students. Add-on courses on modelling and analysis software are being conducted for the UG students. In addition, coaching for GATE and other competitive examinations is also conducted by the department for pre-final & final year students.

#### 2. VISION, MISSION, PEOS & PROGRAM OUTCOMES

#### 3.1 Vision

Transforming young minds into motivated, quality aware and environment - conscious technocrats.

#### 3.2 Mission

Educating the students to excel professionally by:

- Providing facilities and environment conducive to a high quality education.
- Cultivating the spirit of entrepreneurship, applied research and responding effectively to the needs of the industry.
- Emphasizing the values of leadership, contributing to economic development, protecting the environment and improving the quality of human life.

# 3.3 Programme Educational Objectives (PEOs)

After 3 to 5 years of completion of the graduation, our graduates will be able to:

- 1. <u>Enhance Professional Capability</u> They will apply mathematical, scientific and engineering principles for analyzing and solving mechanical engineering problems.
- 2. Excel technically and foster continued learning They will be competent to design and develop meaningful solutions for efficient utilization of man, machine, money and materials, using modern techniques and tools and nurture continuous learning.
- 3. <u>Address Social, Ethical and Environmental Concerns</u> They will deal with social, ethical and environmental concerns in technological advancements.
- 4. <u>Enrich Essential Management Skills</u> They will augment management skills along with teamwork and effective communication for successful completion engineering projects.

#### 3.4 Program Outcomes (POs)

PO's describe what students are expected to know or be able to do by the time of graduation from the program. The Graduate Attributes of UG in Mechanical Engineering are:

- 1. <u>Engineering Knowledge</u> -Apply knowledge of mathematics, science, and engineering fundamentals to the conceptualization of science and engineering models.
- 2. <u>Problem Analysis</u> Identify, analyze, formulate and research literature to interpret data for Mechanical Engineering problems using first principles of mathematics and engineering sciences.
- 3. <u>Design / Development of solutions</u> Design solutions for Mechanical Engineering problems and develop systems, components or processes that meet specified requirements.
- 4. <u>Conduct investigations of complex problems</u> Conduct investigations, analyses and interpretation of data, and synthesis of information to arrive at valid conclusions to complex Mechanical Engineering problems.
- 5. <u>Modern Tool Usage</u> Demonstrate skills to select and apply modern engineering tools, understanding the constraints, using appropriate techniques.
- 6. <u>Engineer & Society</u> Demonstrate understanding of the societal and legal issues and the consequent responsibilities relevant to engineering practice.
- 7. Environment & Sustainability Understand the impact of engineering solutions in an environmental context and demonstrate knowledge of and need for sustainable development.

- 8. Ethics Follow professional ethics with consequent responsibilities relevant to norms of engineering practice.
- 9. <u>Individual & Team Work</u> Perform effectively as an individual, and as a member or leader in diverse teams, in multi-disciplinary settings as well.
- 10. <u>Communication</u> Communicate technical ideas effectively with the engineering community and society by oral and written means.
- Project Management and Finance Manage a project effectively, understanding the limitations of general business practices including risk and finance management.
- 12. <u>Life-long Learning</u> Engage in independent and life-long learning to meet global technological challenges.

#### 3. ACADEMIC COMMITEES:

#### 4.1 Department Advisory Board (DAB)

The Department Advisory Board consists of members of the management, senior faculties, Coordinators, Industry resource persons and Alumni.

4.2 Programme Advisory Committee (PAC)			
1	Dr. Sreejith C C	Professor & Head of Department	
2	Dr. M D Mathew	Professor, Dean (PG & RS)	
3	Paulson T J	Professor	
4	Dr. Jason Cherian Issac	Professor	
5	Sajan Thomas	Professor	
6	Muruganantham P	Associate Professor	
7	G Anil Kumar	Associate Professor	
8	George T S	UG & NBA Coordinator	
9	Sailesh K S	PG Coordinator	
10	Vineeth V.K	Thermal Stream Coordinator	
11	Francis Augustine Joseph	Design Stream Coordinator	
12	Bibin Varkey	Production Stream Coordinator	
13	Sajeev A	Industrial Stream Coordinator	

#### Department Strength

Faculty	37	Professor - 5, Associate Professor - 2, Assistant Professor - 30
Technical Staff	9	Lab Instructor - 3, Trade Instructor - 6
<b>UG</b> Students		[S1 -126 , S3/4 - 126, S5/6 – 126, S7/8 -126]
PG Students		[S1 – 2, S3 –4, S4 – 17 ]

#### 4. DEPARTMENT ADMINISTRATION

Head of the Department:

Dr. Sreeiith C C

Ext: 222 Mobile: 9446321253 E-Mail: hodme@saintgits.org, sreejith.cc@saintgits.org

Dr. Sreejith C. C secured his PhD in Fluidized Bed Gasification and Combustion of renewable Fuels from National Institute of Technology Calicut (NITC). He is an M. Tech holder in Refrigeration and Air Conditioning possessing 9 years teaching and 4 years research experience. His research areas of interest include Energy System Optimization, Modelling of Multi-Phase Flows, Computational Fluid Dynamics, IC Engine Simulation, Absorption/Adsorption Refrigeration and Nano-additives in IC Engine Fuels.

He teaches U G subjects under thermal streams like Thermodynamics, IC Engines & Combustion, Refrigeration & Air conditioning, Thermal Engineering and Cryogenics besides basic subjects such as Fluid Mechanics and Hydraulic Machines. He has to his credit, 12 journal papers in peer reviewed International Journals like Fuel Processing Technology, Energy (Elsevier), International Journal of Sustainable Energy, International Journal of Green Energy, International Journal of ambient Energy (Taylor & Francis), Biomass Conversion & Bio-refinery, International Journal of Energy & Environmental Engineering (Springer). He has presented & conference papers in reputed International Conferences organized by IIT Chennai, IIT Kharagpur, NIT Trichy and NIT Calicut.

He is a regular reviewer of International Journal of Green Energy (Taylor & Francis) and Energy & Fuels (American Chemical Society, ACS). He is in the editorial panel of journals such as IRSN Renewable Energy (Hindawi), ISRN Thermodynamics (Hindawi) and Chemical & Environmental Engineering Advances. He is a member of the state level managing committee (SMC) of the ISTE, Kerala Section.

UG Programme Coordinator	Mr. George T S
PG Programme Coordinator	Mr. Sailesh K S
NBA Coordinator	Mr. George T S
Chief Coordinator (Staff Advisory System)	Mr. Nirmal Chandran
Chief Lab Coordinator	Mr. Philip Jacob Perakathu

