



THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI - 625 015
Department of Mechanical Engineering

Course Instructor Feedback for One/Two credit course

Name of the Course : 14ME1Q0 - Vision Based Dimensional Measurement

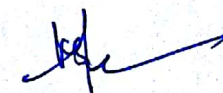
Name of the Industry: VS Technology, Bangalore

Name of the Expert : Mr. Adarsha Sarpangala

Date/Time/Venue : 9-10, September 2017; 9.30 a.m to 5.30 a.m;
TARC Conference Hall & Vision Systems Lab

| | Comments |
|---|---|
| Student attendance | About 24 students Attended, which is fair number. |
| Level of the students in understanding the concepts | Overall good - 8.5 out of 10. |
| Any suggestions regarding new content to be included as Prerequisites/Special electives | 1. Machine vision Fundamentals 2. Application of machine vision to industry. |
| Hall/Lab arrangements | Good - Sophisticated arrangement. |
| Hospitality | Good facilities provided. |

 10/09/17
Signature of the Course Instructor


Signature of Head of the Department

THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI-625015
DEPARTMENT OF MECHANICAL ENGINEERING

ONE CREDIT COURSE ON

"14ME1Q0 - VISION BASED DIMENSIONAL MEASUREMENT"

VII B.E (Mechanical Engineering)

09-10, September 2017

Industry Expert: Mr.Adarsha Sarapangala, Senior Solution Specialist, VS Technology Bangalore

| S.NO | REG NO | NAME OF STUDENT | 09.09.17 FN | 09.09.17 AN | 10.09.17 FN | 10.09.17 AN |
|------|--------|-------------------------------|--------------------|--------------------|--------------------|------------------|
| 1 | 14G15 | M.CHELLAPANDI | M.Chy | M.Chy | M.Chy | M.Chy |
| 2 | 14G36 | S.KARTHIKEYAN | S.Karthikeyan | S.Karthikeyan | S.Karthikeyan | S.Karthikeyan |
| 3 | 14G40 | K.KISHORE | K.Kish. | K.Kish. | K.Kish. | K.Kish. |
| 4 | 14G41 | S.KITHER MOHAMED DASTHAKIR | S.K | S.K | S.K | S.K |
| 5 | 14G59 | B.NIRMAL JEFFREY | B.Nirmal | B.Nirmal | B.Nirmal | B.Nirmal |
| 6 | 14G66 | R.PRADEEP KUMAR | R.P | R.P | R.P | R.P |
| 7 | 14G71 | K.S.RAGHUNANDHAN | Raghunandan | A | A | A |
| 8 | 14G83 | K.G.SANKAR GANESH | K.G.S | K.G.S | K.G.S | K.G.S |
| 9 | 14G87 | D.SATHYARAJAN | D.Sathyarajan | D.Sathyarajan | D.Sathyarajan | D.Sathyarajan |
| 10 | 14G91 | K.S.SHRI DHIVYA | S.Shri Dhivya | S.Shri Dhivya | S.Shri Dhivya | S.Shri Dhivya |
| 11 | 14G100 | M.SURYAPRAKASH | M.Suryaprakash | M.Suryaprakash | M.Suryaprakash | M.Suryaprakash |
| 12 | 14G105 | C.THIRUMOOLASITHAR | C.Thirumoolasithar | C.Thirumoolasithar | C.Thirumoolasithar | A |
| 13 | 14G110 | K.VIGNESHKUMAR | K.Vigneshkumar | K.Vigneshkumar | K.Vigneshkumar | K.Vigneshkumar |
| 14 | 14G114 | M.VIGNESHWARAN | M.Vigneshwaran | M.Vigneshwaran | M.Vigneshwaran | M.Vigneshwaran |
| 15 | 14G116 | M.S.VISHNU | M.S.Vishnu | M.S.Vishnu | M.S.Vishnu | M.S.Vishnu |
| 16 | 14G123 | S.BHARANEESWARAN | S.Bharaneeswaran | S.Bharaneeswaran | S.Bharaneeswaran | S.Bharaneeswaran |
| 17 | 14G127 | U.K.HARIRAM SAIT | U.K.Hariram Sait | U.K.Hariram Sait | U.K.Hariram Sait | U.K.Hariram Sait |
| 18 | 14G132 | B.KARTHIKEYAN | B.Karthikeyan | B.Karthikeyan | B.Karthikeyan | B.Karthikeyan |
| 19 | 14G137 | B.MAHESH | B.Mahesh | B.Mahesh | B.Mahesh | B.Mahesh |
| 20 | 14G138 | M.MANIKANDAN | M.Manikandan | M.Manikandan | M.Manikandan | M.Manikandan |
| 21 | 14G142 | E.K.SANJEEV | E.K.Sanjeev | E.K.Sanjeev | E.K.Sanjeev | E.K.Sanjeev |
| 22 | 14G144 | T.SIVABALAN | T.Sivabalan | T.Sivabalan | T.Sivabalan | T.Sivabalan |
| 23 | 14G145 | K.SURESH | K.Suresh | K.Suresh | K.Suresh | K.Suresh |
| 24 | 14G146 | P.TAMILSELVAN | P.Tamilselvan | P.Tamilselvan | P.Tamilselvan | P.Tamilselvan |

