

Department of

Applied Electronics & Instrumentation Engineering

SAINTGITS COLLEGE OF ENGINEERING
PATHAMUTTOM, KOTTAYAM



Hand Book

2012-2013

About Applied Electronics and Instrumentation Engineering

Applied Electronics & Instrumentation engineering is one of the most chosen branches today when it comes to engineering courses. It is also a field in demand. This branch focuses on Instrumentation, control system Design, process control, Configuration and Automation of various systems for Industries, and more. Instrumentation is one of the most all-encompassing fields of engineering. Opting Instrumentation as the area of specialization can indeed bring high dividends throughout their career

The students undergo courses in Robotics, Biomedical, Computer Control in Process applications , Electrical, Mechanical, Electronic circuits, Control Systems, Digital Signal Processing, Communication etc These courses help the Engineers to design, develop and fabricate various electronic related accessories. Electronics and Instrumentation Engineers are needed by almost all Industries in various cadres like Design and Development, Fabrication, Quality control, Maintenance and Service and so on. Most Software MNC's also recruit Electronics and Instrumentation Engineers .

About the Department

The Department of Applied Electronics & Instrumentation Engineering (AEI) was established in the year 2006, has now grown at full fledge pace with all essential and well sophisticated instruments required for laboratory. The department follows the curriculum prescribed MG University Kottayam. The department satisfies and follows all the norms prescribed by the university and AICTE.

The department provides students with sound theoretical & practical training in the operation and design of electronic instruments, digital logic systems, and computer based automatic process control etc. During the final year, the focus is on more advanced electives such as robotics, biomedical engineering, Advanced micro controller, Embedded systems, Neural networks etc. Apart from the course work, to meet the industrial requirements of future, students are trained in Matlab, micro-controller, PLC and Virtual instrumentation.

Department Vision

“To become a Centre of Excellence in Applied Electronics & Instrumentation Engineering by moulding high caliber graduates with a passion to advance society, carryout high quality research, develop cutting edge technologies for sustainable socio-economic development”

Department Mission

The mission of the department is to nurture and spread the culture of modern electronics and instrumentation to engineering graduates

Strength

FACULTY:	17	Prof. - 2, Asst. - Prof. - 15
TECHNICAL STAFF:	2	Lab Instr. - 2
UG STUDENTS:	189	S1/S2: 49 S3/S4: 35 S5/S6: 59 S7/S8: 64

Teaching Faculty

Name	Designation	Phone	E-mail	Ext.
Dr. P S Godwin Anand	Professor & HOD		godwin.anand@saintgits.org	320
Dr. K P Zacharia	Professor	9496262002	zacharia.kp@saintgits.org	262
Vinayakumar B	Asst. Professor	9961985982	vinay.kumar@saintgits.org	320
Sita Radhakrishnan	Asst. Professor	9447146877	sita.radhakrishnan@saintgits.org	322
Krishna Priya R	Asst. Professor	9495679995	krishna.priya@saintgits.org	322
Nishanth P R	Asst. Professor	9895422454	nishanth.pr@saintgits.org	322
Nisha Thankachan	Asst. Professor	9447776015	nisha.thankachan@saintgits.org	322
Ancy Varghese	Asst. Professor	9446217382	ancy.varghese@saintgits.org	322
Jyothi Krishnan M	Asst. Professor	9447069325	jyothi.krishnan@saintgits.org	320
Starlet Ben Alex	Asst. Professor	9447596187	starlet.ben@saintgits.org	322
Ashly John	Asst. Professor	9497677225	ashly.john@saintgits.org	322
Deepthi A J	Asst. Professor	9995140853	deepthi.aj@saintgits.org	322
Bini Thomas	Asst. Professor	9744663685	bini.thomas@saintgits.org	322
Anu Joy	Asst. Professor	9497476949	anu.joy@saintgits.org	322
Anumol T J	Asst. Professor	9847831936	anumol.t@saintgits.org	322

