



# ESWAR COLLEGE OF ENGINEERING: NARASARAOPET

Approved by AICTE, New Delhi., Affiliated to JNTUK, Kakinada  
Kesanupalli Village, Narasaraopet – 522 601,  
Palnadu Dist. A.P.

Phone No. 9121214708

Email ID: principal@eswarcollegeofengg.org, eswarcollegeofengg@gmail.com  
web:eswarcollegeofengg.org

## Department of Electronics and Communication Engineering

Dt: 26-11-2018

To  
The Principal  
Eswar College of Engineering  
Narasaraopet

Through HOD-ECE

From  
B Siva Nageswara Rao  
Assistant Professor  
Faculty Coordinator

**Sub:** Requesting for permission to conduct a value-added course on **Sensors and Actuators** from **10-12-2018 to 14-12-2018**.

Dear Sir,

The Department of ECE is planning to organize a 1 week value-added course on **Sensors and Actuators** from **10-12-2018 to 14-12-2018**.

**Total Number of Students registered:** 15 No's (IV B.Tech I Sem ECE).


**Resource Person:** **D Rekha**, Assistant Professor, Department of ECE, ESWAR college of Engineering, Narasaraopet.

**Certificate Criteria:** 60% of marks in Evaluation, 80% of attendance

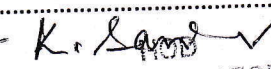
In connection with the programme, we request your approval to organize the same and to make the programme a grand success.

Thanks and regards,

Name: B Siva Nageswara Rao

Signature 

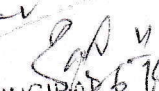
HOD- Comments

*please consider* →   
HOD

Department of ECE  
Eswar College of Engineering  
Kesanupalli (V), Narasaraopet - 522 601.

Principal Comments:

Approved/ Rejected

*Recommended*  
  
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# ESWAR

## COLLEGE OF ENGINEERING

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Kesanupalli (V), Narasaraopet - 522549. www.eswarcollegeofengg.org



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+91 99636 34414



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Website: [www.eswarcollegeofengg.org](http://www.eswarcollegeofengg.org)



Date: 03-12-2018

### CIRCULAR

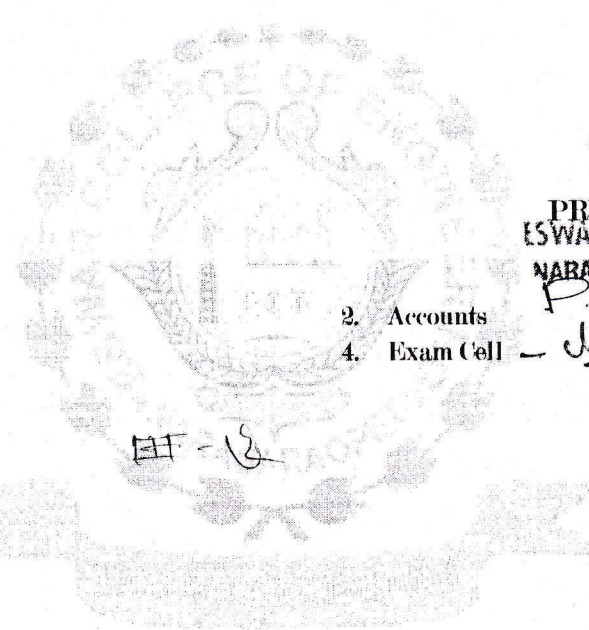
All B.Tech IV/I ECE students are hereby notified that a value added course titled "Sensors and Actuators" will be conducted from 10-12-2018 to 14-12-2018. It is mandatory for all students to enroll their names with course co-ordination B Siva Nageswara rao, Assistant Professor, Department of ECE.

