(An Autonomous Institute of Government of Maharashtra)

GECA

Government College of Engineering, Aurangabad

शासकीय अभियांत्रिकी महाविद्यालय, औरंगाबाद

महाराष्ट्र शासन

In pursuit of Technical Excellence

MECHANICAL ENGINEERING DEPARTMENT

WELCOMES

To

NBA EXPERT COMMITTEE MEMBERS

INTRODUCTION OF THE DEPARTMENT

- Establishment of Department : 1960
- UG Course : Mechanical with intake of 60
- M.Tech Course: Mechanical Production with intake of 18.
- Sanctioned Intake of 60
- Consistent result above 80 %
- Consistent placement record
- 9 full time faculty members
- Associate Professor :2, Assistant Professor :6, Teaching Assistant :1
- 100 % faculty is Post Graduate + 4 Ph. D. (Engg) + 5 Pursuing Ph.D.(Engg)
- 85 % faculty with Experience higher than 5 years in GCOEA

DEPATMENTAL PROFILE

Infrastructure Facilities :

- 3 Dedicated Classrooms and 12 laboratories
- Individual faculty/Staff-rooms & HOD Office
- Department Library : **>170 books + 33 project reports**
- 1 Seminar Hall.

ICT Infrastructure :

- **54** Computers on LAN
- 100 Mbps Leased line
- Intercom Facility
- Multimedia Projection facility in classrooms
- CCTV cameras in Common area

Industry Campus Connect : TCS (Ninja), L&T, Indian Navy, Siemens, Forbes, Endress + Hauser, CGPower, Varroc, Crompton Greaves, Atlas Copco, SANVEO/GREAVES COTTON, Adani Electricity, Indigo Paints etc.

DEPARTMENT ACHIEVEMENTS

- Merotius students all over the Maharashtra prefer to take admission to the department
- Consistent Improvement in success rate.
- Consistent placement record , and is above 60% out of enrolled students. For A.Y. 2019-20 total 21 students has been placed through on campus
- Established TATA Technology, Ready Engineer -Hub Centre from A.Y. 2018.
- Dr. A.M.Nikalje has appointed as BoS member of Engineering and Technology section at KBCNMU, Jalgaon
- Dr.S.B.Chikalthankar & Mr.M.G.Rathi represented team of SAE BAJA International Competition at Oregon USA 2018.

DEPARTMENT ACHIEVEMENTS

- Consistently students of department achieved 1st position in All India Rank in virtual BAJA 2020 competition since last two years.
- Prof. S.D.Ambekar achieved Doctorate degree in 2020 from Savitribai Phule Pune University.
- Dr. U.V.Hambire published a patent on Dental Composites in year 1st Dec., 2020.
- Total 58 students enrolled and successfully completed the NPTEL courses with good percentage during 2018-19.
- 12 final year students of A.Y. 2019-20 has obtained valid score in GATE 2019 exam.
- Mr. K.S.Wasankar has published one research paper in scopus index 12th InternationalConference on Computationa Heat, Mass and Momentum Transfer-2019 ICCHMT-2019, Sept. 03-06, 2019, Rome, Italy

FACULTY ACHIEVEMENTS

Name of Faculty	Details of achievement	Year
Dr. A.M.Nikalje	1.BOS member at KBCNMU,Jalgaon 2.Approved as research guide for Ph.D in KBCNMU,Jalgaon and Dr. BAMU,Aurangabad. 3.Work as External examiner at GCOE,Jalgaon 4.Faculty Advisor at SAE BAJA india, Expert talk at Govt Poly. Aurangabad in 2019. 5.Work as Co-Coordinator for FDP on "Role of industry and Alumni Dev, of Tech education 6.Work as judge for the Project competition at MIT,Aurangabad in Techno-MIT 2K19 7.Work as Coordinator at Startupindia 20K18	2017-18 onwards till 2020 2019
Dr. Suhas Mohite	1.Keynote speaker at MMOT workshop at Trinity college of Engineering and Research, Pune	Feb-2019
	2.Presented paper at ASME Dynamic Systems & Control Conference (DSCC) at Atlanta, Georgia US.	2018
Dr.S.B. Chikalthankar	1.Appointed as Technical Expert by Government of India, Department of Scientific and Industrial Research for M/S Aurangabad Electricals R&D.	June 2019
	2.Expert Lecture at DTE Workshop at Government Polytechnic Nanded.	2019
	3.Represented team of SAE BAJA International Competition at Oregon USA 2018	June 2018
	4.TATA Technology, Ready Engineer -Hub Centre In-charge Aurangabad Region	2018 Onwards

FACULTY ACHIEVEMENTS

Name of Faculty	Details of achievement	Year
Dr. U V Hambire	1.BOS member Dr. BAMU Aurangabad	2018-2019
	2.Appointment as Moderator by IIT Bombay for Online FDP	2018
	3.Patent on " Dental Composite" 2020	2020
Prof. S. R. Kulkarni	1.TATA Technology, Ready Engineer -Hub Centre In-charge Aurangabad Region	2018 Onwards
	2.Coordinator of Train the trainer By TATA Tech Pune	2018
Dr. S. A Patil	1.BOS member Dr. BAMU Aurangabad	2018-2019
Mr.K.S.Wasankar	1.Coordinated Faculty Development Program on “Computational Fluid Dynamics:Development, Applications and Analysis” under TEQIP II grants, in collaboration with Indian Institute of Technology, Bombay during March 8 th to 12 th , 2017.	2017
	2.Conducted, coordinated and delivered most of the expert sessions in student training program on “Internet of Things (IoT)” under TEQIP III grants, during July 13 th to Sept. 20 th , 2020	2020
	3. Published one research paper in scopus index 12th International Conference on Computationa Heat, Mass and Momentum Transfer-2019 ICCHMT-2019, Sept. 03-06, 2019, Rome, Italy	2019-20

STUDENTS ACHIEVEMENTS

- Reeshabh Chhatait from final year B.tech has secured 70.78 scored in GATE 2019 exam.
- Patwardhan shraddha has passed NPTEL course (Inspection and Qulity Control in Manufacturing) with 84% during year 2018-19.
- 2017-18 year GECA secured 25th rank in the national competition ABU Robocon 2017 held at held at Tokyo, Japan.
- In 2018-19 year GECA secured 7th position in national league matches and also secured first runner up in best usage of MATLAB with a cash prize of Rs.25000/-
- In 2019-20 year GECA All India rank 7th at ABU National ROBOCON, IIT Delhi 1st prize of Best usage of MATLAB.
- **Students of mechanical engineering department win various prices and awards in "SEA BAJA" An international event organized by Society of Automotive Engineers India in collaboration with big brands of automotive industries of India**

ABU Robocon 2017

Team Aryans conceptualize, design, build and test a

ABU Robocon 2018

VISION

To Develop Excellence in Mechanical Engineering

MISSION

M1. Impart sound knowledge and technical skills through conduciveambiance with right attitude towards society and environment.

M2. Enhance research facilities, collaboration with industry and provide testing and consultancy services.

M3. Nurture entrepreneurial qualities, creativity and provide motivation for higher education.

M4. Inculcate self-learning, team work and adoptability to change

PROGRAM EDUCATIONAL OBJECTIVES

- PEO1: To equip students with solid foundation in basic sciences and engineering to analyze engineering problems and provide innovative solutions using appropriate technology.

- PEO2: To prepare students for successful career in Industry, R&D, entrepreneurship that meet global needs.

- PEO3: To inculcate professional skills, ethical values, lifelong learning, team work and leadership qualities in students.

- PEO4: To create awareness about sustainable development, clean and green environment.

PEO Statements	M1	M2	M3	M4
PEO1: To equip students with solid foundation inbasic sciences and engineering to analyze engineering problems and provide innovative solutions using appropriate technology	3	2	2	1
PEO2: To prepare students for successful career inIndustry, R&D, entrepreneurship that meet global needs	2	3	3	2
PEO3: To inculcate professional skills, ethical, values, lifelong learning, team work and leadership qualities in students	1	1	1	3
PEO4: To create awareness about sustainable development, clean and green environment	2	---	2	1

ESTABLISH CONSISTENCY OF PEOS WITH MISSION OF THE DEPARTMENT

PROGRAM CURRICULUM

The process for designing the program curriculum

the Institute has formed various boards and committee for curriculum design, periodic revision, for implementation and monitoring of curriculum and evaluation.

- The body which is responsible for designing programme curriculum is Board of Studies (BOS) of mechanical Engineering.
- All faculty members of the department are members of BOS . The BOS has internal members from the department and external experts from industries and renowned institutions.
- The PEO's serves as a base to articulate PO's and further these serve as the main point for designing the curriculum with valuable inputs from other external members.
- It is the course coordinator to whom the responsibility is assigned to design the course contents and include the aspirations of all the stakeholders to give a best possible course which matches the PO's at high level.