Agitha M S	Asst. Professor	9447792014	agitha.ms@saintgits.org	322
Catherine	Asst. Professor	9526738829	binson.va@saintgits.org	320
Leya Mathew				

TECH

NICAL STAFF

Name	Designation	Phone	E-mail	Ext.
Manju C N	Lab Instructor	9446388646	manju.cn@saintgits.org	626
Kuruvilla P Varghese	Lab Instructor	9645331712	kuruvilla.varghese@saintgits.org	626

Laboratories

Lab	Faculty in charge	Instructor in charge	Ext
Power Electronics Lab	Vinayakumar B	Manju C N	626
Measurements Lab	Anu Joy	Manju C N	626
Process Control Lab	Sita Radhakrishnan	Kuruvila P Varghese	626
Mini Project Lab			

- Department has enough labs which are used for all the years on timetable basis to meet the curriculum requirements.
- The courses which have practical work will be provided labs every week.
- Labs are equipped with sufficient hardware and licensed software to run program specific curriculum and off program curriculum.
- Laboratories during two afternoon sessions of a week are absolutely kept free for students to develop core skills.
- Within the working hours all labs are open to the students to carry their project work with a full technical support and beyond the working hours research lab is used.
- Technical support is provided with central hardware and software team
- Lab slots are provided depending on the curriculum.
- Extra lab slots are provided depending on the progress in the course practical work if necessary.
- Each student is allotted individual equipments and components for the lab work assigned.
- The Lab has good ambience as the equipments are arranged in a way that student can feel comfortable in doing labs.

Staff Rooms

Staff Room	Room No.	Extension No.
HOD Room		320
Main Staff Room	CLS SR2 (CLC Second Floor)	320
Staff Room I	ANT 301 (Amenity Block Second Floor)	322

- All staff rooms are equipped with Computers, Printers and Scanners.
- Each and every staff room is provided with glass racks to facilitate the faculty for storing books and files.
- All the staff rooms are equipped with white boards, High speed LAN connection and Wi-Fi.
- All the staff rooms are sufficient to conduct discussions/counseling with students.
- To clarify the doubts of the students individually, faculty rooms are provided with white boards.
- Students interact with faculty in the concerned class rooms to carry out project works

Class Rooms Layout

Batch	Room No.
S3/S4 AEI	CLC304 Second Floor
S5/S6 AEI	CLC305 Second Floor
S7/S8 AEI	CLC408 Third Floor
Tutorial Room	CLC 405 Third Floor
Elective Room	CLC 406 Third Floor
Elective Room	CLC 407 Third Floor

- Department has sufficient class rooms for conducting lectures and tutorials for III/IV, V/VI and VII/VIII B. Tech AE&I students.
- In the program every year has two sections each with fully furnished exclusive class rooms
- Department has two Tutorial Rooms to help students who are lagging in the subjects.
- Class rooms are provided with good ventilation, high speed LAN Connection and

- uninterrupted power supply.
- All the class rooms were equipped with facilities like black board, fans, tube lights, benches, chairs and podium.
- All class rooms are fixed with LCD projectors for conducting presentation sessions and one LCD projector is kept movable.
- Internet connection is provided in every class to enable presentation of online information.

Chief Staff Advisors & Advisors

Class	Staff Advisor
S3/S4 AEI	Sita Radhakrishnan (CSA) Anu Joy Ashly John
S5/S6 AEI	Vinayakumar B (CSA) Jyothi Krishnan M Bini Thomas
S7/S8 AEI	R Krishna Priya (CSA) Deepthy LJ Binson V A

Department Responsibilities

Academic Coordinator	: Vinayakumar B
Association staff incharge	: Nisha Thankachan
Staff Secretary	: Rizwana Akbar
Remedial Class in charge	: Bini Thomas
ISO coordinator	: Ancy Varghese
ISA in charge	: R Krishna Priya
Project /Seminar co- ordinator	: Sita Radhakrishnan
Semester Plan	: Rizwana Akbar
Web Committee	: Nishanth P R
Women Cell Representative	: Ancy Varghese
FDP	: Sita Radhakrishnan
Library in charge	: Anumol T J
Add-on course	: Jyothi Krishnan M