Copy to:

1. A. O. *AO*
3. Library *SPK*
5. HOD's

2. Accounts
4. Exam Cell - *Meeg*

Civil - *SPK*  
 ECE - *KR*  
 CSE - *Maw*  
 SFH - *SPK*



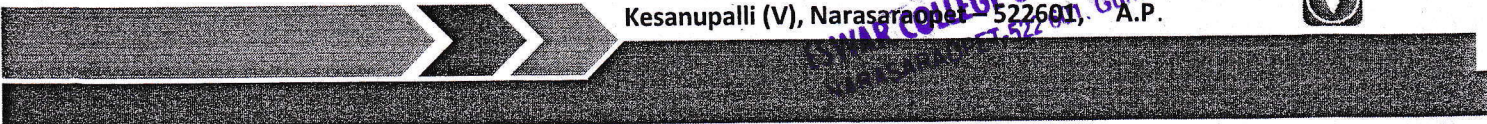
*Esparash*  
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 NARASARAOPET-522 601, Guntur (Dt.)  
*P. A. N. Rao*

Class Rooms:

211 *SPK* 212 *KR* 213 *A* 115 *Reh*  
 236 *SPK* 232 *AO* 237 *R.* 114 *SPK*  
 234 *SPK* 235 *SPK* 210 *A*

*SPK*  
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Date: 03-12-2018

## CIRCULAR

All B.Tech IV/ ECE students are hereby notified that a value added course titled "Sensors and Actuators" will be conducted from 10-12-2018 to 14-12-2018. It is mandatory for all students to enroll their names with course co-ordination B Siva Nageswara rao, Assistant Professor, Department of ECE.

Copy to:

1. A. *oof*
3. Library *SM*
5. HOD's

2. Accounts
4. Exam Cell - *Aug*

Civil - *fo*

ECE - *KR*

CSE - *Maw*

SFH - *AS*

*ET - B*

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*P. A. N. R.*  
*Aug*

Class Rooms:

211 *fo* 212 *fo* 213 *A* 115 *Roh*  
 236 *fo* 232 *fo* 237 *R.* 114 *SM*  
 234 *fo* 235 *fo* 210 *A*

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A.P.

Kesanupalli (V), Narasaraopet - 522549, Guntur (Dt.) A.P.



### Objectives:

- Equip participants with comprehensive knowledge and understanding of various sensors and actuators, including their principles, types, and applications in engineering and technology.
- Develop practical skills in sensor and actuator interfacing, signal conditioning, and integration within complex engineering systems to enhance functionality and performance.
- Foster critical thinking and problem-solving abilities by exploring real-world applications, emerging technologies, and innovative solutions in the field of sensor and actuator technology

### Outcomes

- Participants will gain a comprehensive understanding of various sensor and actuator types, principles of operation, and their applications in engineering systems.
- Participants will develop practical skills in interfacing sensors and actuators, including signal conditioning, control systems integration, and closed-loop system design.
- Participants will explore emerging technologies and future trends in sensor and actuator technology, fostering innovation and research opportunities in the field.
- Participants will collaborate on hands-on projects to design and implement sensor and actuator-based systems, enhancing their problem-solving and teamwork abilities.

### Course Content

- Introduction to Sensors and Actuators
- Sensor Technologies
- Actuator Technologies
- Sensor and Actuator Interfacing
- Applications and Future Trends

### Resource Person

**D Rekha**, Assistant Professor, Department of ECE, ESWAR college of Engineering, Narasaraopet

### Eligibility:

This course is intended for IV B.Tech I Sem ECE

### Registration fee

Registration Fee: **No Registration fee**

Participant (Includes refreshment, training and certificate)

### Scheduled date

**10-12-2018 to 14-12-2018**

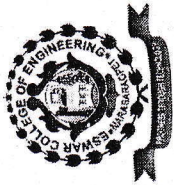
### Last date For Receipt of Application

**08-12-2018**

  
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**NARASARAOPET-522 601, Guntur (D.R.)**