STRUCTURE OF THE CURRICULUM

THE COMPONENTS OF THE CURRICULUM

Course Component	Curriculum Content (% of total number of credits of the program)	Total number of contact hours	Total number of credits
Basic Sciences	16.48	23	29
Engineering Sciences	14.77	25	23
Humanities and Social Sciences	7.95	14	14
Program core	42.61	72	75
Program Electives	9.09	20	16
Open Electives	6.81	12	12
Project (S)	1.7	8	3
Internships/Seminars	2.27	6	4
Any other (Audit courses)	0	0	0
Total number of credits			176

TEACHING-LEARNING PROCESSES

Processes followed to improve quality of Teaching & Learning

- Department follows the academic calendar provided by the institution. Academic Calendar (2019-20).
- E-learning facility (NPTEL Lecture, e-books, e-journals etc.) is made available to the Students
- Expert lectures are organized regularly from the industry persons and/or academia.
- Few specialized courses are offered as elective to bridge the curriculum GAP.
- Guidance is provided to the slow learners based on their performance in the class tests.
- Mentoring sessions are conducted to provide guidance to students towards achieving professional fulfilment and assessment of his/her academic progress as well as personal growth.

EVALUATION SYSTEM FOR THE PROGRAM IS AS FOLLOWS

Evaluation of Theory Courses					
	Class Test I	Class Test II	Teachers Assessment	End Semester Examination	Total
All Theory Course	15	15	10	60	100
Evaluation of LAB Courses					
Lab courses	Internal Continuous Assessment		End Semester Examination		Total
Lab courses	25		25		50
Minor project	50		--		50
Project stage-I & Seminar	50		--		50
Project	100		100		200

PROGRAM OUTCOMES AND COURSE OUTCOMES

- **Direct:-** Internal Assessment Two term tests with questions mapped to course outcomes and End semester examination
- **Indirect:-** Course Survey questions based on attainment of CO.

Direct Assessment Tools

Course Outcomes (CO) attainment process

1. The CO attainment is calculated based on preapproved threshold of evaluation for course approved by DFB and BOS.
2. Every course coordinator will present the threshold value for calculating CO attainment before the DFB.
3. The threshold is calculated from the average of total marks obtained out of maximum marks (100 marks for Theory courses and 50 marks for Practical Courses) for the last three years. In this case the average marks of 2013-14, 2014-15, and 2015-16 are taken in order to calculate the thresholds of both Theory and Practical Courses with same course and contents.
4. If the assessment for last three years (in case of Elective courses) was not available, then an average assessment based on available data was placed before the DFB for approval.
5. It was decided that the course coordinator can decide the threshold with a variation of ±15% with respect to the average assessment approved by DFB.
6. Course coordinator will have to justify the variation of threshold within ±15% based on proposed changes in the difficulty levels in paper setting and shall get it approved in the DFB.
7. Based on the threshold obtained from the previous year results, the CO grades were decided. In this case three levels of CO grades were approved depending upon the marks obtained by the students in the subsequent examinations.

COURSE OUTCOMES (CO) ATTAINMENT PROCESS

8. The levels of the CO grades are 1,2 and 3 with 1 being low level of CO grade,2 being medium level and 3 being high level CO grades. The CO grades are defined in the following table.

Sr. No	CO Grade	Weightage	Marks required to attain the specific level
1.	3 (High)	100%	Marks > Threshold value
2	2 (Medium)	66%	Median<Marks obtained<Threshold
3.	1 (Low)	33%	Minimum marks<Marks obtained<Median

From the above table,

a) The students scoring marks above the threshold value for the respective subject are considered to have achieved or attained CO with 100% weightage i.e. with level 3.

b) In this case, the students scoring marks below threshold but greater than the minimum marks required to achieve the credits for the subject (i.e. 40 marks for Theory courses and 25 Marks for Practical courses) CO grades are divided into two levels 1 and 2 by calculating the median of the Threshold value and minimum marks.

c) So, the students securing marks above median and below threshold are considered to have attained the course outcomes with 66% weightage i.e. with level 2.

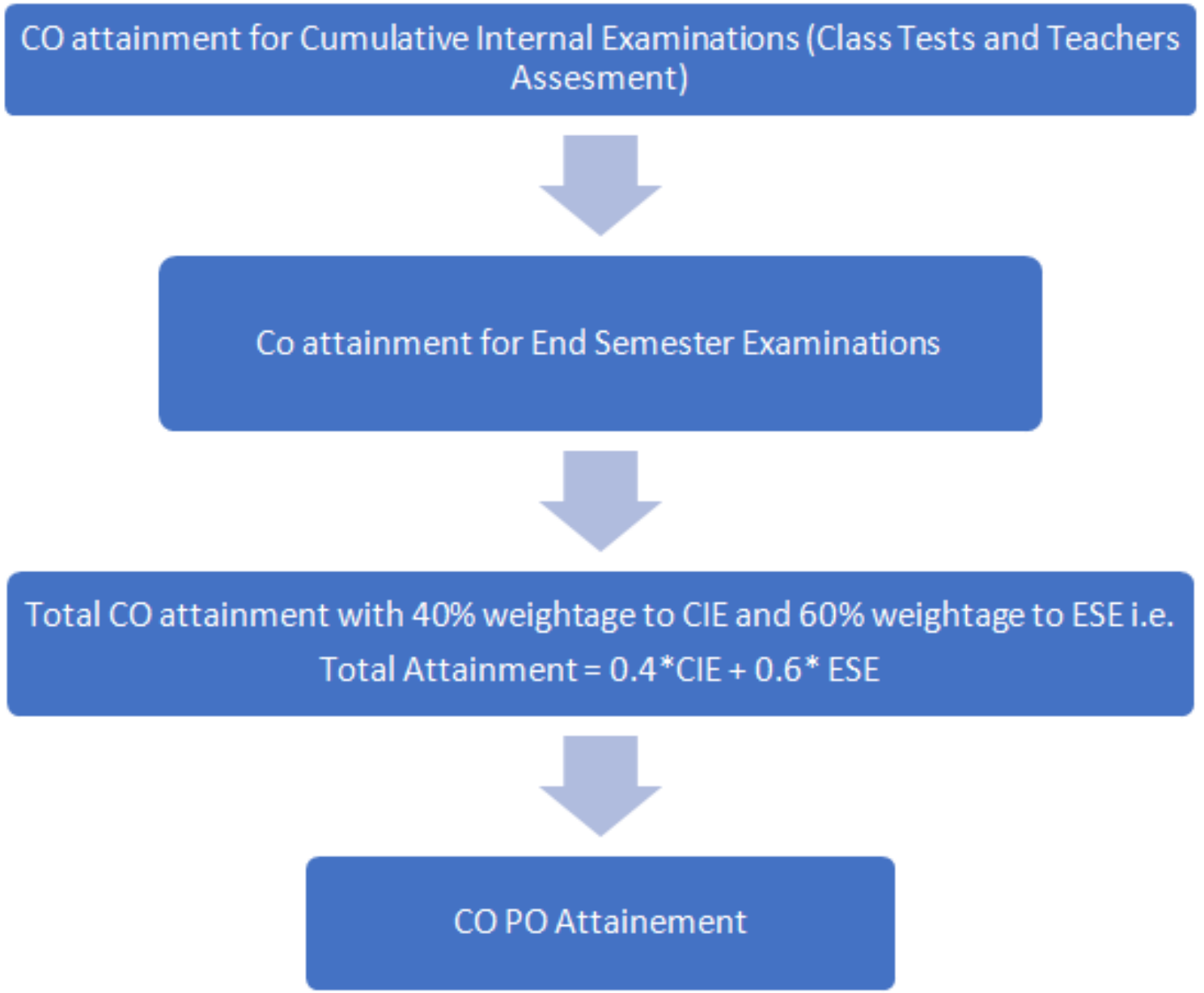
d) And the students securing marks below this median but above the minimum marks for the subject are considered to have attained CO with 33% weightage i.e. with level 1.

9. It is assumed now that all the COs defined for the course are covered in ''Internal assessment'' (CTs & TA) and ESE. However, it is difficult to know the coverage of COs question-wise, since the question paper is set by internal as well as external faculty members.

10. For computing Total CO attainment' for a course, a decision was taken in meetings in the institute to use 40% weightage for internal assessment and 60% weightage to ESE.

