Analysis of Feedback from Stakeholders and Action Taken (2019-2020)

The department has formal and informal mechanisms to obtain feedback from stakeholders through various committees, associations, organization, etc.

1.a. ***Students Feedback***

- The students felt that the syllabus is career oriented and they feel good to learn with high quality of teaching.
- Students found all the subject very good and interactive.
- Students requested more practical sessions.

1.b. ***Parents Feedback***

- Parents expressed their satisfaction in the academic standards of the curriculum and syllabi.
- Parents requested the department to include more laboratory sessions.

2) Analysis:

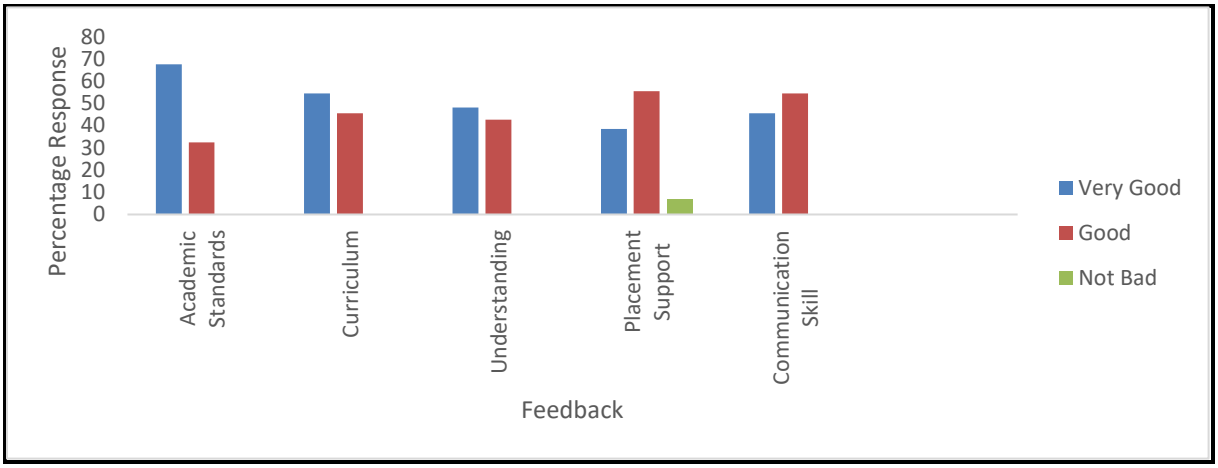

Fig. 1. Analysis of Parents Feedback - 2019-20

Fig. 2. Analysis of Student Feedback - 2019-20

The overall feedback is good and encouraging with many constructive suggestions given by the parents and students.

3) Sample feedback:

Student's Feedback

Karunya University
(Karunya Institute of Technology and Sciences)
Declared as Deemed-to-be University under section 3 of the UGC Act, 1956
Karunya Nagar, Coimbatore - 641114, Tamil Nadu, India

INTERNAL QUALITY ASSURANCE CELL (IQAC)

Feedback from Students on the Curriculum and Syllabi of the B.Tech./M.Tech. Programme

Feedback from Mr.Kevin Shibu Ninan……..

Programme : B.Tech. (…Robotics and Automation……)

Department : …Robotics Engineering ……..

School : Karunya Institute of Technology and Sciences……..

Feedback on Curriculum (Number of Theory Subjects, Laboratory subjects, Core Subjects and Electives. Subjects having industrial applications for improving employability)

1. All the subjects are good and interactive
2. ……

Suggestions to improve the Curriculum

1. More laboratory subjects can be included
2. ……
3. ……

Feedback on Syllabi of subjects studied and suggestions for improvement (any three subjects)

Sl.No.	Name of the Subject	Feed back	Suggestions for improvement
1.	Sensor Signals and Conditioning Circuits	Good	
2.	Kinematics and Dynamics of Machinery	Good	
3.	Robot Kinematics and Dynamics	Good	

Kevin Shibu

Date:30/03/2021

Signature

Name of the Student: Kevin Shibu Ninan

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INTERNAL QUALITY ASSURANCE CELL (IQAC)

Feedback from Students on the Curriculum and Syllabi of the B.Tech./M.Tech. Programme

Feedback from Mr. S.Thamarai Selvan

Programme : B.Tech.. (Robotics and Automation.)