#### 6.1 TEACHING FACULTY

0.1	TEACHING FACO	LII				
No.	NAME	DESIGNATION	CONTACT	E-MAIL	SEATING	EXTN
1	Dr. M D Mathew	Professor	9496216954	dean.pg@saintgits.org	Administrative Block	505
2	Paulson T J	Professor	9995068850	paulson.tj@saintgits.org	Main Staff Room	220
3	Dr. Jason Cherian Issac	Professor	9447733536	jason.cherian@saintgits.org	Main Staff Room	228
4	Sajan Thomas	Professor	9847418708	sajan.thomas@saintgits.org	Main Staff Room	225
5	Muruganantham P	Associate Professor	9995554466	muruganantham.p@saintgits.org	Administrative Block	504
6	G Anil Kumar	Associate Professor	9447475484	anilkumar.g@saintgits.org	Main Staff Room	226
7	Joseph K C	Assistant Professor	9946557283	joseph.kc@saintgits.org	Main Staff Room	223
8	Vinay Mathew John	Assistant Professor	9562474851	vinay.mathew@saintgits.org	Ramanujam Block	
9	Jenny John Mattam	Assistant Professor	9947130129	jenny.john@saintgits.org	Main Staff Room	221
10	Cherian Paul	Assistant Professor	9446093480	cherian.paul@saintgits.org	Main Staff Room	
11	Francis Augustine Joseph	Assistant Professor	9447780190	francis.augustine@saintgits.org	Main Staff Room	233
12	Sivasubramanian P	Assistant Professor	9746251316	sivasubramanian.p@saintgits.org	Main Staff Room	233
13	Parvathy Venugopal	Assistant Professor	9645554414	parvathy.venugopal@saintgits.org	Second Floor	
14	Nirmal Chandran	Assistant Professor	9809885578	nirmal.chandran@saintgits.org	Second Floor	
15	Sajeev A	Assistant Professor	9497555873	sajeev.a@saintgits.org	Main Staff Room	233
16	Manoj Balakrishnan	Assistant Professor	9746613228	manoj.balakrishnan@saintgits.org	Main Staff Room	233
17	Sailesh K S	Assistant Professor	8281203835	sailesh.ks@saintgits.org	Main Staff Room	233
18	Philip Jacob Perakathu	Assistant Professor	8547113377	philip.jacob@saintgits.org	Ground Floor	228
19	Nikhil Ninan	Assistant Professor	9447324960	nikhil.ninan@saintgits.org	Third Floor	229
20	George T S	Assistant Professor	8547553377	george.ts@saintgits.org	Main Staff Room	233
21	Tom Mathew	Assistant Professor	9496321244	tom.mathew@saintgits.org	Main Staff Room	232
22	Tobin Thomas	Assistant Professor	9447789472	tobin.thomas@saintgits.org	Main Staff Room	232
23	Liju Mathew Alexander	Assistant Professor	9446683056	liju.mathew@saintgits.org	Main Staff Room	232
24	Arun K Varghese	Assistant Professor	9744254337	arun.k@saintgits.org	Main Staff Room	232

25	Nandu S	Assistant Professor	9495732273	nandu.s@saintgits.org	Main Staff Room	231
26	Bibin Varkey	Assistant Professor	9744985939	bibin.varkey@saintgits.org	Ground Floor	228
27	Aju Zachariah Mani	Assistant Professor	8547463001	aju.zachariah@saintgits.org	Main Staff Room	232
28	Davis Wilson	Assistant Professor	9846398091	davis.wilson@saintgits.org	Main Staff Room	231
29	Sreejith R	Assistant Professor	9496333622	sreejith.r@saintgits.org	Main Staff Room	231
30	Vineeth V K	Assistant Professor	9846284836	vineeth.vk@saintgits.org	Main Staff Room	231
31	Nisthul G	Assistant Professor	9895825143	nisthul.g@saintgits.org	Main Staff Room	231
32	Harikrishnan K R	Assistant Professor	9495377593	harikrishnan.k@saintgits.org	Third Floor	229
33	Geo Sebastian	Assistant Professor	8547956714	geo.sebastian@saintgits.org	Third Floor	229
34	Sreekumar C	Assistant Professor	9567386261	sreekumar.c@saintgits.org	Main Staff Room	232
35	Easwaran Nampoothiri	Assistant Professor	9446497892	easwaran.nk@saintgits.org	Second Floor	
36	Jiju V Elias	Assistant Professor	9995213946	jiju.v@saintgits.org	Main Staff Room	233

# 6.2. TECHNICAL STAFF

0.2.	TECHNICAL OTAL					
1	Jacob Varghese	Lab Instructor	9495544568	jacob.varghese@saintgits.org	Machine Tool Lab	641
2	U Joseph	Trade Instructor	9544737796	joseph.u@saintgits.org	FM Lab	671
3	Jose N J	Trade Instructor	9446388242	jose.nj@saintgits.org	Machine Tool Lab	641
4	Jose Chakkalackal	Trade Instructor	9447850503	jose.cchackalackal@saintgits.org	Machine Tool Lab	641
5	Baiju Kurian	Trade Instructor	9497819020	baiju.kurian@saintgits.org	Lab Staff Room	631
6	Rajeev K A	Lab Instructor	9495543604	rajeev.ka@saintgits.org	Lab Staff Room	632
7	Benny M C	Trade Instructor	9446909477	benny.mc@saintgits.org	CNC Laboratory	641
8	Nidheesh K K	Trade Instructor	9946007093	nidheesh.kk@saintgits.org	Main Staff Room	661
9	Vipinkumar P Gopinath	Lab Instructor	9995083875	vipinkumar.p@saintgits.org	Research Lab	

## 7. LABORATORIES & FACULTY IN CHARGE

LAB	FACULTY-IN-CHAR	GE TECHNICAL STAFF
Chief Lab Coordinator	Philip Jacob Perakathu	
FM & HM LAB	Sajeev A	U Joseph
Machine Tool Lab	Liju Mathew	Jacob Varghese, Jose N J, Benny M C
CAD LAB	Arun K Varghese	
CNC Lab	Jenny John Mattam	Benny M C
Heat Engines Lab	Nandu S	Nidheesh K K
Adv. Machine tool lab	Liju Mathew	Jacob Varghese , Benny M C, Jose C
Heat Transfer lab	Geo Sebastian	Baiju Kurian
Mechanical Engg. Lab	Tom Mathew	Rajeev K A
Measurements lab	Tobin Thomas	Rajeev K A
Research lab	Dr. Sreejith C C	Vipinkumar P Gopinath
Project lab	Bibin Varkey	Vipinkumar P Gopinath
PG Lab	Nirmal Chandran	Rajeev K A

# 8.1. STAFFROOMS

STAFF ROOM	ROOM No.
Main Staff Room (First Floor)	CLC 201
Staff Room I (Ground Floor)	CLC 104
Staff Room II (Second Floor)	CLC 304
Staff Room III (Third Floor)	CLC 405

# 8.2. CLASSROOMS

BATCH	ROOM No.
\$1, \$2 ME A	AB 211
S1, S2 ME B	AB 108
S3, S4 ME A	CLC 301
S3, S4 ME B	CLC 101
S5, S6 ME A	CLC 302
S5, S6 ME B	CLC 102
S7, S8 ME A	CLC 303
S7, S8 ME B	CLC 103
First Year M.Tech	CLC 402
Second Year M.Tech	CLC 403

#### 9. Departmental Organization

#### 9.1. Technical Stream Coordinators

The roles and responsibilities of the stream coordinator are as follows:

- 1. Coordinate and supervise the faculty teaching the particular course in the stream
- 2. Responsible for assessment of the course objectives and outcomes
- 3. Recommends and facilitates workshops, faculty development programmes, meetings or conferences to meet the course outcomes
- 4. Analyzes results of particular course and recommends the programme coordinator and/or Head of the Department for appropriate action
- 5. Liaises with students, faculty, programme coordinator and Head of the Department to determine priorities and policies.

STREAM COORDINATORS	
Thermal Stream	Mr. Vineeth V K
Design Stream	Mr. Francis Augustine Joseph
Production Stream	Mr. Bibin Varkey
Industrial Stream	Mr. Sajeev A

#### 9.2. PG Programme Coordinator

Major Responsibilities of department PG Coordinator

- 1. Coordinates the academic activities of the Post Graduate Program in Machine Design
- 2. Monitor the course delivery and make suggestions for improvement.
- 3. Ensure the progress of the course delivery according to the lesson plan & course handouts
- 4. Ensure proper mentoring system for PG students by coordinating the staff advisors of various PG classes
- 5. Conduct the internal examinations and finalize the internal marks.
- 6. Ensure the quality of the Master's Thesis work and manuscripts extracted from the thesis are published in journals and conferences.
- 7. Conduct the bi-weekly meeting of the Post Graduate students and discuss the academic progress.
- 8. Ensure the adherence to the PG academic calendar.
- 9. Coordinate the preparation and communication of the project proposals formulated by the students & the respective guides for external funding.
- 10. Delegate the project advisory ship and guarantee the timely completion of the project/thesis work.