COURSE OUTCOMES (CO) ATTAINMENT PROCESS

COURSE OUTCOMES (CO) ATTAINMENT PROCESS



EXAMPLE OF COURSE OUTCOME ATTAINMENT ENGINEERING THERMODYNAMICS (SEM III) (ME243)

Course Outcome

After completing the course, students will able to:

CO1. Accustom with type of energy and thermodynamic systems

CO2. Apply First law of thermodynamics

CO3. Analyze thermodynamic systems

CO4. Define state of steam

EXAMPLE OF CO & PO ATTAINMENT
ENGINEERING THERMODYNAMICS (SEM III) (ME243)

CO Grades

1	40	52
2	53	63
3	64	100

Total CO attainment are:

	Continuous Evaluation	ESE	Total
CO1	55.30	49.89	52.05
CO2	55.30	57.19	56.44
CO3	90.00	57.19	70.32
CO4	89.82	57.19	70.24

Threshold approved for the subject = 64 marks out of 100

PO Attainment

For mapping level 1 the contribution is 0.33 or 1/3
For mapping level 2 the contribution is 0.67 or 2/3
For mapping level 3 the contribution is 1 or 3/3

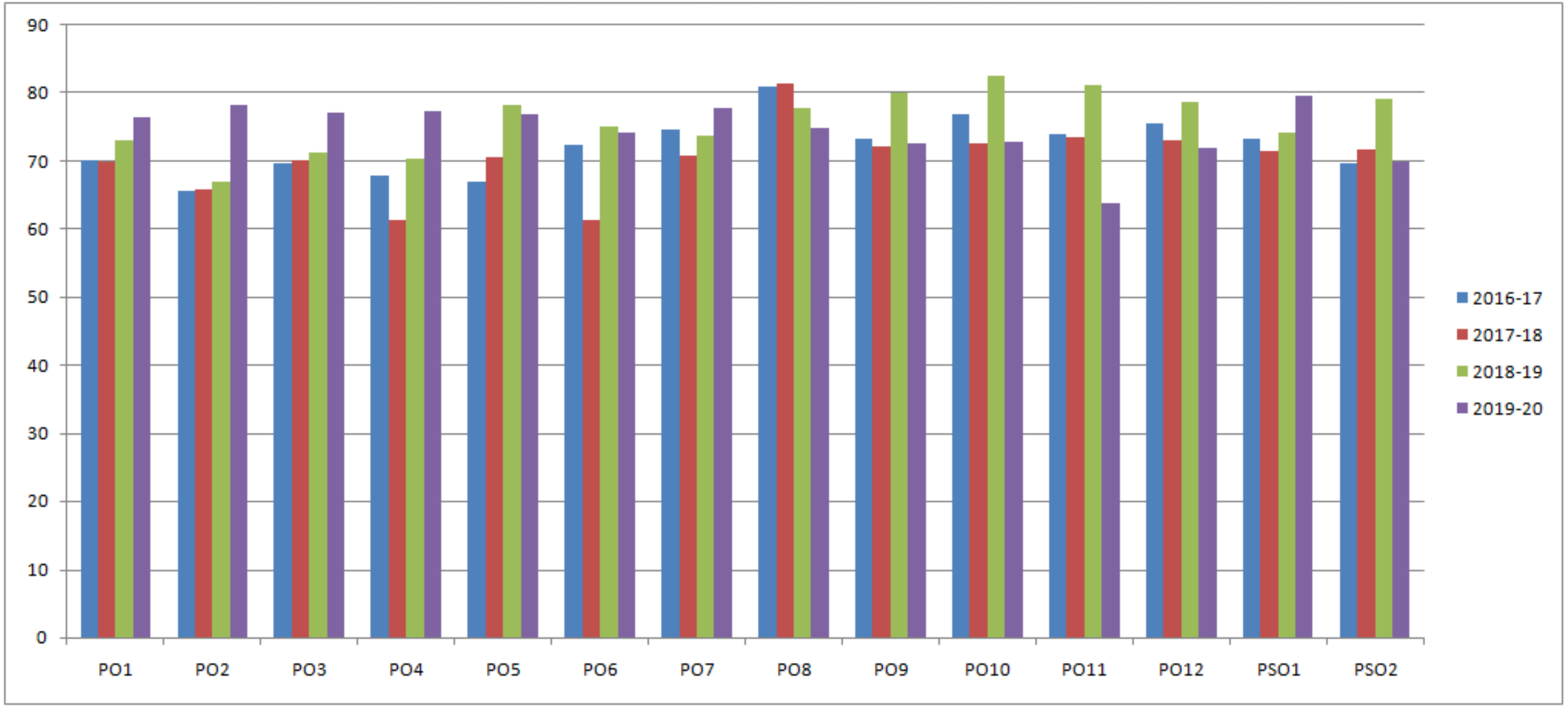
For example, consider first column of the CO PO mapping

In that case, Denominator = 0.67+0.33+0.33+0.33 =1.66.

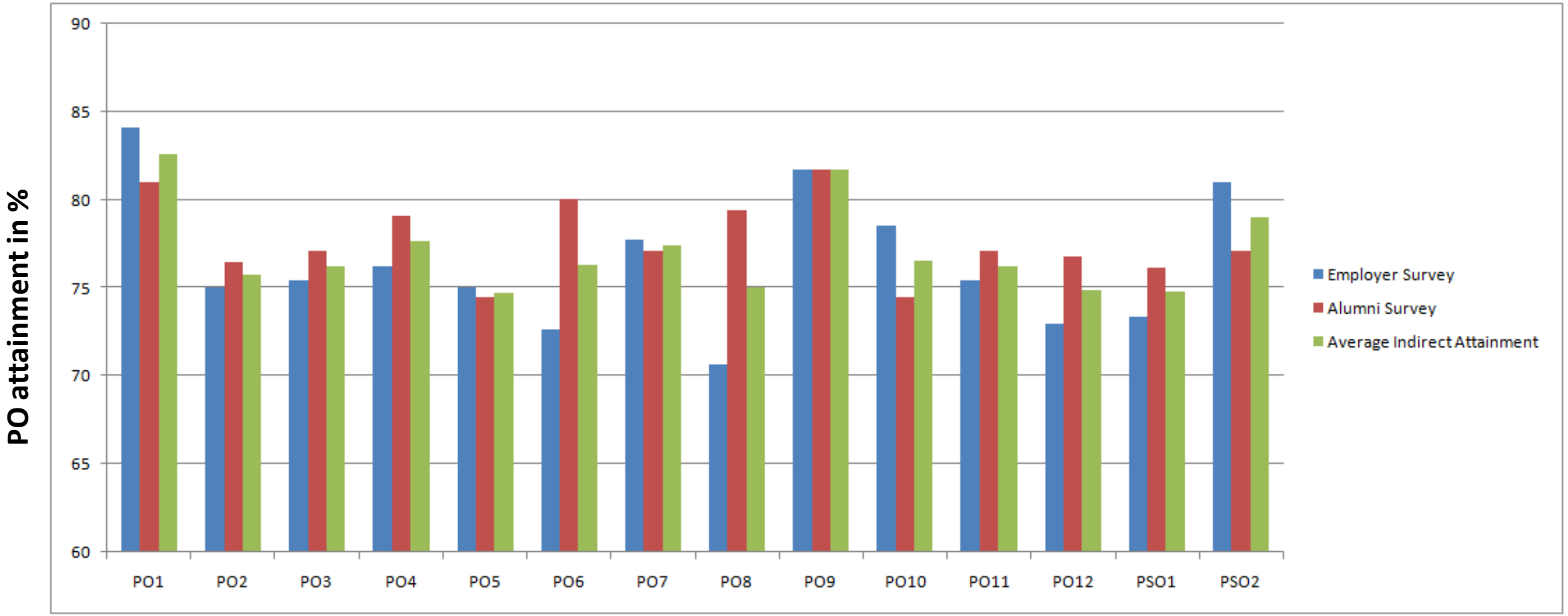
EXAMPLE OF PO ATTAINMENT
ENGINEERING THERMODYNAMICS (SEM III) (ME243)

Theory		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1		2	3	3		3	2	3							2	
CO2		1	3	3	3	2	3									
CO3		1	2	2	3	3	2						2			
CO4		1	2	3		3	3					1				
CO5																
CO6																
CO7																
Theory		**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**	**PSO1**	**PSO2**	**PSO3**
CO1	**52.05**	**34.70**	**52.05**	**52.05**	**0.00**	**52.05**	**34.70**	**52.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**34.70**	**0.00**
CO2	**56.44**	**18.81**	**56.44**	**56.44**	**56.44**	**37.62**	**56.44**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
CO3	**70.32**	**23.44**	**46.88**	**46.88**	**70.32**	**70.32**	**46.88**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**46.88**	**0.00**	**0.00**	**0.00**
CO4	**70.24**	**23.41**	**46.83**	**70.24**	**0.00**	**70.24**	**70.24**	**0.00**	**0.00**	**0.00**	**0.00**	**23.41**	**0.00**	**0.00**	**0.00**	**0.00**
CO5	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
CO6	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
CO7	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Denominator		1.66	3.34	3.67	2	3.67	3.34	1	0	0	0	0.33	0.67	0	0.67	0
Average		**60.46**	**60.54**	**61.47**	**63.38**	**62.73**	**62.35**	**52.05**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**70.95**	**69.97**	**#DIV/0!**	**51.80**	**#DIV/0!**

DIRECT ATTAINMENT OF PO FOR 2016-2020



INDIRECT ATTAINMENT OF PO FOR 2016-2020



ACADEMIC PERFORMANCE OF STUDENTS

STUDENTS ADMITTED DATA

Item **(Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)**	**CAY (2019--20)**	**CAYm1 (2018-19)**	**CAYm2 (2017-18)**
Sanctioned intake of the program (*N*)	60	60	60
Total number of students admitted in first year *minus* number of students migrated to other programs/institutions, plus no. of students migrated to this program (*N*1)	67	60+1	60+1
Number of students admitted in 2nd year in the same batch via lateral entry (*N*2)	--	08	14
Separate division students, if applicable (N3)	Nil	Nil	Nil
Total number of students admitted in the Program (*N*1 + *N*2 + N3)	67	69	75