## ONE WEEK ADD-ON COURSE SENSORS AND ACTUATORS

Organized by

**DEPARTMENT OF ELECTRONICS  
AND COMMUNICATION  
ENGINEERING,**

**ESWAR COLLEGE OF  
ENGINEERING**

**Kesanupalli (V), Narasaraopet**  
on

**10-12-2018 to 14-12-2018**

### Registration Form

Name \_\_\_\_\_

Department: \_\_\_\_\_

Designation: \_\_\_\_\_

Organisation: \_\_\_\_\_

Address: \_\_\_\_\_

Contact No.: \_\_\_\_\_

E-mail: \_\_\_\_\_

### **About college**

Eswar College of Engineering was established during the academic year 2008 -09 and sponsored by Shaik Dada Saheb Charitable Trust, with a vision of imparting futuristic technical education and instill high patterns of discipline in order to set global standards and making the students technologically superior and ethically strong. The young and dynamic promoters have selected this rural area with lot of foresight. The Institution is spread over 22 acres of lush green landscape and located at 5<sup>th</sup> km stone on the Narasaraopet-Chilakaluripet Road. The Institution offers the UG Courses B.Tech- CIVIL, EEE, ECE, CSE, AME, ME, PG Courses M.Tech- PE&ED, DECS, CSE, CAD/CAM & MBA. The tourist places near by are Kotappakonda, Amaravathi, Suryalanka Beach. **Eswar College of Engineering is having MOU with International Institute of Information Technology IIIT- Hyderabad and introduced CIT Programme for students Digital Class facility is also provided in association with Manipal K12, Bangalore. the very first college in Andhra Pradesh**

### **About department**

The Department of Electronics & Communication Engineering came into existence in 2001 immediately when the institute was founded. It started with an intake of 60 students which was subsequently raised to 120 over a period of time. It offers 4 year B.Tech degree program in Electronics & Communication Engineering, 2 Year M.Tech degree in Digital Electronics and Communication system with an intake of 18.

**Vision:** To excel in the emerging fields of electronics and communication engineering by conducting cutting-edge research, advocating for ethical principles, and addressing societal needs

#### **Mission:**

- To provide strong fundamentals and technical skills through effective teaching learning Methodologies, disseminate knowledge by organizing seminars, field visits and workshops.
- To provide an ambiance for research through collaborations with industry and academia.
- To develop responsible citizens and professional leaders with high ethical and moral values, who contribute in

### **CHIEF PATRONS**

**SRI.SHAIK.MEERAVALI**

Chairman

**SRI.SHAIK.KAREEM MOHIDDIN**

Secretary & Correspondent

**SRI.SHAIK MASTHAN SHARIF**

Managing Director

### **PATRON**

**DR.G. NAGA MALLESWARA RAO**

Principal

### **Convener**

Dr SK Mirza Shafi shahasavar,

HOD-ECE Department,

The Co-Ordinator.

### **ONE WEEK ADD-ON COURSE**

### **SENSORS AND ACTUATORS**

ESWAR COLLEGE OF ENGINEERING,

KESANUPALLI (V),

NARASARAOPET (M),

GUNTUR-DT

  
PRINCIPAL

Ph.No: 8985793973 **ESWAR COLLEGE OF ENGINEERING**

**NARASARAOPET-522 601, Guntur (Dt.)**  
E-mail: [www.eswarcollegeofengg.org](http://www.eswarcollegeofengg.org)

[www.eswarcollegeofengg.blogspot.com](http://www.eswarcollegeofengg.blogspot.com)

### **Declaration:**

The above information is true to the best of my knowledge. I agree to abide by the rules and regulations governing the course. If selected I shall attend the course for the entire duration. I also under take the responsibilities to inform the coordinator in case I am unable to attend the course

**Place:**

**Date:**

Signature of the applicant

### **Sponsorship certificate:**

Mr/ Mrs./

Dr.....

.....