- 11. Attend the PG cluster meeting and provide appropriate direction to the PG course coordinators and thesis guides based on the decisions taken in the meeting.
- 12. Attend the college level PG coordinators' meeting by representing the department and make suggestions for improvement in PG academic curriculum.
- 13. Provide adequate and appropriate direction to the faculty members handling classes for PG in line with institute policy.
- 14. Ensure the required technical quality of the PG academic program by adopting the necessary measures and taking judicious decisions.
- Any other PG program related responsibility entrusted by the HOD from time to time

#### 9.3. Chief Coordinator (Staff Advisory System)

The Chief Coordinator (Staff Advisory System) will coordinate the activities of Chief Staff Advisor's (CSAs) by providing appropriate directions and instructions. The Chief Staff Advisors will report to the Chief Coordinator regarding the student mentoring activities and the related academic activities of the respective batch.

Major responsibilities of Chief Coordinator (Staff Advisory System) are

- 1. Direct and delegate the Chief Staff Advisors (CSAs) to carry out their assigned responsibilities and monitor the progress.
- 2. Ensure the systematic up keeping and maintenance of the student profiles in updated condition by providing suitable directions to the CSAs.
- 3. Ensure the conduct of the UG student mentoring system with utmost flawlessness and diligence.
- 4. Convene the bi-weekly meeting of the CSAs and review the effectiveness of the mentoring system.
- 5. Convene the bi-weekly meeting of the student representatives (total 16 in number) and provide proper directions to them and address the grievances of the students (personal as well as academic).
- 6. Ensure the attainment of the minimum required attendance level (live) for each student of the department and recommend for remedial measures to the respective CSAs, if find not at the satisfactory level.
- 7. Make arrangements for making available the weekly consolidated attendance sheet to the CSAs so as to publish the same on class NBs and Main NB.
- 8. Update and maintain of the registers pertaining to the staff advisory system in the department
- 9. Direct the CSAs to carry out the allotted work in time with regard to regular Staff advisory responsibility.

- 10. Identify the weak students based on the series test marks and weekly test marks (to be provided by the CSAs) and suggest for remedial measures to the CSAs and monitor the same.
- 11. Work in close coordination with 'Student Development Coordinator' of the department who will make arrangements for the students (by proper motivation) to participate in various co-curricular activities in and outside the campus and properly record them.
- 12. Play an active and effective role between the HOD and CSAs with regard to the implementation of the college level as well as department level decisions which require the active engagement of the staff advisors.
- 13. Recommend for remedial tests/remedial classes/special coaching etc. for the weak students and guarantee the improvement in the academic performance by means of continuous monitoring.
- 14. Recommend for the appropriate measures to improve the academic standards of the students (including the university examination result) which demands successive and continuous fine-tuning of the student mentoring system by providing individual attention.
- 15. Any other related responsibility which comes under the purview of staff advisory system as per the direction of the HOD, in resonance with the requirements/policy at the college level.

# 9.4. Chief Laboratory Coordinator

Chief Laboratory Coordinator will coordinate the laboratory related matters by properly guiding, directing and advising the faculty in charge of labs.

Roles and Responsibilities of Chief Laboratory Coordinator are:

- Reporting authority of all the faculty members in charge of various laboratories under the department, with regard to academic matters related to the concerned lab.
- 2. The Chief laboratory coordinator, in consultation with HOD, shall issue appropriate directions and guidelines to the faculty member(s) in charge of labs for timely processing and completion of the regular academic work.
- 3. Shall take adequate and proper initiatives to purchase / maintain the equipments / instruments required in each lab, which will be processed by the concerned faculty member in charge of the laboratory.
- 4. Ensure the systemic up keeping of all files, documents and registers, pertaining to each laboratory, in updated condition so as to present the same before the various inspection committees/teams and also before HOD/Principal/COO as and when required. Proper directions will be issued to the faculty members in charge of laboratories accordingly.

- 5. Oversee and monitor the conduct of lab examinations (both internal and university) by intimating and informing the concerned faculty members handling the laboratory classes.
- 6. Devise and implement appropriate plans and strategies with the objective of enhancing the academic quality with regard to training and learning exercise in the laboratories.
- 7. Supervise the equipment/instrument calibration process in each lab by urging the department laboratory calibration in charge and the other associated faculty members.
- 8. Entrusted to take proper and timely decision with regard to any other matter related to training / purchase / audit / HR management / file keeping / maintenance / repair of laboratory equipment / personal etc. by properly coordinating the faculty in charge of labs, in consultation with HOD.

#### 10. Class Advisory System

Each class is assigned with a Chief Staff Advisor (CSA) or Teacher in Charge. To give individual attention and help the students in matter of personal and academic importance, a class of 60 is again divided into three equal groups of 20 each under a Staff Advisor. The students can seek for both personal and academic advices of Staff Advisors. Besides, two students are elected as the class representatives.

#### Major responsibilities of Chief Staff Advisor (CSA) are:

- Co-ordination of the staff advisors for maintaining the accreditation-related files.
- 2. Consolidation of fortnightly attendance and publishing the same.
- 3. Reporting the activities and progress of the class to the respective Head of the Department.
- 4. Intimating the parents about the result of Series Examinations, University Examinations, PTA meetings etc.
- 5. Class monitoring, in order to get the feedback from the students regarding the various subjects taught during the semester.
- 6. Should monitor and consolidate the duty leaves for internal programme and forward the same to the Vice Principal / Principal.
- 7. Convene the meeting of staff advisors and reporting to Head of Department.
- 8. Conduct class committee meetings / course committee meetings of the class
- Any other academic responsibilities entrusted by the Principal/ HOD from time to time.

#### Major responsibilities of Staff Advisor (SA) are:

- 1. A friend, philosopher and advisor to the student.
- 2. Meeting the student once in a fortnight at least in normal circumstances.
- 3. Interaction with parents on academic and non-academic matters pertaining to the students in his/her group.
- 4. Ensuring the attendance of the student in class and general and total behavior including adherence to the dress code.
- 5. Grievance redressal of the students.
- 6. Maintenance of the student profile, which include the progress of the student since his/her inception in the first year.
- 7. Reporting to the Head of the Department in the fortnightly appraisal form for the first and second half of the month, through the CSA & Chief Coordinator (Staff Advisory System).
- 8. Motivating the students for co-curricular and extra-curricular activities.
- 9. Identifying the strength and weakness of students and timely action for special attention can be suggested to the Head of the Department.
- 10. Should update the attendance and marks in the website.
- 11. Any other student mentoring related duties assigned by the CSA with regard to the mentees under the SA.

"My message, especially to young people is to have courage to think differently, courage to invent, to travel the unexplored path, courage to discover the impossible and to conquer the problems and succeed. These are great qualities that they must work towards. This is my message to the young people."