Department : Robotic Engineering.

School : Karunya Institute of Technology and Science

Feedback on Curriculum (Number of Theory Subjects, Laboratory subjects, Core Subjects and Electives. Subjects having industrial applications for improving employability)

1. The Syllabus is Career oriented
2. Good to learn new topics with the high quality of teaching

Suggestions to improve the Curriculum

1. Needs to include some more Practical Oriented Subject topic

Feedback on Syllabi of subjects studied and suggestions for improvement (any three subjects)

Sl.No.	Name of the Subject	Feed back	Suggestions for improvement
1	Sensors for IOT Application	Very Good	Workshop needed
2	Sensors and Protocols for instrumentation	Very Good	Practical Session

Date:30/3/2021

Signature

S. Selvan

Karunya University
(Karunya Institute of Technology and Sciences)
Karunya Nagar, Coimbatore - 641114, Tamil Nadu, India

INTERNAL QUALITY ASSURANCE CELL (IQAC)

Feedback from Parents on the Curriculum and Syllabi of the B.Tech./M.Tech. Programme

Feedback from parents to help the University to improve the Curriculum and Syllabi taught to your son. Your feedback will be placed in Curriculum Development Cell (CDC) and Board of Studies (BoS) during the next revision of curriculum and syllabi. Kindly feel free to give your feedback.

Sl.No.	Feedback	Very Good	Good	Not bad
1	Give your feedback on the academic standards of the University		✓	
2	How do you find the curriculum and syllabi of the programme		✓	
3	After completing the programme, the academic understanding of your son / daughter		✓	
4	Support given by Curriculum and syllabi for getting placement to your son/daughter		✓	
5	Improvement of communication skills through the academic programme		✓	

Suggestions for improving the Curriculum and Syllabi:

1. Theoretically seems everything fine. But much worried about the lab. Without the lab practice students will not be able to excel in the what they are learning.
   .....
2. Request to give more lab experiments. Students must need to get experienced working in the lab.
   .....

Signature:

Name: Viji Shibu Ninan

Mother of :Kevin Shibu Ninan
(name of the student)

Reg.No. of the Student: URK19RA1003

Programme: B.Tech. / M.Tech. (Robotics and Automation)

Department: Robotics Engineering

Date:30/03/2021

School: Karunya Institute of Technology and Sciences

4) **Action Taken**

Action Taken

S. No.	Suggestion given	Action Taken
Student Feedback		
	More practical oriented courses are needed	Following laboratory courses were included in the curriculum: • Artificial Intelligence and Machine Learning laboratory • Python Programming • Embedded C • RPA Laboratory • Basic Robotics Laboratory (A1)
	Workshops are required	Hands on Workshops and Training Programs were organized (A2)
Parent Feedback		
	More practical sessions are needed	Mini projects and Project Based Courses were introduced in the curriculum (A3)
	Industrial Learning will be helpful	Industrial Training is included in every semester. Industry based training programmes were arranged (A4)

5) Evidence: A1

Category 4 : Engineering Sciences

No.	Course Code	Course Title	L:T:P	Credit
1.	18RO2002	Introduction to Mechanical Systems	3:0:0	3
2.	18ME1002	Engineering Graphics (AutoCAD)	0:0:2	1
3.	20RO1001	Engineering Practices	0:0:2	1
4.	20RO1002/ 20CS1001	Basic Course in Embedded C / Programming for Problem Solving	3:0:3	4.5
5.	20RO1003	Fundamentals of Python Programming for Robotics	3:0:3	4.5
6.	20RO1004	Introduction to Robotics and Automation	3:0:0	3
7.	20RO1005	Basic Robotics Laboratory	0:0:2	1
8.	18EC2032	Electron Devices and Circuits	3:0:0	3
		Total		21