Time Table	: Agitha M S
Series Exam Cell	: Nishanth P R
Department diary	: Ancy Varghese
Departmental meetings	: Anu Joy
GATE Coaching in charge	: Anumol T J
University Exam Cell	: Jyothi Krishnan M
Placement Team	: Agitha M S/ Nisha Thankachan
NSS Tech Cell	: Vinayakumar B
Department Files	: Agitha M S
PTA	: Vinayakumar B

Institutional Responsibilities

Labview Academy in charge : Dr. PS Godwin Anand

Student Class Representatives

Class	Name of Student
S3/S4 AEI	Akhil G Shine Archana
S5/S6 AEI	Jinu Raj Chippy B
S7/S8 AEI	Anna Philp

Student Placement Representative

Jeswin Antony Jose : S7/S8 AEI

GATE COACHING -13

GATE (Graduate Aptitude Test in Engineering) is an All-India examination conducted by '7' IITs & Indian Institute of Science- Bangalore, on behalf of the National Co-ordinating Board, known as 'GATE BOARD' under the Dept of Education, MHRD, Govt. of India. More than 500 colleges including IISc, IITs, NITs, IIITs and Govt. Colleges in

kerala require GATE score for admission to various post graduate programs. GATE qualified candidates in Engineering Disciplines are also eligible for Junior Research Fellowship (JRF) award in Research based laboratories like CSIR, DRDO etc..GATE qualification is also a minimum requirement to apply for many Govt fellowships and MHRD scholarships/ assistantships. Besides these a number of PSUs like NTPC, IOCL, BPCL, BHEL, and Power Grids are recruiting their employee through Gate Scores. In this competitive world, where the market is getting crowded with a huge numbers of eligible candidates with Engineering Degree, without acquiring any additional quality you may lose yourself in the crowd. So we strongly recommend you to appear for GATE to place yourself above others.

AEI Department of Saintgits conducts GATE coaching for the final year and Pre-final Year students, who prefer to appear for the Test.

Objectives:

- Immense self development to take up the challenges in research and development.
- Improves the confidence in appearing technical competitive Examinations.
- Equip students in building sound subject knowledge.
- Explore them to pursue dream specializations.

Why should I take GATE?

For the past few years Gate has become literally the Golden Gate for the bright careers and opportunities. Following are some of the benefits of taking M. Tech or qualifying GATE:

- A good GATE score is helpful for getting admission in to IITs, IISc, IIITs, NITs
- It's a min. requirement to apply for fellowships awarded by many Govt. organizations.
- GATE qualified candidates are also eligible for the award of Junior Research Fellowship in CSIR Laboratories and CSIR sponsored projects.
- GATE Preparation also helps in other prestigious PSU recruitment examinations
- M.Tech opens lot of career in fields of Teaching, Research & other Core sectors.
- Better Placements in top PSUs, MNCs & Indian companies both in India and Abroad.
- Min. Stipend 8000/- per month is given to reg. students joining colleges under MHRD
- Opportunity to work in research positions like JRFs, in ISRO/DRDO/BARC/IITs etc.
- M. Tech gives chance to pursue specializations of interest.

Class Timing

This is a six months intensive coaching programme, Classes will commence on second week of August 2013 and ends in the last week of January. Classes are held during Monday to Thursday from 4.30 pm. to 5.30 pm, two evening hours per week and morning sessions 10 am to 12 pm on first and third Saturdays

Support Systems

This course offers following aids to students to get a good GATE score:

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

GATE Syllabus

The question paper for GATE 2014 will consist of questions of both multiple-choice type and numerical answer type. For multiple choice type questions, candidates have to choose the answer from the given choices. For numerical answer type questions, choices will not be given. Candidates have to enter a number as the answer using a virtual keypad. The paper includes questions from General Aptitude, Engineering Mathematics and Engineering Subject Questions covering the entire syllabus of Instrumentation.