- Dr. A. P. J. Abdul Kalam



# List of Chief Staff Advisors & Advisors

CLASS	CHIEF STAFF ADVISOR	STAFF ADVISORS	Student Nos.
		Geo Sebastian	01 - 21
S1/S2 A	Tobin Thomas	Jiju V Elias	22 - 42
		Tobin Thomas	43 - 63
		Nikhil Ninan	01 - 21
S1/S2 B	Nikhil Ninan	Bince Joseph (Maths)	22 - 42
		Philip Jacob Perakathu	43 - 63
		Nisthul G	01 - 21
S3/S4 A	Sreejith R	Easwaran Namboothiri	22 - 42
		Davis Wilson	43 - 63
		K C Joseph	01 - 21
S3/S4 B	Jenny John Mattam	Nandu S	22 - 42
		Vinay Mathew John	43 - 63
		Bibin Varkey	01 - 20
S5/S6 A	6 A Liju Mathew Alexander	Sajeev A	21 - 42
		Liju Mathew Alexander	43 - 62
		Francis A Joseph	01 - 21
S5/S6 B	Parvathy Venugopal	Vineeth V K	22 - 43
		Parvathy Venugopal	44 - 63
		Arun K Varghese	01 - 21
S7/S8 A	Tom Mathew	Harikrishnan K R	22 - 42
		Sivasubramaniyan P	43 - 62
		Manoj Balakrishnan	01 - 22
S7/S8 B	Aju Z Mani	Sreekumar N	23 - 41
		Aju Z Mani	42 - 62

CLASS	CHIEF STAFF ADVISOR	
S1 M.Tech	Cherian Paul	2015 Admissions
S2 M.Tech	Prof. Sajan Thomas	2014 Admissions
S4 M.Tech	Dr. Jason Cherian Issac	2013 Admissions

#### Role of Class Representatives

- To make sure that the Classroom, Black-Board, Notice board, curtains etc. are maintained properly. Besides, lights and fans should be switched off when not in use.
- 2. To report any grievances of the class to the respective SA / CSA / Chief Coordinator (SAS) / HOD.
- 3. Any other responsibility entrusted by the CSA with respect to academic and co-curricular activities

# 11. Student Representatives

## 11.1 List of Student Class Representatives

CLASS	Name of Student	Contact No.
FY ME-A	Abhishek Anil	8893707950
	Avani P R	9497247131
FY ME-B	Joseph Mathew Kurien	7356121472
111111111111111111111111111111111111111	Sravya G P	9447580234
S3, S4 ME A	Gagul Toby	8281161902
33, 34 ML A	C C Varghese	9496733991
S3, S4 ME B	Joel T Varghese	9447703954
33, 34 ML D	Ligin Jacob Abraham	9446437830
\$5, \$6 ME A	Amal Abraham	8547390513
33, 30 ML A	Joel Jacob	9895755498
S5, S6 ME B	Rohin T George	9995067552
33, 30 ML D	Nandakrishnan	8129420013
S7, S8 ME A	Brutus Martin	9633594921
37, 30 ML A	Jefin Sunny	8281787518
S7, S8 ME B	Lithin Sam Varghese	9605944418
37, 30 MED	Stephen Jose Mathew	8086247810
S2 M.Tech	Varun M P	9447357956
S4 M.Tech	Jidhin Raju	9746661860

Notes:		

# 11.2. List of Student Placement Representatives

CLASS	Name of Student	Contact No.
S3, S4 ME A	Febin P Sahib Nazeer	8891027850
33, 34 ME A	Jiddu Krishnan D	9526675663
S3, S4 ME B	Sachin Cherian Paulose	9562561472
33, 34 ME D	Nithin Berny	8547215759
S5, S6 ME A	Albin Thomas	9645597520
33, 30 ME A	Daniel Rojoy	7558065223
S5, S6 ME B	Vaisakh Padmakumar	9400085586
33, 30 ME D	Sandeep M Jayaram	8893948281
S7, S8 ME A	Anand P N	8547894113
	Geo Eucharist James	8891320465
S7, S8 ME B	Manu P Nair	9496005992
	Joseph T Daniel	9544610419

# 11.3. IEDC-Innovation and Entrepreneurship Club Members

CLASS	Name of Student	Contact No.
S3, S4 ME A	Ameen M Azhar	9497322699
	Arun Kumar S	9497619118
C2 C4 NAT D	Manu Thomas Mathai	9495100768
S3, S4 ME B	Sobin Biju Mathew	9539993769
\$5, \$6 ME A	Joel George Thomas	8129655135
	Akhil V Thomas	8129068999
S5, S6 ME B	Tharun Thomas	9048646881
	Nithin Viswanath	9495154077

# 11.4. Start-up Bootcamp Representatives

CLASS	Name of Student	Contact No.
S3, S4 ME A	Adrian Isidore Felix	9495964747
S3, S4 ME B	Kurian V Kurian	9495914650
S5, S6 ME A	Harikrishnan M	9895783106
S5, S6 ME B	Tharun Thomas	9048646881

# 11.5. List of Student Members to the Course Committee (S1 B.Tech)

Code	Subject	Branch / Batch	Name of Student
MA 101	Calculus	ME-A	Danil John Mathews
MATOT		ME-B	Muhammed Suhail
CY100	Engineering Chemistry	ME-A	Bibin Thomas Jacob
C1100	Engineering Chemistry	ME-B	Joacy Issac
BE 100	Engineering Machanias	ME-A	Anto Francis
DL 100	Engineering Mechanics	ME-B	Sreyas M S
		ME A	Adithya C Vinod
BE101-02	Introduction to Mechanical Engineering	ME A	Ajoon Shaji
DE 101-02		ME B	Sruvya G P
		ME B	Tony V Raju
BE103	Sustainable Engineering	ME-A	Aswin Ajay
DL 100	Sustainable Engineering	ME-B	Joseph Mathew
EE 100	Basics of Electrical	ME-A	Aswin K S
LLTOO	Engineering	ME-B	Neethu Thomas
CY110	Chemistry Lab	ME-A	Arjun P K
CITIO		ME-B	Melvin V M
ME110	Basic Mechanical	ME-A	Arjun V A
METTO	Engineering Workshop	ME-B	Maneesh Mohan
EE 1 10	Basic Electrical Engineering Workshop	ME-A	Deepak R Krishnan
LLIIO		ME-B	Sandra Maria John

# 12. Department & Institutional Responsibilities of Faculty Members

DEPARTMENT RESPONSIBILITIES		
PG Coordinator	Sailesh K S	
UG Coordinator	George T S	
NBA Coordinator	George T S	
Chief Coordinator (Staff Advisory System)	Nirmal Chandran V M	
Chief Lab Coordinator	Philip Jacob Perakathu	
Staff Secretary& Treasurer	Nikhil Ninan	
Association Staff in charge	Tom Mathew	
International collaboration	Dr. Jason Cherian Issac	
ISO Coordinator	Sajeev A	
SAE Collegiate club	Bibin Varkey	
SAE BAJA Faculty	Francis A J, Bibin Varkey	
PG Seminar & Project Coordinator	Dr.Jason Cherian Issac	
UG Project Coordinator	Aju Z Mani	
UG Seminar Coordinator	Aju Z Mani	
Semester Project Coordinator	Nisthul G	
KTU Academic Coordinator & Team Member	Harikrishnan K R	
Series Exam Committee	Sivasubramanian P	
University Exam Committee Members		
<ol> <li>MG University</li> </ol>	Sailesh K S, Sivasubramanian P	
2. KTU	Sivasubramanian P	
Weekly Test Committee	Davis Wilson (Convener)	
	Harikrishnan K R, Sreekumar C	
Library in charge	Vineeth V K	
Add-on Course Coordinator	Arun K Varghese	
GATE Coaching Coordinator	Bibin Varkey	
Faculty Tour Coordinator	Aju Z Mani	
Technical talks for students	Jenny John Mattam	
Teaching Documents	Sreekumar C	
Placement Representative	Vinay Mathew John	
National Workshop	G Anil Kumar , Jenny John Mattam	
NAAC Accreditation	George T S / Nikhil Ninan	
SCIE Advisors	Vinay Mathew John / Aju Z Mani	
Workshop/STTP/FDP	Geo Sebastian / Nisthul G	
PTA Executive Committee Member	Sailesh K S	
Industry / NGO tie-ups	Arun K Varghese	
Contact person with HR Department	Nisthul G	
Editor, Dept. Hand Book	Sreejith R	
Editor, Dept. Newsletter	Tobin Thomas	
Editor, Dept. Technical Magazine	G Anil Kumar	