Is an employee of our institute/ organization and is here by sponsored and will be permitted to attend the course, if selected

Place

Date



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web: [eswarcollegeofengg.org](http://eswarcollegeofengg.org)

### Department of Electronics and Communication Engineering

**Course Name:** Sensors and Actuators

### Proposed Syllabus

#### Day 1: Introduction to Sensors and Actuators

Basics of Sensors, Definition and types of sensors, Principles of sensing and transduction, Basics of Actuators

Definition and types of actuators, Principles of actuation and control

#### Day 2: Sensor Technologies

Optical Sensors, Photodiodes, phototransistors, and optical fibers, Applications in sensing and imaging, Temperature and Humidity Sensors, Thermocouples, RTDs, and capacitive sensors, Principles and applications in environmental monitoring

#### Day 3: Actuator Technologies

Electromechanical Actuators, DC motors, stepper motors, and solenoids, Principles and applications in robotics and automation, Piezoelectric and MEMS Actuators, Principles of operation and applications, Integration in microsystems and biomedical devices

#### Day 4: Sensor and Actuator Interfacing


Signal Conditioning for Sensors, Amplification, filtering, and digitization, Importance in sensor accuracy and reliability, Control Systems for Actuators, Feedback control, PWM techniques, Integration with sensors for closed-loop systems

#### Day 5: Applications and Future Trends

IoT and Smart Sensors Integration of sensors in IoT platforms, Real-world applications and case studies, Emerging Technologies and Future Trends, Wearable sensors, AI-driven actuators, Research opportunities and challenges in sensor and actuator technology

### CO Statements

| CO's | CO Statements   |
|------|---|
| CO1  | Participants will gain a comprehensive understanding of various sensor and actuator types, principles of operation, and their applications in engineering systems.          |
| CO2  | Participants will develop practical skills in interfacing sensors and actuators, including signal conditioning, control systems integration, and closed-loop system design. |
| CO3  | Participants will explore emerging technologies and future trends in sensor and actuator technology, fostering innovation and research opportunities in the field.          |
| CO4  | Participants will collaborate on hands-on projects to design and implement sensor and actuator-based systems, enhancing their problem-solving and teamwork abilities.       |

  
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web:eswarcollegeofengg.org

### Department of Electronics and Communication Engineering

### Feedback form


Course Name: Sensors and Actuators

Please place tick marks at the respective column

| S.No | Particulars  | Excellent | Very good | Good | Average | Poor |
|------|--|-----------|-----------|------|---------|------|
| 1    | How well did you achieve this learning goal in this course?      | ✓         |           |      |         |      |
| 2    | Does the course contain meet the expectation?                    |           | ✓         |      |         |      |
| 3    | Is The lecture sequence was well planned                         | ✓         |           |      |         |      |
| 4    | Does the Lecture content illustrate with adequate examples       | ✓         |           |      |         |      |
| 5    | Do you Level of the course up to the standards?                  |           | ✓         |      |         |      |
| 6    | Does the Course meets the level of new knowledge                 | ✓         |           |      |         |      |
| 7    | Is th lecture clear and easy to understand?                      | ✓         |           |      |         |      |
| 8    | Did your expect Teaching aids are effectively used?              |           | ✓         |      |         |      |
| 9    | Does the resource person interacted well and cleared the doubts. |           | ✓         |      |         |      |
| 10   | Overall organization of the course                               | ✓         |           |      |         |      |

Comments

1. Principles of Actuation and control
2. Temperature and Humidity sensors

  
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### Department of Electronics and Communication Engineering

### Feedback form

Course Name: Sensors and Actuators

Please place tick marks at the respective column

| S.No | Particulars  | Excellent | Very good | Good | Average | Poor |
|------|--|-----------|-----------|------|---------|------|
| 1    | How well did you achieve this learning goal in this course?      | ✓         |           |      |         |      |
| 2    | Does the course contain meet the expectation?                    | ✓         |           |      |         |      |
| 3    | Is The lecture sequence was well planned                         | ✓         |           |      |         |      |
| 4    | Does the Lecture content illustrate with adequate examples       |           | ✓         |      |         |      |
| 5    | Do you Level of the course up to the standards?                  | ✓         |           |      |         |      |
| 6    | Does the Course meets the level of new knowledge                 |           | ✓         |      |         |      |
| 7    | Is th lecture clear and easy to understand?                      | ✓         |           |      |         |      |
| 8    | Did your expect Teaching aids are effectively used?              | ✓         |           |      |         |      |
| 9    | Does the resource person interacted well and cleared the doubts. |           | ✓         |      |         |      |
| 10   | Overall organization of the course                               | ✓         |           |      |         |      |