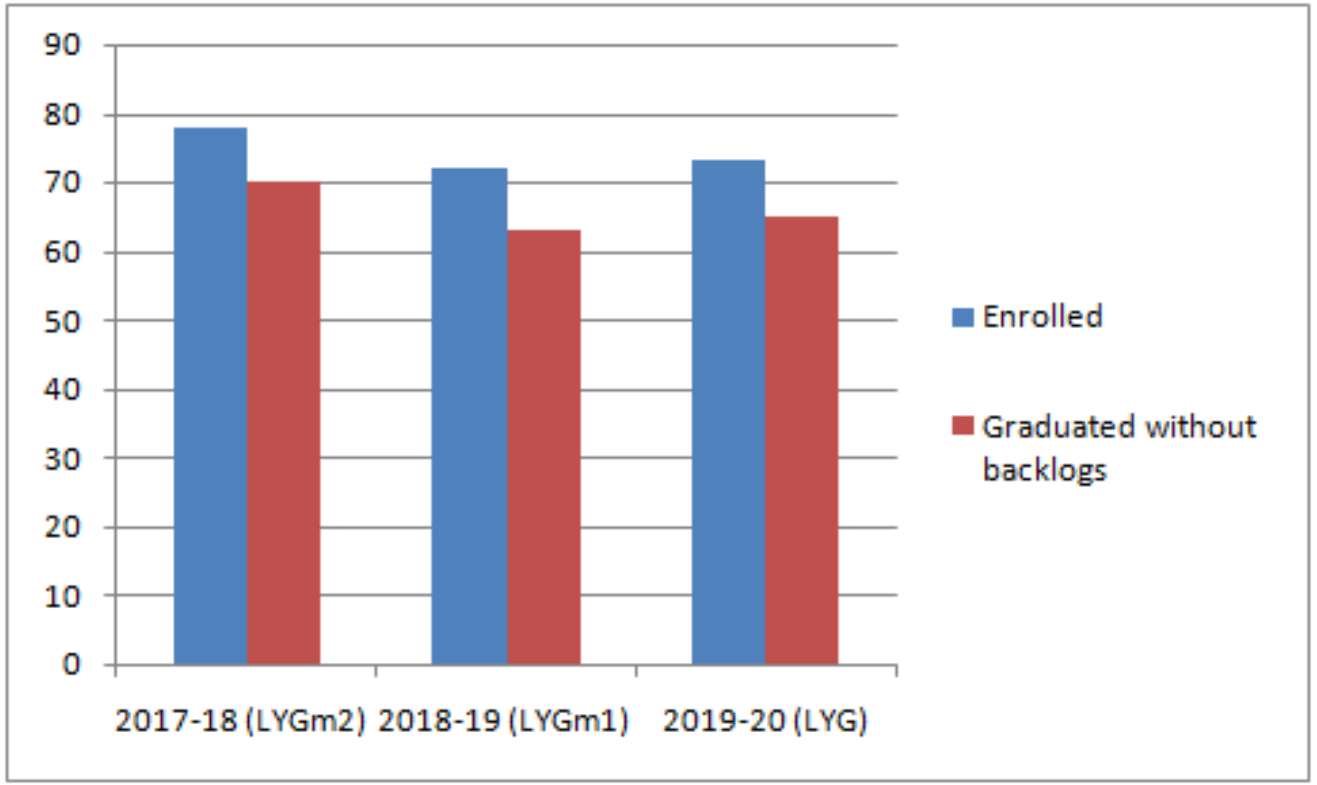
ENROLMENT RATIO

Year	Sanctioned intake of the program (N)	Students enrolled at the First Year Level N1	N1/N
CAY 2019-20	60	67	1.11
CAYm1 2018-19	60	61	1.01
CAYm2 2017-18	60	61	1.01
	Average Enrolment Ratio		3.15/3=1.05= **105.8%**

ACADEMIC PERFORMANCE OF STUDENTS

Number of students who have successfully graduated without backlogs in any semester/year of study

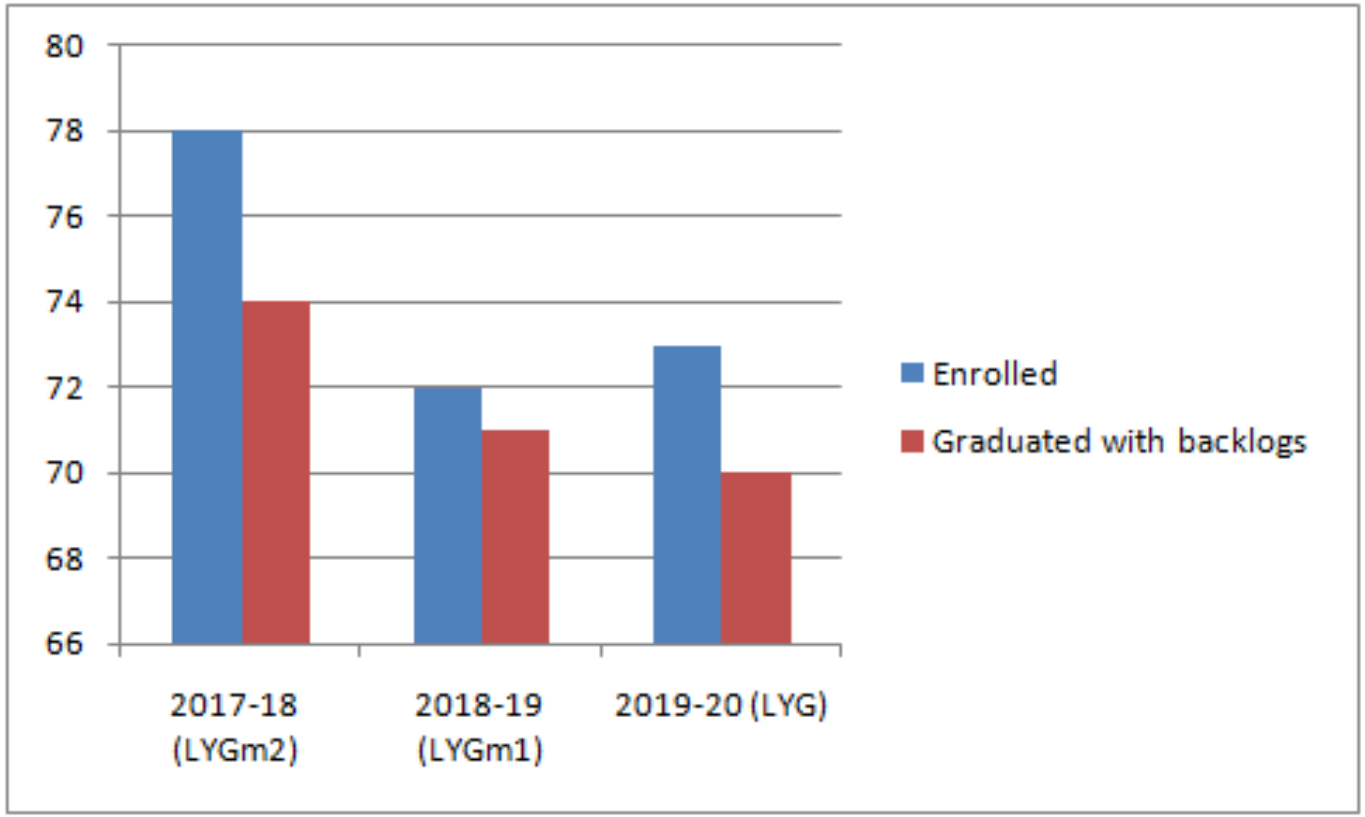
Year	Enrolled	Graduated without any backlogs
2017-18 (LYGm2)	78	70
2018-19 (LYGm1)	72	63
2019-20 (LYG)	73	65