Course Coordinator: S.Saravana Perumaal, APME



THIAGARAJAR COLLEGE OF ENGINEERING - MADURAI 625 015
TCE-III

| S.No | One credit course need analysis sheet | |
|------|---|---|
| 1. | Name of the Course | AME100 - Vision Based Dimensional Measurement |
| 2. | Name of the Industry | VS Technology, Bangalore |
| 3. | Name of the SIG associated with | Manufacturing Engineering |
| 4. | Motivation for offering the course | Industrial need |
| 4.1 | Feedback (If yes, Details of the feedback as per the annexure I) | |
| | From Recruiter | <input checked="" type="checkbox"/> Y/N |
| | From Employer | Y/N |
| | From Alumni | <input checked="" type="checkbox"/> Y/N |
| | From Academic Council members | Y/N |
| | From Board of Studies members | Y/N |
| | From Senior students | Y/N |
| | From current students | Y/N |
| | From Performance Assessment Committee | Y/N |
| | From Department Advisory committee | Y/N |
| 4.2 | Faculty participation in Seminar/FDP (If yes, details) | |
| | At higher learning institutes | |
| | At Industry | Advanced Imaging during 6-9 Jan 2016 by ADCIS France & Online Solutions Chennai |
| 5. | Outcomes expected | |
| | Technology transfer | |
| | Student Internship | |
| | Placement | |
| | Organizing FDP/seminar at TCE | ✓ |
| | Collaborative research/consultancy projects | |
| | Faculty as Trainee/Trainer in the Industry | |
| | Joint publications | |
| | Setting up of Lab/Infrastructure | ✓ |

S. Sankar



THIAGARAJAR COLLEGE OF ENGINEERING - MADURAI 625 015

TCE-III

Course Schedule

Name of the Course: **14ME1Q0 - Vision Based Dimensional Measurement**

Name of the Industry: VS Technology, Bangalore

Name of the Expert: Mr. Adarsha Sarpangala

Number of Students enrolled: 24

Name of the Faculty: Dr.S.Saravana Perumaal

Date/Time/Venue: 9-10, September 2017; 9.30 a.m to 5.30 a.m;
TARC Conference Hall & Vision Systems Lab

| Date | Time | Topics | Remarks |
|------|----------------------|--|---------|
| Day1 | 9.30 a.m to 1.30 p.m | Image Acquisition Process: Workflow of Image acquisition - Solid State Sensors – Operation of Charge Coupled Device (CCD) and Complementary Metal Oxide Semiconductor (CMOS) Sensors. Types of cameras: Line Scan, Area scan and Smart cameras. Image Data Transfer – Digital Camera Interfaces – CameraLink, Fire Wire, USB and Gigabit Ethernet. | |
| | 2.30 p.m to 5.30 p.m | Optics: Optical foundations: Depth of field, Field of view and focal point - F number, Thin Lens, Imaging Equation, Depth of Field, Typical Imaging Situations, Aberrations, Lens Selection – Mounts, Telecentric lens, Fisheye lenses and endoscopes. | |
| Day2 | 9.30 a.m to 1.30 p.m | Illumination: Light Sources, Types of Light Filters, Types of Lighting: Front lighting – Diffuse, Directed, Polarized, Ring and Structured; Back lighting – Diffuse, Directional, polarized, Collimated, Telecentric, Structured, Bright field, Dark Field, Incident and Transmitted Lighting. | |
| | 2.30 p.m to 5.30 p.m | Applications: Dimensional Checking: Simple gauging – Linear Measurement – Calibration - Shape Checking. | |

Signature of the Faculty coordinator