Category 5 : Professional Core

S. No	Course Code	Course Title	Credits

1.	20RO2001	Digital Electronics and Microprocessors	3
2.	20RO2002	Mechanics of Solids	3
3.	18EE2001	Electrical Circuit Analysis	4
4.	19RO2001	Theory and Programming of CNC Machines	3
5.	18EE2019	Electrical Machines and Drives	3
6.	18RO2003	Automatic Control Systems	4
7.	18EC2033	Electron Devices and Circuits Laboratory	1
8.	18RO2004	Electrical Machines and Control Systems Laboratory	1
9.	18RO2005	Sensor Signal Conditioning Circuits	3
10.	20RO2003	Sensors and Protocols for Instrumentation	3
11.	18ME2028	Hydraulics and Pneumatics	3
12.	18ME2029	Hydraulics and Pneumatics Laboratory	1
13.	20ME2010	Kinematics and Dynamics of Machinery	4
14.	18RO2007	Sensor Signal Conditioning Circuits Laboratory	1
15.	18RO2008	Robot Kinematics and Dynamics	3
16.	18ME2030	Mechanics and Engineering Design Laboratory	1
17.	19RO2016	Microcontrollers for Robotics	3
18.	19RO2017	Microcontrollers Laboratory for Robotics	1
19.	18RO2009	Vision Systems	3
20.	18RO2010	Programmable Logic Controllers	3
21.	18RO2011	Automation System Design	3
22.	18RO2012	PLC and Robotics Laboratory	1
23.	18RO2013	Totally Integrated Automation	3
24.	18RO2014	Totally Integrated Automation Laboratory	1
25.	18RO2015	Field and Service Robotics	3
26.	19RO2012	Artificial Intelligence in Robotics	3
27.	19RO2010	Machine Learning for Robotics	3
28.	20RO2004	AI and ML Laboratory for Robotics	2
29.	20RO2005	Robot Process Automation Laboratory	1
		Total Credits	71

A2: Workshops

Course name
VAC1. Basics of LabVIEW programming
VAC2. Hands on training on Robotics
VAC3. Industrial training on the basics of LabVIEW NXG
VAC4. National level workshop on LabVIEW - MyRIO
VAC5. National level workshop on 3D printing for medical and robotic applications
VAC6.Workshop on IoT based smart agriculture using Arduino

VAC7.Workshop on Embedded System Application – Hands on approach

A3: Project Based Learning & Mini Projects

Professional Core

Dr. Lazar Mathew, Senior Advisor recommended that Artificial Intelligence should be in the core. Hence, the course titled Artificial Intelligence for Robotics was moved from Professional Elective to Professional Core. The total credits for core is hence 57.

The contents of the course Microprocessor and Microcontroller was analyzed and the following modifications were recommended by the board members.

1. The course 18EC2030 Digital Electronics to be modified as Digital Electronics and Microprocessors
2. The course 18EC2028 Microprocessors and Microcontrollers to be replaced by Microcontrollers for Robotics
3. The Laboratory Course 18EC2029 Microprocessors and Microcontrollers Laboratory to be replaced by Microcontrollers Laboratory for Robotics
4. HoD-Dr. S. Thomas George mentioned that all the courses should be project oriented and the following courses were identified to be given Mini project as a mandatory requirement.
    - Automatic Control Systems
    - Sensor Signal Conditioning Circuits
    - Microcontrollers
    - Robot Kinematics and Dynamics
    - Vision Systems
    - Automation System Design
5. The following faculty members were assigned the responsibility of conduction Add on courses to students on various skill sets required for B. Tech Robotics and Automation and B. Tech Biomedical Engineering

S. No.	Add On Course	Faculty In-charge
1.	PLC, SCADA, DCS	Mr. K. Gerard
2.	Embedded Systems	Dr. X. Anitha Mary
3.	FDP on Robotics	Dr. P. Subha Hency
4.	CAD and 3D Printing	Dr. L. D. VijayAnand
5.	Basic Electronics	Dr. D. Pamela
6.	Matlab and LabVIEW	Dr.P.Rajalakshmy/ Dr. P. Manimegalai

A4: Industry Training and Internships

Category 9 : Internships, Projects, Patent and Products

S.No.	Course Code	Course Title	Credit
1	ISP2921	Industry Internship 1	1
2	ISP2922	Industry Internship 2	1
3	ISP2923	Industry Internship 3	1
4	20RO2999	Projects, Patent and Products	12
		Total	15