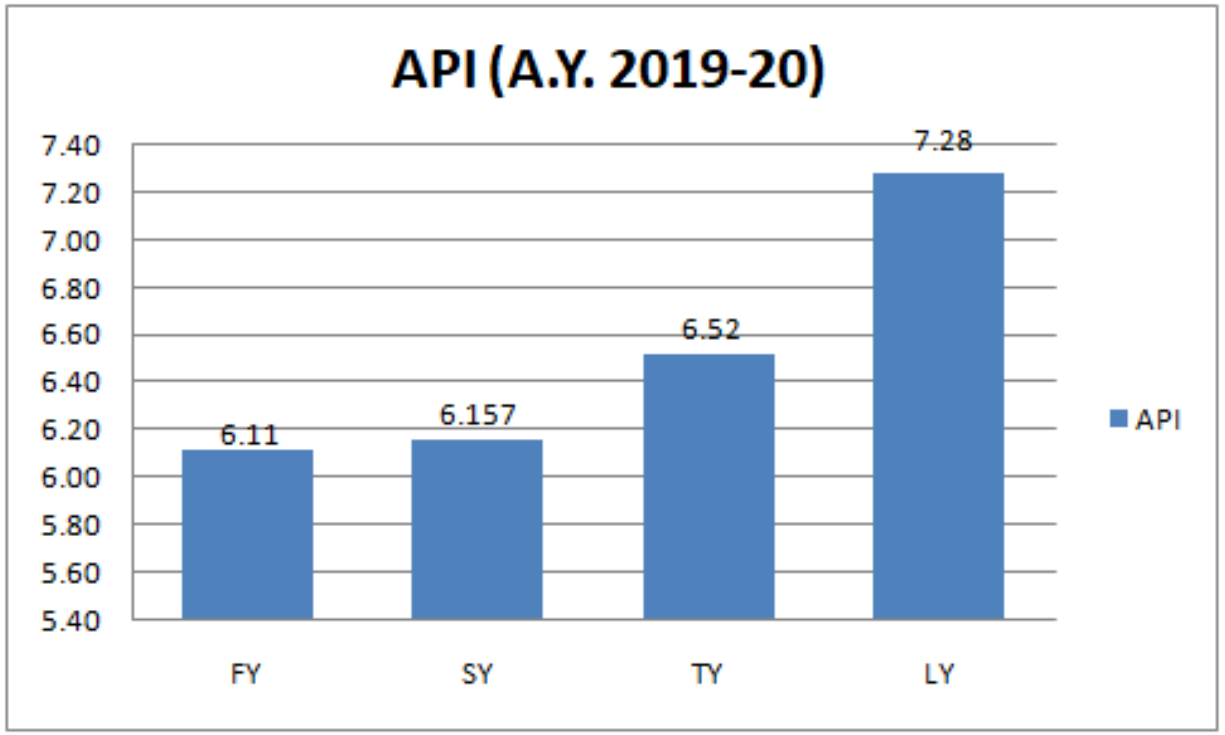
ACADEMIC PERFORMANCE OF STUDENTS

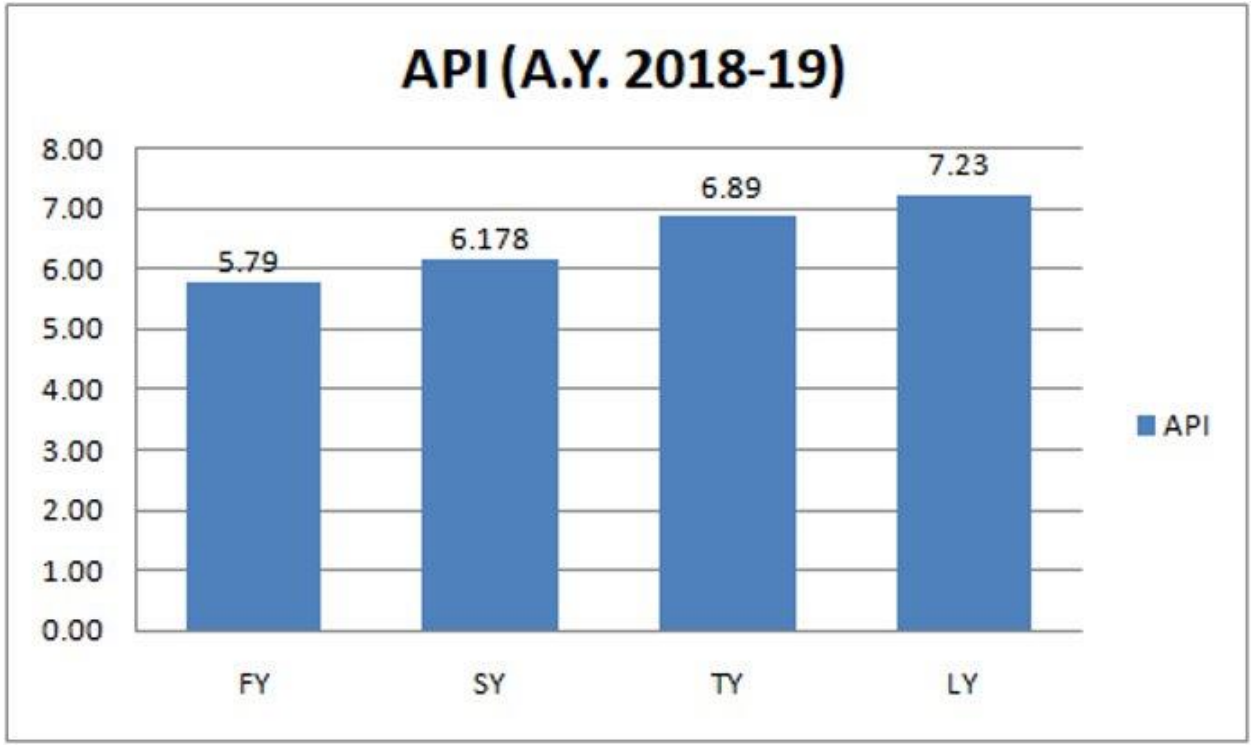
Number of students who have successfully graduated in stipulated period of study) [Total of with Backlog + without Backlog]

Year	Enrolled	Graduated with backlogs
2017-18 (LYGm2)	78	74
2018-19 (LYGm1)	72	71
2019-20 (LYG)	73	70