Comments

1. Conditioning for sensors

2. Control systems for Actuators

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### Department of Electronics and Communication Engineering

### Feedback form

Course Name: Sensors and Actuators

Please place tick marks at the respective column

| S.No | Particulars  | Excellent | Very good | Good | Average | Poor |
|------|--|-----------|-----------|------|---------|------|
| 1    | How well did you achieve this learning goal in this course?      | ✓         |           |      |         |      |
| 2    | Does the course contain meet the expectation?                    | ✓         |           |      |         |      |
| 3    | Is The lecture sequence was well planned                         |           | ✓         |      |         |      |
| 4    | Does the Lecture content illustrate with adequate examples       |           | ✓         |      |         |      |
| 5    | Do you Level of the course up to the standards?                  | ✓         |           |      |         |      |
| 6    | Does the Course meets the level of new knowledge                 | ✓         |           |      |         |      |
| 7    | Is th lecture clear and easy to understand?                      | ✓         |           |      |         |      |
| 8    | Did your expect Teaching aids are effectively used?              |           | ✓         |      |         |      |
| 9    | Does the resource person interacted well and cleared the doubts. | ✓         |           |      |         |      |
| 10   | Overall organization of the course                               | ✓         |           |      |         |      |

Comments

1. wearable sensors

2. IOT techniques

  
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Department of Electronics and Communication Engineering

Feedback Analysis

Course Name: SENSORS AND ACTUATORS

Number of students attended/ given feedback 15

| S.No | Particulars   | Excellent | Very good | Good | Average | Poor | Levels  |
|------|---|-----------|-----------|------|---------|------|---------|
| 1    | How well did you achieve this learning goal in this course? | 10        | 4         | 1    |         |      | 0.9     |
| 2    | The course contain meet the expectation                     | 14        | 1         |      |         |      | 0.98333 |
| 3    | The lecture sequence was well planned                       | 13        | 2         |      |         |      | 0.96667 |
| 4    | Lecture content illustrated with adequate examples          | 12        | 2         | 1    |         |      | 0.93333 |
| 5    | Level of the course up to the mark?                         | 11        | 3         | 1    |         |      | 0.91667 |
| 6    | Course highlights the level of new knowledge                | 15        |           |      |         |      | 1       |
| 7    | The lecture was clear and easy to understand?               | 12        | 2         | 1    |         |      | 0.93333 |
| 8    | Teaching aids are effectively used?                         | 11        | 2         | 2    |         |      | 0.9     |
| 9    | The resource person interacted well and cleared the doubts. | 14        | 1         |      |         |      | 0.98333 |
| 10   | Overall organization of the course                          | 14        | 1         |      |         |      | 0.98333 |
|      |   |           |           |      |         |      | 0.95    |

Over all feedback value :

3.8

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### Department of Electronics and Communication Engineering

Course Name: Sensors and Actuators

#### Evaluation of the Value-Added Courses

Answer all the Questions Each Question Carry 1 Mark

Total Marks: 20M

Min Marks: 12 Marks

Name of the Student

H.T.No:

Marks obtained:

1. What is the primary function of a sensor? [     ]  
A) Control a system                      **B) Convert physical quantities into electrical signals**  
C) Generate mechanical motion        D) Store data
2. Which sensor type is commonly used for detecting light intensity? [     ]  
A) Thermocouple    **B) Photodiode**                      C) Accelerometer    D) Hall effect sensor
3. What is the primary function of an actuator? [     ]  
A) Measure physical quantities        **B) Convert electrical signals into mechanical motion**  
C) Store energy                              D) Amplify signals
4. Which actuator type is commonly used in robotics for precise angular control? [     ]  
A) Solenoid    B) DC motor    **C) Stepper motor**    D) Relay
5. What is the principle behind capacitive sensors? [     ]  
A) Inductance    B) Resistance    **C) Capacitance change**    D) Hall effect
6. Which of the following is NOT a type of temperature sensor? [     ]  
A) Thermocouple    B) RTD            **C) Hall effect sensor**    D) Thermistor
7. What does MEMS stand for? [     ]  
A) Micro Electronic Mechanical System    B) Mechanical Electronic Micro Sensor  
**C) Micro Electro Mechanical System**                      D) Mechanical Electrical Micro System
8. Which actuator uses piezoelectric materials for operation? [     ]  
A) DC motor    B) Solenoid    **C) Piezoelectric actuator**    D) Stepper motor
9. What is the primary purpose of signal conditioning in sensor systems? [     ]  
A) Data storage                              **B) Signal amplification and filtering**  
C) Energy conversion                      D) Mechanical motion

  
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10. Which sensor is commonly used for detecting magnetic fields? [     ]  
A) Thermocouple    B) Photodiode **C) Hall effect sensor** D) Ultrasonic sensor
11. What is the primary application of an accelerometer? [     ]  
A) Temperature measurement                      B) Pressure measurement  
**C) Motion detection**                                      D) Light intensity measurement
12. Which actuator type is commonly used in pneumatic systems? [     ]  
**A) Hydraulic cylinder**                      B) Stepper motor    C) Solenoid    D) DC motor
13. What is the primary function of a strain gauge sensor? [     ]  
A) Measure light intensity    B) Measure pressure  
**C) Measure deformation**    D) Measure temperature
14. Which sensor type is suitable for measuring humidity? [     ]  
A) Thermocouple    B) Photodiode                      **C) Capacitive sensor**                      D) Hall effect sensor
15. Which actuator type is used for switching purposes in electrical circuits? [     ]  
A) DC motor **B) Relay**    C) Stepper motor    D) Piezoelectric actuator
16. What does RTD stand for? [     ]  
A) Resistor Temperature Detector                      B) Resistance Thermodynamic Detector  
**C) Resistance Temperature Detector**                      D) Real-Time Detector
17. Which sensor type is commonly used for detecting distance in robotics? [     ]  
**A) Ultrasonic sensor**                      B) Hall effect sensor    C) Thermocouple    D) Photodiode
18. What is the primary function of a pressure sensor? [     ]  
A) Measure temperature    B) Measure light intensity  
**C) Measure pressure** D) Measure distance
19. Which actuator type is commonly used for linear motion control? [     ]  
A) Stepper motor    B) DC motor    C) Solenoid    **D) Hydraulic actuator**
20. What is the primary function of a Hall effect sensor? [     ]  
A) Measure temperature                      **B) Measure magnetic fields**  
C) Measure light intensity                      D) Measure pressure

  
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**Department of Electronics and Communication Engineering**  
Course Name: Sensors and Actuators  
**Evaluation of the Value-Added Courses**  
Key

| Q.No | Answer | Q.No | Answer |
|------|--------|------|--------|
| 1    | B      | 11   | C      |
| 2    | B      | 12   | A      |
| 3    | B      | 13   | C      |
| 4    | C      | 14   | C      |
| 5    | C      | 15   | B      |
| 6    | C      | 16   | C      |
| 7    | C      | 17   | A      |
| 8    | C      | 18   | C      |
| 9    | B      | 19   | D      |
| 10   | C      | 20   | B      |

*BSP*

  
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ESWAR COLLEGE OF ENGINEERING  
NARASARAOPET-522 601, Guntur (Dt.)



# ESWAR COLLEGE OF ENGINEERING: NARASARAOPET

Approved by AICTE, New Delhi., Affiliated to JNTUK, Kakinada  
Kesanupalli Village, Narasaraopet – 522 601,  
Palnadu Dist. A.P.