Time Table Coordinator	Nirmal Chandran
Dept. Infrastructure in Charge	Davis Wilson
In charge (Dept. notices / Dept. NB and related information	Nandu S
Website Updation Coordinator	Nisthul G
Moodle Coordinator	Sreejith R
Alumni Coordinator	Tobin Thomas
IIT/ Amrita Virtual Lab Coordinator	Jiju V Elias
SMS Controller	Nandu S
NSS Tech Cell Representatives	Francis A J, Davis Wilson
Online Attendance Coordinator	Parvathy Venugopal
Department Registrar	Tom Mathew
Knowledge Enhancement Programme (KEP) Coordinator	Manoj Balakrishnan

INSTITUTIONAL RESPONSIBLITIES		
Associate Registrar	Muruganantham P	
University Examination Coordinator (KTU)	G Anil Kumar	
Quiz Club	Vinay Mathew John	
KTU Audit Cell Chairman	Sajan Thomas	
SCIE Deputy Head	Vinay Mathew John	
SCE Handbook Editor	Vinay Mathew John	
NSS Programme Officer	Francis A J	

ACCREDITATION TEAM			
NBA			
1. Coordinator	George T S		
2. Core Team	Philip Jacob Perakathu, Manoj Balakrishnan Aju Z Mani		
3. Criterion Coordinators	Philip Jacob Perakathu Nikhil Ninan G Anil Kumar Arun K V Davis Wilson Aju Z Mani Manoj Balakrishnan Nisthul G		
NAAC	George T S, Nikhil Ninan		
ISO	Sajeev A		

# 13. Rules and Regulations:

#### 13.1 College Timings:

Period	First	Second	Break	Third	Fourth	
Timing	9:00 - 9:50 AM	9:50 - 10:40 AM	10:40 - 10:50 AM	10:50 - 11:40 AM	11:40 – 12:30 PM	
	Monday – Thursday: Lunch Break12:30 to 1:30 PMLunch Break					
Period	Fifth	Sixth	Break	Break Seventh		
Timing	1:30 - 2:20 PM	2:20 - 3:10 PM	3:10 - 3:20 PM	3:20 – 4:10 PM		
Friday: Lunch Break12:30 – 2:00 PMLunch Break						
Hour	Fifth	Sixth	No Break	Se	eventh	
Timing	2:00 - 2:50 PM	2:50 - 3:40 PM	No break	3:40 -	- 4:25 PM	

# 13.2 Question Paper Pattern for Semester -End Examination: (MGU, Prior to 2015 Admissions)

The question papers of semester –end examinations of  $\underline{\text{theory subjects}}$  shall be able to perform achievement testing of the students in an effective manner. The question paper shall be prepared. Duration of Semester – End examinations will be 3 hours.

- a. Covering all sections of the course syllabus
- b. Unambiguous and free from any defect/errors
- c. Emphasizing knowledge testing, problem solving & quantitative methods
- d. Containing adequate data/other information on the problem assigned
- e. Having clear and complete instructions to the candidate.

The pattern of question paper for theory subjects shall be as follows:

#### PART A:

Short answer questions

5 x 3 marks=15 marks

All questions are compulsory. There should be at least one question from each module.

#### PART B:

Analytical/ Problem solving questions

5 x 5marks=25 marks

All questions are compulsory. There should be at least one question from each module.

#### PART C:

Descriptive/Analytical/Problem solving questions

5 x 12marks=60 marks

Two questions from each module with choice to answer one question.

Maximum Total Marks:100

# 13.3 Kerala Technological University (KTU) Curriculum (2015 Admission onwards)

KTU has come into existence, controlling and regulating the technical institutions of the state with effect from 2015 – 16 academic year. The detailed regulations are given in the college handbook (Page 59-71). For further information visit <a href="https://www.ktu.edu.in">www.ktu.edu.in</a>

#### Course Committees

The course committees are formulated for monitoring the course progress.

Code	Subject	Chairman	Course Faculty
MA101	Calculus	Prof. Koshy Varghese	Prof. Josekutty Antony Mr. Siju K S Mr. Bivash K B Ms. Lekha Susan Jacob Mr. Jobin K Jose Ms. Smitha K S Mr, Kasinath K Mr. Bince Joseph Mr. Derin Raju

Code	Subject	Chairman	Course Faculty
CY100	Engineering	Prof. Sunnykutty K	Dr. Muraleedharan Pillai
C1100	Chemistry	John	Dr. R Chandrasekharan Nair

Code	Subject	Chairman	Course Faculty
BE100	Engineering Mechanics	Dr M C Philipose	Mr.Ajesh K Kottuppillil Ms.Sunitha A Daniel Ms.Sneha M Varghese
			Ms.Bennet A Ipe

Code	Subject	Chairman	Course Faculty
			Prof. Josekutty Antony
			Mr. Siju K S
			Mr. Bivash K B
			Ms. Lekha Susan Jacob
MA101	Calculus	Prof. Koshy Varghese	Mr. Jobin K Jose
			Ms. Smitha K S
			Mr, Kasinath K
			Mr. Bince Joseph
			Mr. Derin Raju

Code	Subject	Chairman	Course Faculty
RE101-	Introduction to Mechanical	Dr. Jason Cherian	Mr. Muruganantham P
02	Engineering	Issac	Mr. Vinay Mathew John

Code	Subject	Chairman	Course Faculty
		Arun G	Arun G Sankar
			Vincy Koshy
BE103 Sust	Sustainable	Prof Sajan Thomas	Nimiya Rose Joshuva
BEIUS	Engineering	Fioi Sajan Monas	Shyla Joseph
			Jinu Susan Eipe
			Roopa V

Code	Subject	Chairman	Course Faculty
			Ms. Filmy Francis
EE100	Basics of Electrical	Ms. Jisha James	Ms. Serin Zacharia
	Engineering	IVIS. JISHA JAHIES	Ms. Asha Anu Kurian
			Ms. Smitha S D

Code	Subject	Chairman	Course Faculty
CY110	Chemistry Lab	Prof. Koshy Varghese	Dr. Muraleedharan Pillai Dr. R Chandrasekharan Nair

Code	Subject	Chairman	Course Faculty
ME110	Basic Mechanical Engineering Workshop	Mr. K C Joseph	Mr. Cherian Epen

Code	Subject	Chairman	Course Faculty
			Ms. Smitha S
			Ms. Rachel Rose
			Ms. Aparna Thampi
			Mr. Deepu E Koshy
Basic Electrical Engineering Workshop	Dania Florinal		Mr. Jaison Cheriyan
	Dr. Manju Mathew	Ms. Asha Anu Kurian	
		Dr. Mariju Matriew	Mr. Rishi Menon
	Workshop		Mr. Polly Thomas
			Mr. Arun Sebastian
			Ms. Filmy Francis
			Mr. Emil Ninan
			Ms. Serin Zacharia