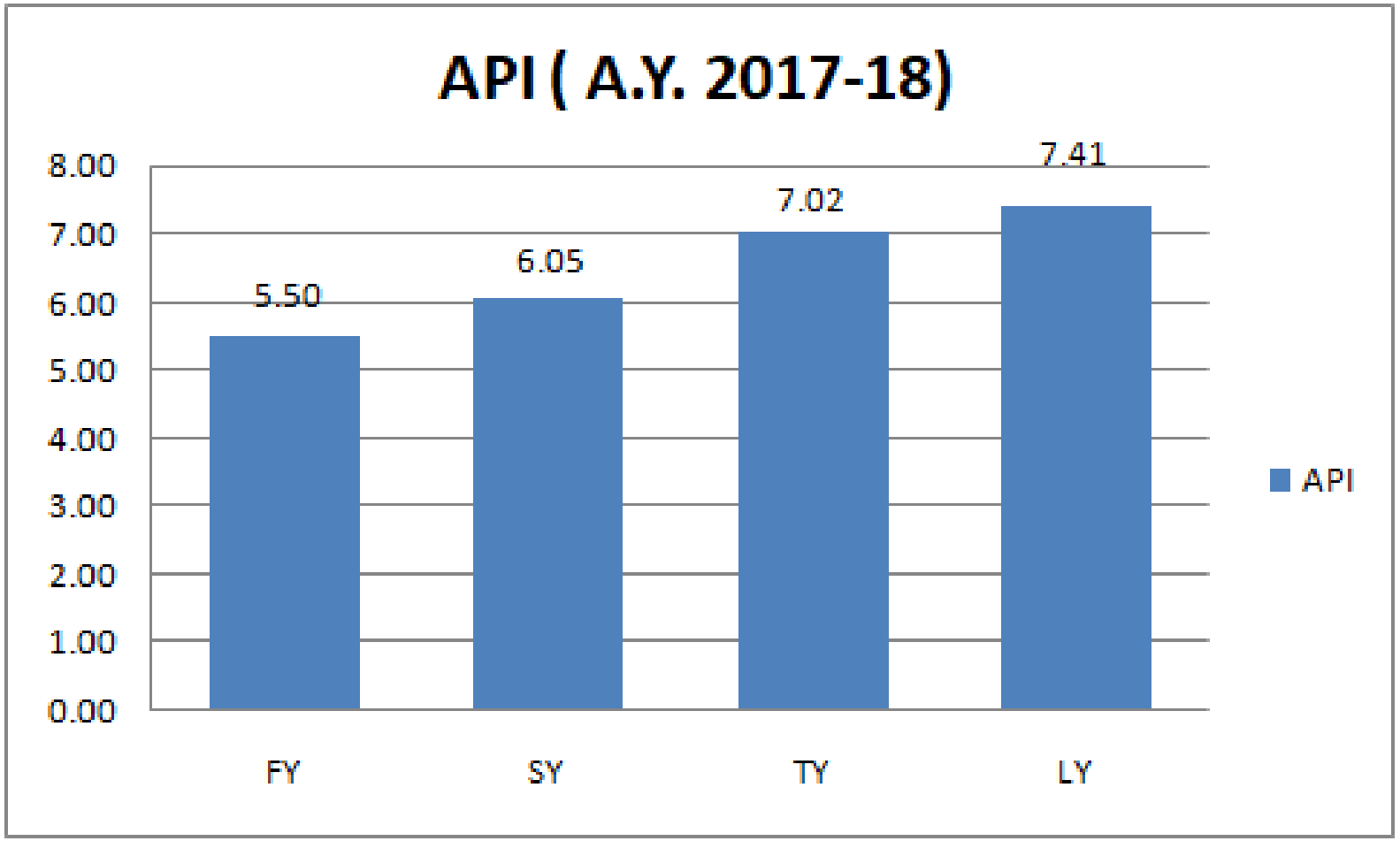
ACADEMIC PERFORMANCE INDEX





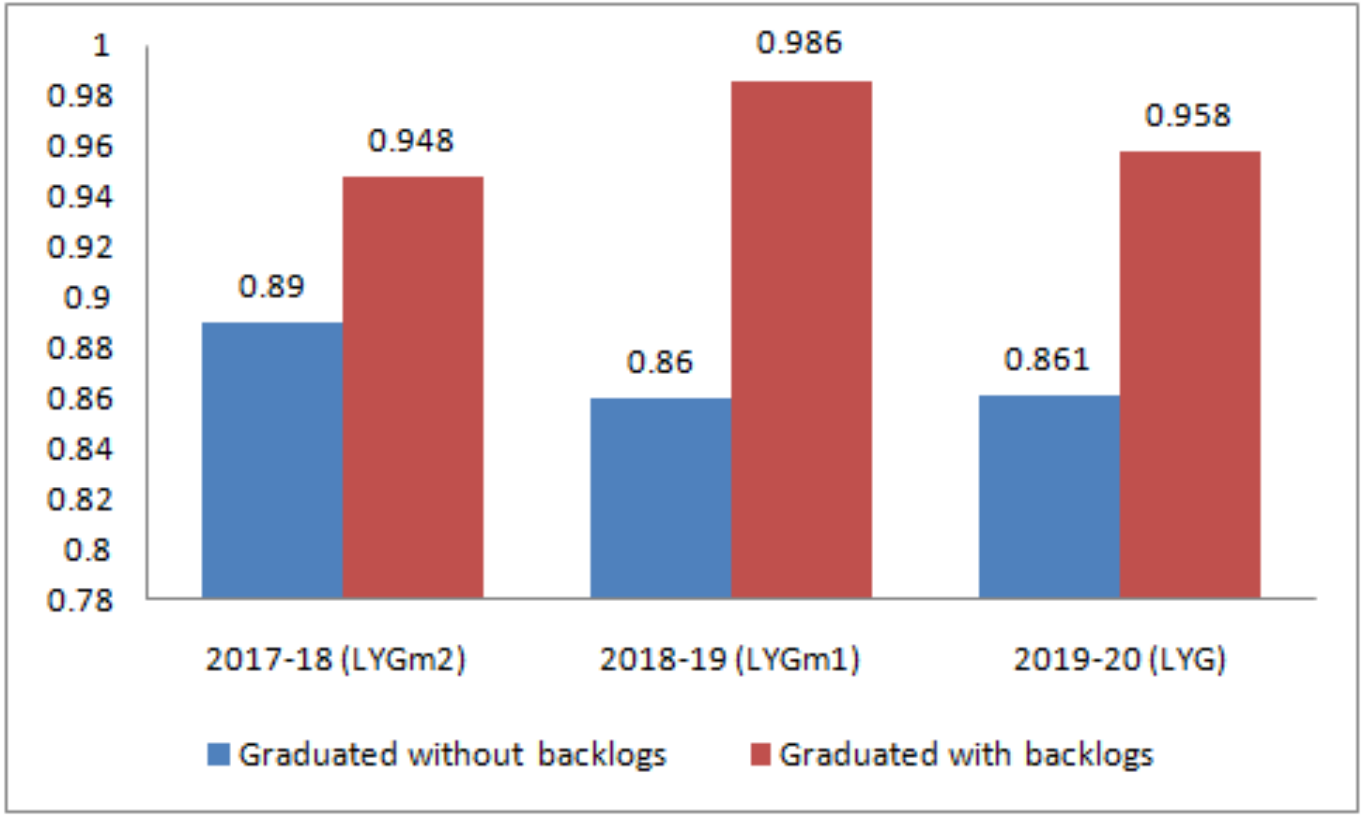
ACADEMIC PERFORMANCE INDEX

A.Y. 2017-18



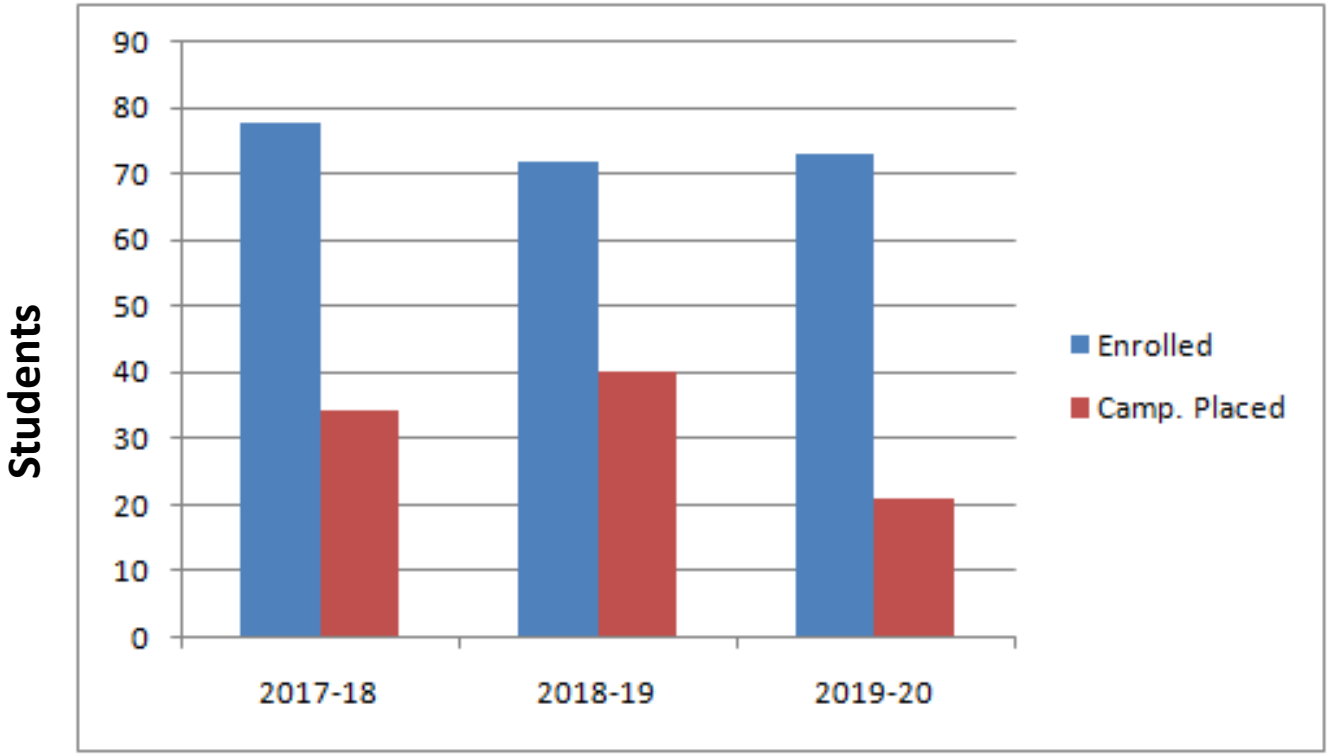
SUCCESS INDEX

Year	Graduated without backlogs	Graduated with backlogs
2017-18 (LYGm2)	0.89	0.948
2018-19 (LYGm1)	0.86	0.986
2019-20 (LYG)	0.861	0.958