Phone No. 9121214708

Email ID: principal@eswarcollegeofengg.org, eswarcollegeofengg@gmail.com  
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## Department of Electronics and Communication Engineering

Course Name: Sensors and Actuators

### Evaluation of the Value-Added Courses

Answer all the Questions Each Question Carry 1 Mark

Total Marks: 20M

Min Marks: 12 Marks

Name of the Student Bhargava Kumar M H.T.No: 15SE1A0 Marks obtained: 12

1. What is the primary function of a sensor? [ B ]  
A) Control a system B) Convert physical quantities into electrical signals  
C) Generate mechanical motion D) Store data
2. Which sensor type is commonly used for detecting light intensity? [ B ]  
A) Thermocouple B) Photodiode C) Accelerometer D) Hall effect sensor
3. What is the primary function of an actuator? [ B ]  
A) Measure physical quantities B) Convert electrical signals into mechanical motion  
C) Store energy D) Amplify signals
4. Which actuator type is commonly used in robotics for precise angular control? [ C ]  
A) Solenoid B) DC motor C) Stepper motor D) Relay
5. What is the principle behind capacitive sensors? [ C ]  
A) Inductance B) Resistance C) Capacitance change D) Hall effect
6. Which of the following is NOT a type of temperature sensor? [ C ]  
A) Thermocouple B) RTD C) Hall effect sensor D) Thermistor
7. What does MEMS stand for? [ A ]  
A) Micro Electronic Mechanical System B) Mechanical Electronic Micro Sensor  
C) Micro Electro Mechanical System D) Mechanical Electrical Micro System
8. Which actuator uses piezoelectric materials for operation? [ C ]  
A) DC motor B) Solenoid C) Piezoelectric actuator D) Stepper motor
9. What is the primary purpose of signal conditioning in sensor systems? [ B ]  
A) Data storage B) Signal amplification and filtering  
C) Energy conversion D) Mechanical motion

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10. Which sensor is commonly used for detecting magnetic fields? [ C ]  
 A) Thermocouple    B) Photodiode    C) Hall effect sensor    D) Ultrasonic sensor
11. What is the primary application of an accelerometer? [ C ]  
 A) Temperature measurement    B) Pressure measurement  
 C) Motion detection    D) Light intensity measurement
12. Which actuator type is commonly used in pneumatic systems? [ A ]  
 A) Hydraulic cylinder    B) Stepper motor    C) Solenoid    D) DC motor
13. What is the primary function of a strain gauge sensor? [ D ]  
 A) Measure light intensity    B) Measure pressure  
 C) Measure deformation    D) Measure temperature
14. Which sensor type is suitable for measuring humidity? [ C ]  
 A) Thermocouple    B) Photodiode    C) Capacitive sensor    D) Hall effect sensor
15. Which actuator type is used for switching purposes in electrical circuits? [ B ]  
 A) DC motor    B) Relay    C) Stepper motor    D) Piezoelectric actuator
16. What does RTD stand for? [ C ]  
 A) Resistor Temperature Detector    B) Resistance Thermodynamic Detector  
 C) Resistance Temperature Detector    D) Real-Time Detector
17. Which sensor type is commonly used for detecting distance in robotics? [ A ]  
 A) Ultrasonic sensor    B) Hall effect sensor    C) Thermocouple    D) Photodiode
18. What is the primary function of a pressure sensor? [ C ]  
 A) Measure temperature    B) Measure light intensity  
 C) Measure pressure    D) Measure distance
19. Which actuator type is commonly used for linear motion control? [ D ]  
 A) Stepper motor    B) DC motor    C) Solenoid    D) Hydraulic actuator
20. What is the primary function of a Hall effect sensor? [ B ]  
 A) Measure temperature    B) Measure magnetic fields  
 C) Measure light intensity    D) Measure pressure



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Name of the Student P. Ajayappa

H.T.No: 15JE1A0 Marks obtained: 12

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### Department of Electronics and Communication Engineering


#### 1 Week Add-On Course on “Sensors and Actuators”


Dates: 10-12-2018 to 14-12-2018.