Subject	Faculty
Circuits, Measurement, Signals, Communications	Anumol T J/ Jyothi Krishnan M/ Agitha MS
Analog/ Digital Electronics	Ancy Varghese/Starlet Ben Alex/Rizwana Akbar
Analytical and Electronic Measurements	Anu Joy/Binson V A
Optical and Bio medical Instrumentation	Nisha Thankachan/Elizabeth Paul
Control system and Process Control	Sita Radhakrishnan/ Vinayakumar B
Transducers and Measurements	Bini Thomas
Industrial Instrumentation	Anish Thomas

Association & Clubs

Instrumentation Engineers Techno Innovative Association (INERTIA)

To mould eminent instrument engineers with creative minds, innovative ideas and practical skills, Applied Electronics and Instrumentation Department of Saintgits college of Engineering , founded its own association in 2009-INERTIA- Instrumentation Engineers Techno-Innovative Association.

It is the inertia against inaction, against dormancy, providing ample momentum to the students of the department to subjugate all their technical hardships. Since its inception in 2009, it has hosted a number of events-providing budding engineers from various colleges, a platform for honing their technical as well as cultural skills. INERTIA has outstretched its arms by bringing the student chapters of ISA and ISOI to Saintgits.

ISA- International Society of Automation:



Founded in 1945, the International Society of Automation is a leading, global, nonprofit organization that is setting the standard for automation by helping over 30,000 worldwide members and other professionals solve difficult technical problems, while enhancing their leadership and personal career capabilities. Based in Research Triangle Park, North Carolina, ISA develops standards; certifies industry professionals; provides education and training; publishes books and technical articles; and hosts conferences and exhibitions for automation professionals. ISA is the founding sponsor of the Automation Federation

INERTIA Office Bearers

Staff In Charge	Jiss J Nellikuzhy	Assistant Professor AEI
President	Githin Sajeew George	S7 AEI(2008-2012)
Secretary	Rinu Lopez	S7 AEI(2008-2012)

Association Activities for 2012-13

1. Technical fest SFERICS 2012
2. Mini Project Exhibition
3. Alumni Interaction
4. Best B.Tech Project Competition

Best B.Tech Project Competition

Faculty In Charge : Vinayakumar B

Ancy Varghese

Best Mini Project Competition

Faculty In Charge: Ancy Varghese

Jyothi Krishnan M

Group Discussion Competition

Co-ordinators - English Department Faculty & Placement Cell Representative

Aptitude Test Competition

co-ordinators - SCE Placement Department Faculty

SFERICS 2011

Sferics 2011, the National level Technical symposium conducted under the banner of ISA and INERTIA was hosted by the Applied Electronics and Instrumentation department of SAINTGITS College of Engineering on 23rd August 2011. The flagship event was inaugurated by **N S Parameswaran**, the Deputy General Manager of Hindustan Newsprint Limited (HNL).



Sferics 2011 conducted for the 3rd time in the history of SAINTGITS college included a wide range of events which tested the technical know-how of the participants in every realm. Sferics 2011 was very much appreciated by the participants and it was a real rendezvous for the "geeks" n "technocrats". The programme comprised of Presentaci De Treballs (Technical paper presentation), Circuit De Depuraci (Circuit Debugging), El Miller Enginyer (Best Engineer), Recerca Del Tresor (Tech Hunt), Xarxa De Joc (Network Gaming) and Questionari (Quiz). We had total participants of 220 and had some great participants from across the Nation.

Er. Jiss J. Nallikuzhy was the Staff Coordinator of the event and Student Coordinators were Githin Sajeev George and Rinu Lopez.

NSS Tech Cell

NSS Tech cell of Saintgits imprinted its mark in our campus from 2007 onwards with unit number 195. NSS Saintgits Techcell has an intake of 50 members each from second year and third year of the four year B.ech Course. Students selected as NSS volunteers have to complete 120 hours of service in each year. The 120 hours include orientation,

community service and campus work. Successful completion of the 240 hours of service within the two year span will enable them to entitle for grace marks in their university grade.