# 14. PLACEMENT SYLLABUS

Aptitude Syllabus for B Tech First Year			
Numerical Aptitude	Logical Reasoning	Verbal Ability	
How to Prepare for Maths; Addition & Subtraction; Multiplication & Division; Divisibility; Squaring; Cube; Square roots & Cube roots; HCF & LCM; Fractions; Decimals; Fractions; Surds & Indices	Syllogism; Blood Relation; Venn Diagram; Series Completion; Directions and senses; Coding & Decoding	Grammar Introduction; Adverbs, Adjectives; Articles & Tenses; Subject verb agreement & Preposition Articulation skills; Listening skills; Techniques to reading; Essay and precis writing; Report writing; Presentation skills	

Aptitude Syllabus for B Tech 3rd Semester			
Numerical Aptitude	Logical Reasoning	Verbal Ability	
Permutation and Combination; Probability; Ratio and Proportion; Partnership; Percentage; Average; Problems Based on Ages; Profit and Loss; Simple Interest; Compound Interest	Logical Deduction; Seating arrangement problems; Circular arrangement Problems; Inserting Missing Character	Communication; Listening skills; Reading comprehension; Presentation techniques; Group discussion; Interview skills; Technical writing skills; Curriculum Vitae; Report writing	

Aptitude Syllabus for B Tech 4th Semester		
Numerical Aptitude	Logical Reasoning	Verbal Ability
Alligation; Time and Work; Work and Wages; Pipes and Cisterns; Time and Distance; Trains; Boats and Streams; Elementary Mensuration - 1; Measurement of Areas; Elementary Mensuration - 2; Measurement of Volume and Surface Areas; Number series	Cubes and Dice; Data Sufficiency; Day Sequences; Puzzle test	Comprehension; Vocabulary Enhancement; Antonyms and synonyms; Choose the right word; One word substitutes; Subject verb agreement; Active and passive voice Tenses; Articles and prepositions; GK exercises

Aptitude Syllabus for B Tech 5th Semester		
Numerical Aptitude	Logical Reasoning	Verbal Ability
Data Analysis & Interpretation; Trigonometry; Clocks & Calendar; Chain Rule; True discount; Banker's discount	Number ranking and time sequence; Logical sequence of words; Assertion and reasoning Analogy	Speaking exercises; Conversations; Extempore; Grammar exercises; Vocabulary improvement game and exercises; Free Writing; Reading comprehension passages; Letter writing

Aptitude Syllabus for B Tech 6th Semester		
Numerical Aptitude	Logical Reasoning	Verbal Ability
Permutation and Combination; Probability; Ratio and Proportion; Partnership; Percentage; Average; Problems Based on Ages; Profit and Loss; Alligation; Time and Work; Work and Wages; Pipes and Cisterns; Time and Distance; Trains; Boats and Streams; Data Analysis & Interpretation; Clocks & Calendar; Chain Rule	Syllogism; Blood Relation; Venn Diagram; Series Completion; Directions and senses; Coding and Decoding; Logical Deduction; Seating arrangement problems; Circular arrangement Problems; Cubes and Dice; Data Sufficiency; Day Sequences; Puzzle test; Number ranking and time sequence; Logical sequence of words	Group discussion skills; Mock GD's; Interview skills; Mock Interviews; Personality development; Anger management; Corporate Grooming; Mobile phone etiquette; Dinning etiquette

Notes:	
	••
	••

# 15. GATE Coaching

The Graduate Aptitude Test in Engineering (GATE) is an all-India examination that primarily tests the comprehensive understanding of various undergraduate subjects in engineering and science. GATE is conducted jointly by the IISc and seven Indian Institutes of Technology (IIT Bombay, IIT Delhi, IIT Guwahati, IIT Kanpur, IIT Kharagpur, IIT Madras and IIT Roorkee) on behalf of the National Coordination Board – GATE, Department of Higher Education, Ministry of Human Resource Development (MHRD), Government of India. The GATE score of a candidate the relative performance level of a candidate. The score is used for admission to various post-graduate programmes (e.g. M.E, M.Tech and direct Ph.D.) in Indian higher education institutes with financial assistance provided by MHRD and other Government agencies. The score may also be used by Public sector units for employment screening purposes.

Considering the significance of the examination, the Department is offering GATE coaching to final year and pre-final year students who are interested to appear for the test at a nominal cost.

Following are the objectives of this course

- Motivate the students for self-development and be prepared to take up the challenges in research and development.
- · Rallies confidence in appearing technical competitive Examinations.
- · Equip students in mounting comprehensive subject knowledge.
- · Encourage students to pursue dream specifications.

#### 15.1 About the Class

To clear path for regular functioning of the department, GATE coaching classes are scheduled after class hour (4:15 - 5:30PM), every working day and on second & fourth Saturdays for a period of 6 months. The session is expected to begin in the first week of august. This course offers the following aids to students to get a good GATE score

- · GATE Qualified Experienced Faculty members
- Discussion and Doubt clarification of previous GATE papers
- · GATE mock tests and subjects wise tests
- Basic concept building sessions
- · General Aptitude and Mathematics development classes

Course Coordinator: Mr. Bibin Varkey

#### 15.2 Course Fee

The Course Fee is Rs. 3,500/- which is collected in two instalments at the time of admission (August) and during the end of coaching season (January).

# 16. Mechanical Engineering Association

ARMS, The Association of Royal Mechanical Students of SAINTGITS had its evolution in the year 2004 and ever since then, the torch is being passed on to the emerging semesters for revealing their true spirits on this innovative platform. The association took shape with the initiative of Mechanical Engineering Students of our college and since then it is growing to new heights, thereby setting a new trend and leaving a trail of unparalleled success in its path.

#### 16.1 ARMS exist to

- Promote competitive spirit among faculty & students
- Organize department Technical Fest
- Acknowledge the Excellence among Faculty & Students

16.2 Office Bearers		
Faculty in Charge	Tom Mathew	
President	Joseph T Daniel	9544610419
Secretary	Akhil Sivadas	9400235368
Joint Secretary	Anand P N	8281531722
Treasurer	Karthik G S	9961996011
	Ben Jose	7293167545
Executive Committee	Harikrishnan	9526707736
Members	Nandakrishnan	8129420013
	Sandip M Jayaram	9496981982

#### 16.3 Association Activities Planned for 2015-2016

- 1. Technical Fest MECHNIUS
- Alumni Interaction
- 3. Best B.Tech Project Competition
- 4. Best M.Tech Project Competition
- 5. Best B.Tech Seminar Competition
- 6. Best Paper Presentation Competition
- 7. Best Mini Innovative project competition
- 8. Best bugging engineer competition
- Best designer competition
- 10. Group discussion competition
- 11. Aptitude test competition
- 12. GEM of 2015-16 competition
- 13. Merit Day

#### Technical Fest - MECHNIUS

Coined from the words Mechanical & Genius, MECHNIUS provided the apt platform for the budding professionals to get transformed from an Intellectual to a Genius. It is scheduled in the first week of August.

Faculty Coordinators Tom Mathew
Project Manager Akhil Sivadas

**Asst. Project Manager** Karthik G S, Anand P N

#### Alumni Interaction

Faculty In charge Nikhil Ninan, Tobin Thomas

#### Best B.Tech Project Competition

The Best project will be acknowledged with a cash prize of Rs 20000/-

Faculty In Charge Aju Z Mani, G Anil Kumar, Vineeth V K, Jiju V Elias

#### Best M.Tech Project Competition

The Best project will be acknowledged with a cash prize of Rs1500/-

Faculty In Charge Dr. Jason Cherian Issac, Sailesh K S, Parvathy Venugopal, Sreejith R

#### Best B. Tech Seminar Competition

The Best three seminar will be acknowledged with a cash prize of Rs100/- each

Faculty In Charge Aiu Z Mani, G Anil Kumar, Vineeth V K. Jiju V Elias

# Best Mini Innovative Project Competition

The competition is meant for the second and third year Mechanical students. The most innovative project two from each year will be acknowledged with a cash prize of Rs 500/- each.