THE PLACEMENT DATA

Year	Enrolled	Placed students
2017-18	78	34
2018-19	72	40
2019-20	73	21

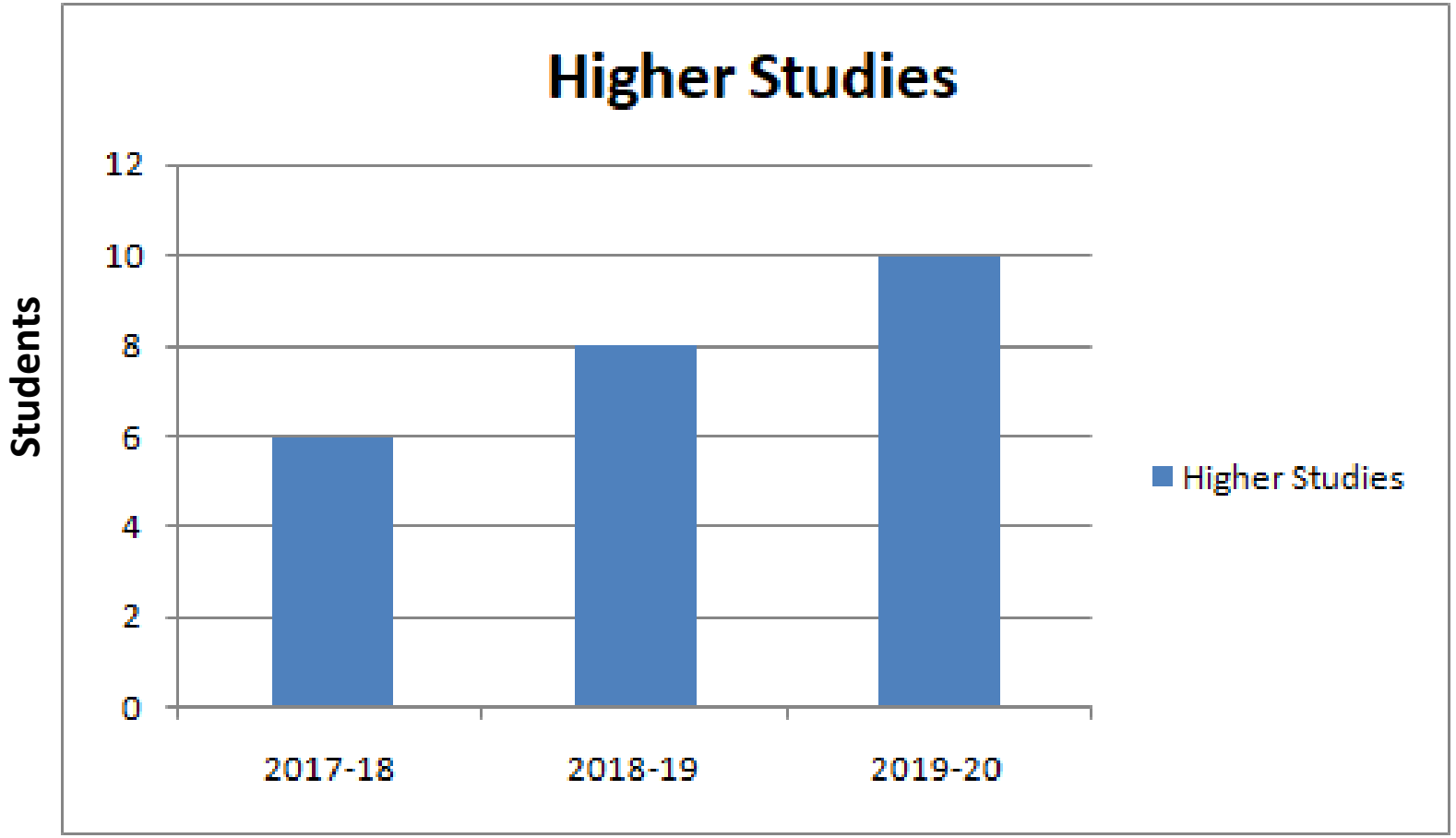


PAY PACKAGES

Serial No.	2017-18		2018-19		2019-20	
	Name of company	Package (LPA)	Name Of Company	Package (LPA)	Name of Company	Package (LPA)
1	Principal Global Services	5.50	Siemens	5.5	TCS Digital	7
2	Larsen & Toubro	4.87	Wipro	3.5	TCS Digital (Codevita)	7
3	Varroc	4.50	CINIF	3.6	Atlas Copco	6.4
4	Tata Consultancy Services	3.36	Tata Consultancy Services	3.36	PGS	6
5					Dassault Systems	5.5/6

THE HIGHER STUDY DATA

Year	Went for Higher Studies
2017-18	6
2018-19	8
2019-20	10



FACULTY STRENGTH :CADRE

Sr. No	Cadre	No. of Faculty (AY 2017-2018)	No. of Faculty (AY 2018-19)	No. of Faculty (AY 2019-20)
1	Professor	00	01	02
2	Associate Professor	04	05	06
4	Assistant Professor	08	08	08
5	Assistant Professor (Contract/Visiting)	04	04	04
Total Number of Faculty		16	18	20

FACULTY INFORMATION 2019-20

SR. NO.	Name of the Faculty Member	Qualification (Degree (highest degree))	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Currently Associated (Y/N)	Nature of association	DATE OF LEAVING
1	Prof. Dr. R.S.Dalu	PhD	Professor	17/07/03	08-08-2019	N	Regular	17/10/2020
2	Prof.Dr.S.S.Mohite	Ph.D	Professor	24/10/04	06-09-1996	N	Regular	17/10/2020
3	Prof.Dr.R.N.Ladhwe	Ph.D	Asso. Professor	01-01-2006	07-11-2019	N	Regular	17/10/2020
4	Prof.S.B.Chikalthankar	Ph.D	Asso. Professor	2011	11-01-2003	Y	Regular	
5	Prof.Dr.A.M.Nikalje	Ph.D	Asso. Professor	19/6/14	11-07-2003	Y	Regular	
6	Prof.Dr.S.A.Patil	Ph.D	Asso. Professor	21/9/06	21/11/03	Y	Regular	
7	Prof.K.R.Madavi	M.E.	Assistant Professor	_	11-11-2003	Y	Regular	
8	Prof.M.S.Harne	M.E.	Asso. Professor	15/1/13	11-01-2003	Y	Regular	
9	Prof.A.N.Shinde	BE	Assistant Professor	_	03-05-2010	N	Regular	6/10/2020
10	Prof.Dr.U.V.Hambire	Ph.D	Assistant Professor	_	01-11-2011	Y	Regular	
11	Prof.S.D.Ambekar	M.E.	Assistant Professor	_	01-07-2011	Y	Regular	
12	Prof.S.R.Kulkarni	M.Tech.	Assistant Professor	-	01-01-2011	Y	Regular	
13	Dr. Y.U.Sathe	Ph.D	Associate Professor	2012	22-10-99	Y	Regular	

FACULTY INFORMATIO 2019-20

SR. NO.	Name of the Faculty Member	Qualification Degree (highest degree)	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Currently Associated (Y/N)	Nature of association	DATE OF LEAVING
14	Prof U.N.Shete	M.E.	Assistant professor	-	07-07-2018	Y	Regular	
15	Prof K.S.Wasankar	M.E.	Assistant professor	-	20-10-2011	Y	Regular	
16	Prof.M.G.Rathi	M.E.	Assistant professor	-	04-08-2000	Y	Regular	
17	Prof G.A.Ingle	M.E.	Assistant Professor			N	Contract	1/9/2021
18	Prof.M.A.Pelagade	ME	Assistant Professor			Y	Contract	
19	Prof.M.N.Pande	ME	Assistant Professor	-	1-1-2019	Y	contract	
20	Prof.N.M.Kathar	M.E.	Assistant Professor	-	1-1-2019	Y	Contract	

FACULTY INFORMATION 2018-19

Sr. No.	Name of the Faculty Member	Degree (highest degree)	Designation	Date on which Designated as Professor / Associate	Date of Joining the Institution	Currently Associated (Y/N)	Nature of Associat ion	DATE OF LEAVING
1	Prof.S.B.Chikalthankar	Ph.D	Asso. Professor	2011	11-01-2003	Y	Regular	
2	Prof.Dr.S.S.Mohite	Ph.D	Professor	24/10/04	06-09-1996	Y	Regular	
3	Prof.Dr.S.A.Patil	Ph.D	Asso. Professor	21/9/06	21/11/03	Y	Regular	
4	Prof.Dr.A.M.Nikalje	Ph.D	Asso. Professor	19/6/14	11-07-2003	Y	Regular	
5	Prof.K.R.Madavi	M.E.	Assistant Professor	_	11-11-2003	Y	Regular	
6	Prof.M.S.Harne	M.E.	Asso. Professor	15/1/13	11-01-2003	Y	Regular	
7	Dr. Y.U.Sathe	Ph.D	Associate Professor			Y	regular	
8	Prof.A.N.Shinde	BE	Assistant Professor	_	03-05-2010	Y	Regular	
9	Prof.Dr.U.V.Hambire	Ph.D	Assistant Professor	_	01-11-2011	Y	Regular	
10	Prof.S.R.Kulkarni	M.Tech.	Assistant Professor	-	01-01-2011	Y	Regular	

FACULTY INFORMATION 2018-19

Sr. No.	Name of the Faculty Member	Degree (highest degree)	Designation	Date on which Designated as Professor/ Associate	Date of Joining the Institution	Currently Associated (Y/N)	Nature of Association	DATE OF LEAVING
11	Prof.S.D.Ambekar	M.E.	Assistant Professor	_	01-07-2011	Y	Regular	
12	Prof U.N.Shete	M.E.	Assistant professor	-	07-07-2018	Y	Regular	
13	Prof K.S.Wasankar	M.E.	Assistant professor	-	20-10-2011	Y	Regular	
14	Prof.M.G.Rathi	M.E.	Assistant professor	-	04-08-2000	Y	Regular	
15	Anuja Ingle	M.E.	Assistant Professor	-		Y	Contract	
16	Pooja Giri	M.E.	Assistant Professor	-		Y	Contract	
17	Pooja Surwase	M.E.	Assistant Professor	-		Y	Contract	
18	Neha Choudhary	M.E.	Assistant			Y	contract	