Er. Nishanth P. R is assigned as the Programme Officer of the unit.

The NSS activities of Applied Electronics & Instrumentation Engineering department are coordinated by Er. Vinayakumar B.

Add on Courses

A Three day Workshop on Virtual Instrumentation was held on 7th January, 2013 to 9th January, 2013. The sessions were handled by Mr. Sreevardhan from National Instruments Technical support team.

EVEN SEMESTER PLAN (JAN2013 - MAY 2013)

DEPARTMENT OF APPLIED ELECTRONICS & INSTRUMENTATION ENGINEERING

I.PROGRAMS FOR B.TECH STUDENTS		
DATE	PROGRAM	STAFF IN CHARGE
07.01.2013 - 11.01.2013	Add on course (S6 students)	Vinayakumar B
09.01.13	Semester starts: Registration for S4 students	Sita Radhakrishnan
14.01.13	Semester starts: Registration for S6 students	Vinayakumar B
21.01.2013	Semester starts: Registration for S8 students	Krishna Priya R
23.01.2013	class meeting for s4 students	Staff advisors

25.01.2013	submission of student interaction report of s4 and s6	Staff advisors
28.01.2013	class meeting for s6 students	Staff advisors
28.01.2013	remedial classs for s4 students	Staff advisors
30.01.2013	submission of student interaction report of s8	Staff advisors
31.01.2013	Submission of portions covered by faculty members	Binson V A
31.01.2013	class meeting for s8 students	Staff advisors
01.02.2013	Evaluation of staff by S4 students collected by HOD	HOD
04.02.2013	Evaluation of staff by S6 students collected by HOD	HOD
04.02.2013	remedial classs for s6 & s8 students	Staff advisors
05.02.2013	Evaluation of staff by S8 students collected by HOD	HOD
06.02.2013	External talk for S6 students	Anish Thomas
9.02.2013	Social visit for S6 students	Staff advisors
11.02.2013	in house talk for s4 students	Anish Thomas
14.02.2013	submission of student interaction report ofs4, s6 and s8	Staff advisors
18.02.2013	Submission of portions covered by faculty members	Binson V A
4.03.2013 TO 6.03.2013	First series examination for S4, S6 & S8 students	
07.03.2013	External talk for S8 students	Anish Thomas
09.03.2013	Social visit for S4 students	Staff advisors
11.03.2013	Evaluation of staff by S4 students collected by HOD	HOD
12.03.2013	Evaluation of staff by S6 students collected by HOD	HOD
13.03.2013	Evaluation of staff by S8 students collected by HOD	HOD
13.03.2013	Class committee meeting for S4 students	Staff advisors
14.03.2013	Class committee meeting for S6 students	Staff advisors

15.03.2013	Class committee meeting for S8 students	Staff advisors
19.03.2013	submission of student interaction report of s4, s6 and s8	Staff advisors
20.03.2013	PTA meeting for S4 students	Sita Radhakrishnan(staff advisors)
21.03.2013	PTA meeting for S6 students	Vinayakumar B(staff advisors)
22.03.2013	PTA meeting for S8 students	Krishna Priya R(staff advisors)
25.03.2013	Submission of portions covered by faculty members	Binson V A
1.04.2013	submission of student interaction report of s4, s6 and s8	Staff advisors
8.04.2013	Submission of portions covered by faculty members	Binson V A
8.04.2013-10.04.2013	second series examination for S4, S6 & S8 students	
13.04.2013	Social visit for S8 students	Staff advisors
15.04.2013	Evaluation of staff by s4, s6 and S8 students collected by HOD	Staff advisors
19.04.2013	Sent- off for S8 students	Staff advisors
30.04.2013	Semester end	
II.PROGRAMS FOR FACULTY MEMBERS		
Date	Program	Staff - in - charge
23.03.2013	External talk	Anish Thomas
06.04.2013	In house talk	Anish Thomas
27.05.2013 to 31.05.2013	FDP	Sita Radhakrishnan