Faculty In Charge Nisthul G, Vinay Mathew John, Nirmal Chandran

# Best Budding Engineer Competition

The Best Budding Engineer one from each batch [S3/S4 & S5/S6] will be appreciated with a cash prize of Rs 500/- each.

Faculty In Charge Arun K V, Parvathy Venugopal

#### Best Designer Competition

The Best Designer among the three batches of Mechanical Engineering will be awarded with a cash prize of Rs 1000/-. Knowledge of Design Softwares will carry weightage.

Faculty In Charge Tobin Thomas, Sreekumar C

#### **Group Discussion Competition**

The winners will be acknowledged with a cash prize of Rs300/-, Rs200/- & Rs100/- respectively

Faculty In Charge Vinay Mathew John

#### Aptitude Test Competition

The winners will be acknowledged with a cash prize of Rs300/-, Rs200/- & Rs100/- respectively

Faculty In Charge SCE Placement Department Faculty & PEP team

#### "GEM of 2015-16" Competition

The BEST STUDENT from the Second and Third Year batch will be named as the GEM for 2014- 15. .The same person will be appreciated with a cash prize of Rs1000/-

Respective Chief Staff Advisors under the leadership of Chief Coordinators

Coordinator (SAS)

#### MERIT DAY

Chief Coordinator	Vinay Mathew John

# 17. Chapter of Professional Bodies

#### 17.1

SAEINDIA is a Premier Professional society that serves the Mobility Engineering Community engaged in the design, manufacture and service of self-propelled vehicles and systems that move in land, sea, air and space. SAEINDIA works closely with other fraternal societies such as Society of Indian Automobile Manufacturers (SIAM), Automotive Component Manufacturers of India (ACMA) and American Society of Engineers of Indian Origin (ASEI) for spreading knowledge and relevant information to a wider cross section of the Indian community. It is also a member of International Federation of Automotive Engineering Societies (FISITA).

SAE Saintgits Collegiate Club imparts a framework to the creativity and scientific thrust of students by providing avenues to students to solve engineering problems of real nature, learn to manage projects in a collaborative environment and keep themselves abreast with the latest in mobility engineering. It also helps them become more ready to work in the industry as committed collegiate club members may develop personal and professional attributes that may be valued by potential employers.

The department has active teams in SAE Formula, SAE BAJA and SAE Efficycle, were the students have to design, validate and manufacture automobiles of given specification.

The office bearers of SAE Saintaits for the year 2015 - 16 are:

Faculty Mentors	Mr. Francis Augustine Joseph, Mr. Bibin Varkey	
Faculty in Charge	Mr. Bibin Varkey	
Chairman	Sarin John Skaria	8547828016
Vice Chairman	Tharun Thomas	9048646881
Secretary	Finny Varghese	8086944722
Joint Secretary	Sandip M Jayaram	9496981982
Treasurer	Karthik G S	9961996011
Publicity Chairman	Vyshak Padmakumar	9400085586
Programme Committee	Justin Joseph	8281790485

Ac	Activities Planned for 2015-2016		
•	Conducting Tier   Events as part of Student convention 2015		
•	Participating in SAE BAJA 2016 competition		
•	Enrollment of new students to SAE INDIA professional body		
•	Conducting Technical talk for the students		
•	Mobilizing students to participate in various SAE activities organized by SAE INDIA		

# 17.2. SESI Saintgits Chapter

The Solar Energy Society of India (SESI), established in 1976, and having its Secretariat in New Delhi, is the Indian Section of the International Solar Energy Society (ISES). Its interests cover all aspects of renewable energy, including characteristics, effects and methods of use, and it provides a common ground to all those concerned with the nature and utilization of this renewable non-polluting resource.

The major activities of the Society are:

- Publication of SESI Journal, a bi-annual technical journal containing papers on renewable energy utilization, technical notes and other items of interest of those involved in renewable energy research and development.
- Publication of a monthly newsletter, namely the SESI News Letter.
- Organization of one -day workshops on selected topics.
- Organization of the International Congress on Renewable Energy once in a year, where numerous scientific and technical papers are presented and discussed.
- Publication of the proceedings of the Annual Convention

The office bearers of SESI Saintgits Chapter for the year 2015 - 16 are:

Staff in Charge	Vineeth V K, Sreejith R	
Chairman	Lithin Sam Varghese	9747280591
Vice Chairman	Vibu Mammen Jacob	9497392720
Secretary	Akhil P Santhosh	8606303557
Joint Secretary	Dinu V James	9447834019
Treasurer	Mohammed Thaha	8089503422

Ac	Activities Planned for 2015-2016	
•	SESI Quiz Programme	
•	Industrial Talk	
•	Awareness Programme	

# 17.3. IIM Saintgits Chapter

The Indian Institute of Metals (IIM) is a premier body representing the family of professional metallurgists in India. IIM was formed in 1947 with the objectives of promoting and advancing the study and practice of Science and Technology of Metals & Alloys and protecting the interests of metallurgists and metallurgical engineers.

Department of Mechanical Engineering enrolled in the IIM under IIM, Trivandrum Chapter on 21st November, 2014. A total of 40 (1 Life member & 39 Associate) members are present in the Saintaits chapter of IIM at present.

# 17.4. IIW Saintgits Chapter

The Indian Institute of Welding (IIW-India) was incorporated on the 22nd April, 1966 at Calcutta to foster the development of welding science, technology and engineering in India and since then has been serving the cause of the welding industry through its 13 branches / chapters throughout India.

Through its various activities and programmes, IIW-India is now recognised as the premier Institute related to welding in the country with over 4500 Individual and Corporate Members.

# 17.5. IEI Saintgits Chapter

The Institution of Engineers (India) (IEI) is the national organisation for engineers in India. IEI has over 0.5 million members from 15 engineering disciplines in 99 centres or chapters in India and overseas; it is the world's largest multi-disciplinary engineering professional society in engineering and technology world.

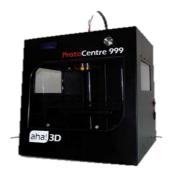
Various types of technical activities organized by the Mechanical Engineering Division including All India Seminars, All India Workshops, Lectures, Panel Discussions etc., at various State/Local Centres of the Institution. In order to promote the research and developmental work in the field of Mechanical Engineering, the Institution also publishes Journal of The Institution of Engineers (India).

The inauguration of The Institution of Engineers (India), SAINTGITS College of Engineering Students chapter was held on 30th July 2015.

# 18. RESEARCH FACILITIES

#### 3D Printer

A fully featured 3D Printer (ProtoCentre 999) is fully available in the college. 3D printing or additive manufacturing (AM) consists of various processes for making a three-dimensional object of almost any shape from a 3D model or other electronic data source primarily through additive processes in which successive layers of material are laid down under computer control.



Faculty in Charge: Arun K Varahese, Liju Mathew Alexander

#### CNC Machines

Rapidly changing market demands, designs, more complicate designs with variety of materials and low products life cycle time, made product designer to evaluate various design alternatives within short period time. By using CAD/CAM & CAE made the task of product designer easier with more accuracy and precision. The facilities in the research lab includes a CNC Lathe and a Milling machine (*Make*: LMW, *CNC*: Sinumeric-Siemens).