#### Marks Sheet

| S.No. | HT.NO      | Student Name                          | Marks |
|-------|------------|---------------------------------------|-------|
| 1     | 15JE1A0401 | PANADI AYYAPPA                        | 12    |
| 2     | 15JE1A0402 | MALEPATI GURU BHARAT<br>KUMAR         | 12    |
| 3     | 15JE1A0403 | SHAIK JOHNY                           | 12    |
| 4     | 15JE1A0404 | KANCHARLA KOTESWAR<br>RAO             | 13    |
| 5     | 15JE1A0405 | SHAIK YALAVARTHIPATI<br>MUNEER AHAMED | 12    |
| 6     | 15JE1A0406 | SHAIK NAGOOR BASHA                    | 14    |
| 7     | 15JE1A0407 | JOGIPARTHI<br>NARASIMHARAO            | 13    |
| 8     | 15JE1A0409 | KOTA RATNA KUMARI                     | 14    |
| 9     | 15JE1A0410 | NARISSETTY SOWRI BABU                 | 13    |
| 10    | 15JE1A0411 | CHAVALI SRILALITHA                    | 12    |
| 11    | 15JE1A0412 | KOYA SRINADH                          | 13    |
| 12    | 15JE1A0413 | VASA SUDHA RANI                       | 14    |
| 13    | 16JE5A0401 | DERANGULA SAI PRIYA                   | 13    |
| 14    | 16JE5A0402 | POLAKAM RAVINDRA                      | 14    |
| 15    | 14JE1A0434 | KOTHAPALLI SIVA SANKAR                | 13    |

  
Course Coordinator

  
HOD-ECE  
Department of ECE  
Eswar College of Engineering  
Kesanupalli (V), Narasaraopet - 522 603.

  
Principal  
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### Department of Electronics and Communication Engineering

#### Summary of the Program

**Course Name:** Sensors and Actuators

The Department of Electronics and Communication Engineering at Eswar College of Engineering, Narasaraopet, proposes to conduct a one-week value-added course on " **Sensors and Actuators**" from **10-12-2018 to 14-12-2018**.. The course aims to enhance the skills and knowledge of 15 students from IV B.Tech I Sem ECE.

#### Evaluation Criteria for Certification:

- Marks: Students were required to secure a minimum of 60% marks in the evaluation.
- Attendance: A minimum of 80% attendance was mandatory for certification.

#### Objectives of the Course:

- Equip participants with comprehensive knowledge and understanding of various sensors and actuators, including their principles, types, and applications in engineering and technology.
- Develop practical skills in sensor and actuator interfacing, signal conditioning, and integration within complex engineering systems to enhance functionality and performance.
- Foster critical thinking and problem-solving abilities by exploring real-world applications, emerging technologies, and innovative solutions in the field of sensor and actuator technology.

#### Course Delivery Method:

- The course consisted of lectures, and practical sessions, conducted by **Mrs D Rekha**, an experienced faculty member from the Department of ECE.
- Interactive sessions encouraged active participation and engagement from the students to ensure effective learning and understanding of the concepts.

#### Benefits for Students:

**Enhanced Skillset:** Students will acquire practical skills and knowledge in sensor and actuator technologies, making them more proficient and competitive in the evolving field of engineering and technology.

**Career Advancement:** With specialized expertise in sensors and actuators, students can explore diverse career opportunities in industries such as robotics, automation, biomedical engineering, and IoT, thereby expanding their career prospects and earning potential.

  
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**Hands-on Experience:** The course offers hands-on training and project-based learning opportunities, allowing students to apply theoretical concepts to real-world problems, thereby enhancing their problem-solving, analytical, and teamwork skills.

**Innovative Thinking:** By exploring emerging technologies and trends in sensor and actuator technology, students will be inspired to think creatively, innovate, and contribute to advancements in the field, fostering a culture of innovation and research-driven learning..

In conclusion, the "Sensors and Actuators" course equips students with essential knowledge and practical skills in the field of engineering and technology. Through hands-on training and project-based learning, students enhance their problem-solving abilities and gain valuable insights into real-world applications. This course fosters innovation and prepares students for diverse career opportunities in industries such as robotics, automation, and IoT.

  
Faculty Coordinator

  
HOD-ECE

  
Principal

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