**Turning Centre** 



Milling Centre

Faculty in Charge: Jenny John Mattam, Arun K Varghese

#### Work Station

Five High end workstations capable of doing all tasking CAE activities are installed in the Research Lab. It has Intel Xeon processors, 16 GB RAM, Dedicated graphics card etc.

#### Softwares Available:

- Solidworks 2014
- o CATIA V6
- o MATLAB R2011a
- o ANSYS 15
- o AutoCAD 2010
- o KISSlicer
- o Netfabb

#### Computerized SI Engine Test Rig

The test rig consists of a twin cylinder four stroke water cooled petrol engine coupled to eddy current dynamometer and are mounted on an M.S Frame. It had a stainless steel panel board consisting of digital instruments such as DAQ board, torque controller with ammeter &main on/off switch. The panel board is designed to mount a computer on the table for monitoring the readings taken from the test rig.



Faculty in Charge: Nandu S, Aju Z Mani

# 19. Memorandum of Understanding (MOU'S)

The department has signed MOU's with Autodesk Asia PTE Ltd, CADD Centre Training Services and CoreEL Technologies.

#### 1) Autodesk Asia PTE Ltd.

AUTODESK provides free access to Autodesk softwares and will support to develop discipline specific design curricula & courseware embedded with Autodesk software on new emerging concepts. It also provide training in Autodesk softwares and provide Autodesk certification, which helps in measuring the quality of faculty & students. Also to promote and encourage students to participate and showcase their Design Skills, Autodesk conducts National Design Competitions that will give an opportunity to students to benchmark them with global peers.

#### 2) CADD Centre Training Services

CADD Centre provides training in mechanical design & CAD softwares to students as part of their curriculum as per the latest trends in the area of mechanical design. The training is in accordance with latest software and industry requirements.

#### 3) CoreEl Technologies

CoreEL is a Synergistic Value Added Technology Products and Solutions Provider in India. They develop standard and custom system level products to Industry with markets like Defense & Space, Broadcasting & Professional Video, Education, Telecom & Networking and Security. The MOU enables to engage with the Industry on a regular basis to understand the needs of the industry and accordingly update the syllabus. It also provide know how to upgrade the infrastructure in VLSI, Embedded Domain and other information technology-related topics and to procure various industry standard hardware and software. It also collaborate with the industry for research programme, projects and student internships in the above fields and to faculty development programs for teaching staff, advanced training to students.

## 20. LIST OF BOOKS AVAILABLE IN DEPARTMENT LIBRARY

No.	Name of Book	Author(s)		
1	University Solved Question Paper S <sub>1</sub> S <sub>2</sub>			
2	A textbook of Power Plant Engineering	P C Sharma		
3	Fundamentals of Machine Drawing	Sadhu Singh		
4	Machine Drawing	Pi Varghese, Kc John		
5	Steam Tables	K K Ramalingam		
6	Machine Design	Kannaiah		
7	Production Engineering	P C Sharma		
8	Research for Marketing Decisions	Green, Tull, Albaum		
9	Mechanical Measurements & Instruments	Rajput		
10	Engineering Graphics for Degree	K C John		
11	Power Plant Engineering	A K Raja		
12	Workshop Technology	S K Garg		
13	Total Quality Management	Kulneet Suri		
14	Mechanical Engineering	D S Kumar		
15	Theory of Machines	R S Khurmi		
16	Engineering Mechanics	D S Kumar		
17	Total Quality Management	Kulneet Suri		
18	A textbook of Power Plant Engineering	R K Rajput		
19	Engineering Metrology And Instrumentation	R K Rajput		
20	Machine Drawing	M S Gill		
21	Principles Of Management	Tripathi And Reddy		
22	Elements Of Material Science	Van Vlack		
23	Introduction To Machine Design	V B Bhandari		
24	Introduction to Robotics	Craig		
25	Power Plant Engineering	Nagpal		
26	Fundamentals of Compressible Flow Yahya			
27	Mechanical Engineering Design	Shigley, Mischke		
28	Industrial Engineering And Management Science S C Sharma			

Power Plant Engineering   Rajput	29	Design Data Hand Book	Mahadevan, Reddy			
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1	Thandapra		06:15	1	Crystal		06.00
2	St.Mary	06.40	07:00	2	KBC		07.15
3	Crystal	06:50	07:15	3	KBC	07:10	07.35
4	Benny	06:50	07:30	4	Thandapra	07:05	08.00
5	Orient ***	07:40	08:05	5	Bestin	07:30	08.15
6	KBC via M*	07:55	08:25	KSR1	C Nagampadom	07.40	
7	KBC via P**	08:05	08:30	6	Crystal	07:50	08.45
	KSRTC		08.40	7	St.Mary	08:00	08.55
8	Rising Sun	08:16	08:45	8	Benny	08:15	09.05
9	Bestin	08:40	09:05	9	Orient	09:00	09.55
10	Thandapra	09:00	09:20	10	KBC	09:15	10.20
11	St.Mary	09:20	09:45	11	KBC	09:35	10.30
12	Crystal	09:30	09:55	12	Rising Sun	09:50	10.45
13	Benny	09:45	10:10	13	Bestin	10:15	11.05
14	Orient ***	10:35	11:00	14	Thandapra	10:31	11.20
15	KBC via M*	11:00	11:25	15	St.Mary	10:40	11.45
16	KBC via P**	10:55	11:30	16	Crystal	11:05	12.00
17	Rising Sun	11:15	11:40	17	Benny	11:15	12.10
18	Bestin	11:30	11:55	18	Orient	12:00	01.00
19	Thandapra	11:55	12:25	19	KBC	12:15	01.05
20	St.Mary	12:22	12:45	20	KBC	12:20	01.15
21	Crystal	12:30	01:00	21	Rising Sun	12:35	01.30
22	Benny	01:20	01:45	22	Bestin	01:00	01.50
23	KBC via P**	01:25	02:05	23	Thandapra	01:30	02.25
24	Orient ***	01:55	02:20	24	Crystal	01:50	02.40
25	KBC via M*	01:58	02:25	25	St.Mary	02:00	03.00
26	Bestin	02:25	02:55	26	Benny	02:35	03.30
27	Rising Sun	02:40	03:05	27	KBC	02:55	03.50
28	Crystal	03:05	03:30	28	Orient	03:20	04.05
29	Thandapra	03:31	03:55	29	KBC	03:20	04.15
30	St.Mary	03:40	04:10	30	Bestin	03:40	04.30
31	Benny	04:00	04:30	31	Rising Sun	03:58	04.55
32	KBC via P**	04:20	04:45	KSR1	C Nagampadam	04.00	
33	Orient ***	04:40	05:00	32	Crystal	04:30	05:20
	KSRTC		05.00	33	Thandapra	04:50	05.45
34	KBC via M*	04:55	05:15	34	St.Mary	05:20	06.20
35	Bestin	05:20	05:45	35	KBC	05:35	06.30
36	Rising Sun	05:40	06:10	36	KBC	06:24	06.35
37	Crystal	05:50	06:15	37	Benny	05:50	06.45
38	Thandapra	06:20	06:45	38	Bestin	06:40	07.20
39	St.Mary	06:40	07:15	39	Orient	06:10	07.20
40	Johnson	07:15	07:40	40	Rising Sun	07:30	08.30
41	KBC upto CGVM	07:40	08:15	41	Thandapra	08:05	08.50

## Timetable

	1	2	3	4	5	6	7
Monday							
Tuesday							
Wednesday							
Thursday							
Friday							

FORMING FUTURE LEADERS



## SAINTGITS COLLEGE OF ENGINEERING

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