FACULTY INFORMATION 2017-18

SR. No.	Name of the Faculty Member	Qualification: Degree (highest degree)	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Currently Associated (Y/N)	Nature of Association (Regular/Co	DATE OF LEAVING
1	Prof. Dr. R.K.Shrivastava	Ph.D	Asso. Professor	18/04/2011	08/03/1996	N	Regular	2017
2	Prof.S.B.Chikalthankar	Ph.D	Asso. Professor	2011	11-01-2003	Y	Regular	
3	Prof.Dr.S.A.Patil	Ph.D	Asso. Professor	21/9/06	21/11/03	Y	Regular	
4	Prof.K.R.Madavi	M.E.	Assistant Professor	_	11-11-2003	Y	Regular	
5	Prof.M.S.Harne	M.E.	Asso. Professor	15/1/13	11-01-2003	Y	Regular	
6	Prof.A.N.Shinde	BE	Assistant Professor	_	03-05-2010	Y	Regular	
7	Prof.Dr.U.V.Hambire	Ph.D	Assistant Professor	_	01-11-2011	Y	Regular	
8	Prof.S.D.Ambekar	M.E.	Assistant Professor	_	01-07-2011	Y	Regular	
9	Prof.S.R.Kulkarni	M.Tech.	Assistant professor	-	01-01-2011	Y	regular	
10	Prof K.S.Wasankar	M.E.	Assistant professor	-	20-10-2011	Y	Regular	

FACULTY INFORMATION 2017-18

SR. No.	Name of the Faculty Member	Qualification: Degree (highest degree)	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Currently Associated (Y/N)	Nature of Association (Regular/Co	DATE OF LEAVING
11	Prof.M.G.Rathi	M.E.	Assistant professor	-	04-08-2000	Y	Regular	
12	Dr. S.A.Sonawane	Ph.D	Assistant Professor	-	13/01/2011	N	Regular	
13	Anuja Ingle	M.E.	Assistant Professor	-		Y	Contract	
14	Pooja Giri	M.E.	Assistant Professor	-		Y	Contract	
15	Pooja Surwase	M.E.	Assistant Professor	-		Y	Contract	
16	Neha Choudhary	M.E.	Assistant Professor			Y	contract	

STUDENT-FACULTY RATIO (SFR)

Year	CAY	CAYm1	CAYm2
u1.1	63	72	68
u1.2	72	68	71
u1.3	68	71	71
UG1	203	211	210
p1.1	12	17	17
p1.2	15	12	12
PG1	27	29	29
…..			
Total No. of Students in the Department (S)	230	240	239
No. of Faculty in the Department (F)	F1=16(R)+4(C)=20	F2=14(R)+4(C)=18	F3=12(R)+4(C)=16
Student Faculty Ration (SFR)	230/17=13.52	240/15=16	239/13=18.38
Average SFR	47.91/3=15.97		

THE REGULAR AND CONTRACTUAL FACULTY

	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY 2019-20	16	04
CAYm1 2018-19	14	04
CAYm2 2017-18	12	04

FACULTY QUALIFICATION

	X	Y	F	FQ = 2.0 x [(10X +4Y)/F)]
CAY	8	11	12	20.67
CAYm1	6	8	12	15.33
CAYm2	3	10	12	11.67
Average Assessment				15.89
				(* without considering contractual faculty)

x is no. of regular faculty with Ph.D., Y is no. of regular faculty with M. Tech., F is no. of regular faculty required to comply 20:1

FACULTY CADRE PROPORTION

	Professors		Associate Professors		Assistant Professors	
Year	Required F1	Available	Required F2	Available	Required F3	Available
CAY	1	2	2	4	8	9(R)+4(C)=13
CAYm1	1	1	2	3	8	9(R)+4(C)=13
CAYm2	1	0	2	1	8	8(R)+4(C)=12
Average Numbers	1	1	2	2.67	8	8.6 (R)

FACULTY RETENTION

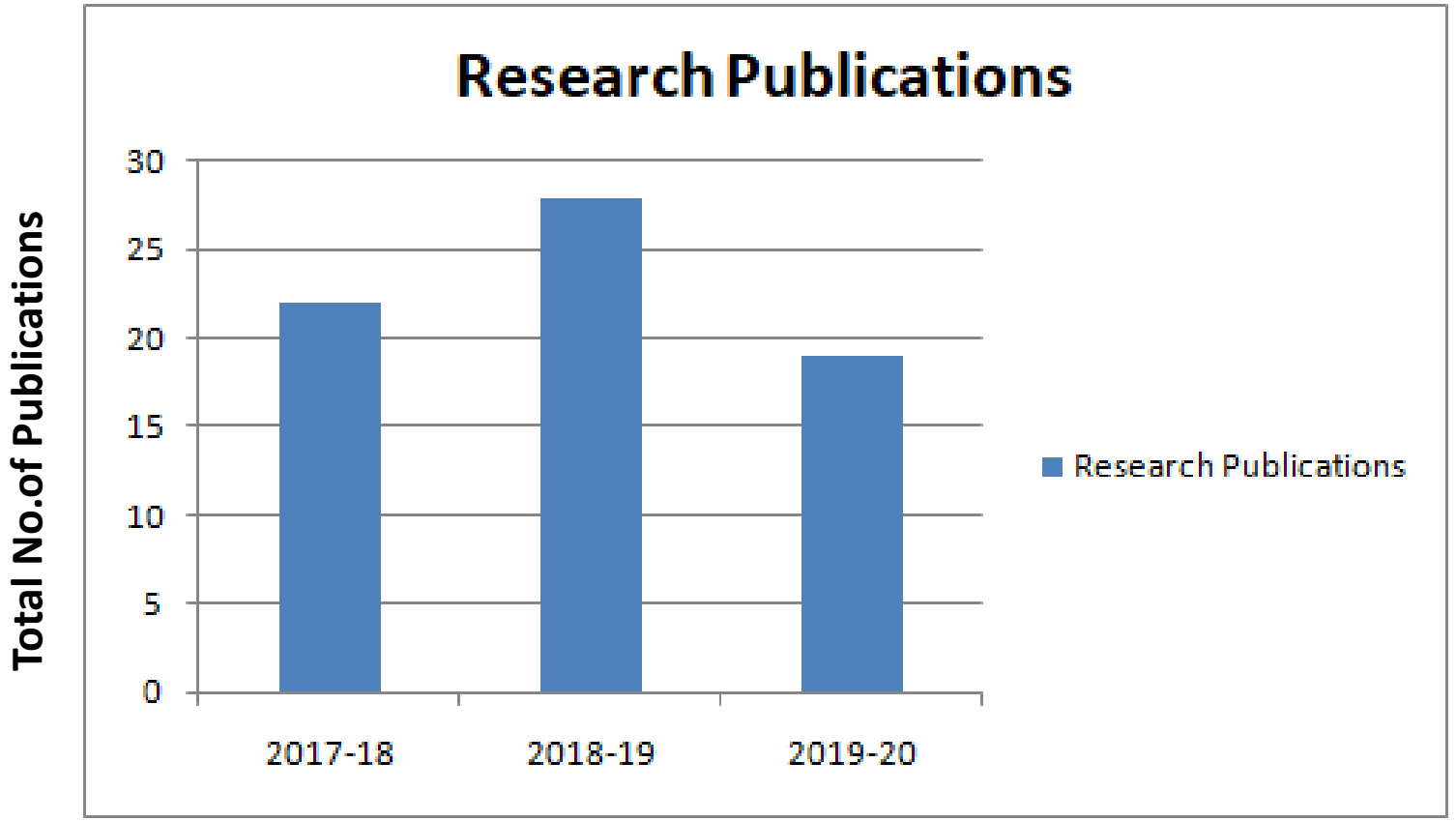
No	2017-18	2018-19	2019-20	Faculty Retention
Regular Faculty	12	14	16	(16/12)*100=116.6%

Name oF the Faculty	2019-20	2018-19	2017-18
Dr. R S DALU	1	0	1
DR. SUHAS MOHITE	3	2	1
DR R N LADHWE	1	1	2
Dr S B. CHIKALTHANKAR	1	1	2
DR. S A PATIL	0	0	1
DR. A M NIKALJE	1	1	1
K R MADAVI	1	1	1
M S HARNE	1	2	2
A N SHINDE	0	1	1
DR. U V HAMBIRE	2	2	2
S D AMBEKAR	1	2	1
S R KULKARNI	1	2	2
K S WASANKAR	2	1	1
U N SHETE	0	1	1
DR. Y U SATHE	1	1	1
M G RATHI	1	0	1
Sum	17	18	21

FACULTY AS PARTICIPANTS IN FACULTY DEVELOPMENT/TRAINING ACTIVITIES/STTPS

RESEARCH PUBLICATIONS

Year	Research Publications
2017-18	22
2018-19	28
2019-20	19



Name of the Faculty	Research Publication		
	2019-20	2018-19	2017-18
DR. R S DALU	0	3	2
DR. SUHAS MOHITE	1	4	2
DR. R N LADHWE	0	1	0
Dr S B. CHIKALTHANKAR	0	2	4
DR. S A PATIL	3	-	1
DR. A M NIKALJE	8	3	0
K R MADAVI	0	3	5
M S HARNE	1	3	2
A N SHINDE	0	0	0
DR. U V HAMBIRE	2	1	0
S D AMBEKAR	01	2	0
S R KULKARNI	2	3	3
K S WASANKAR	0	1	1
U N SHETE	0	0	0
DR. Y U SATHE	0	0	0
M G RATHI	1	2	2

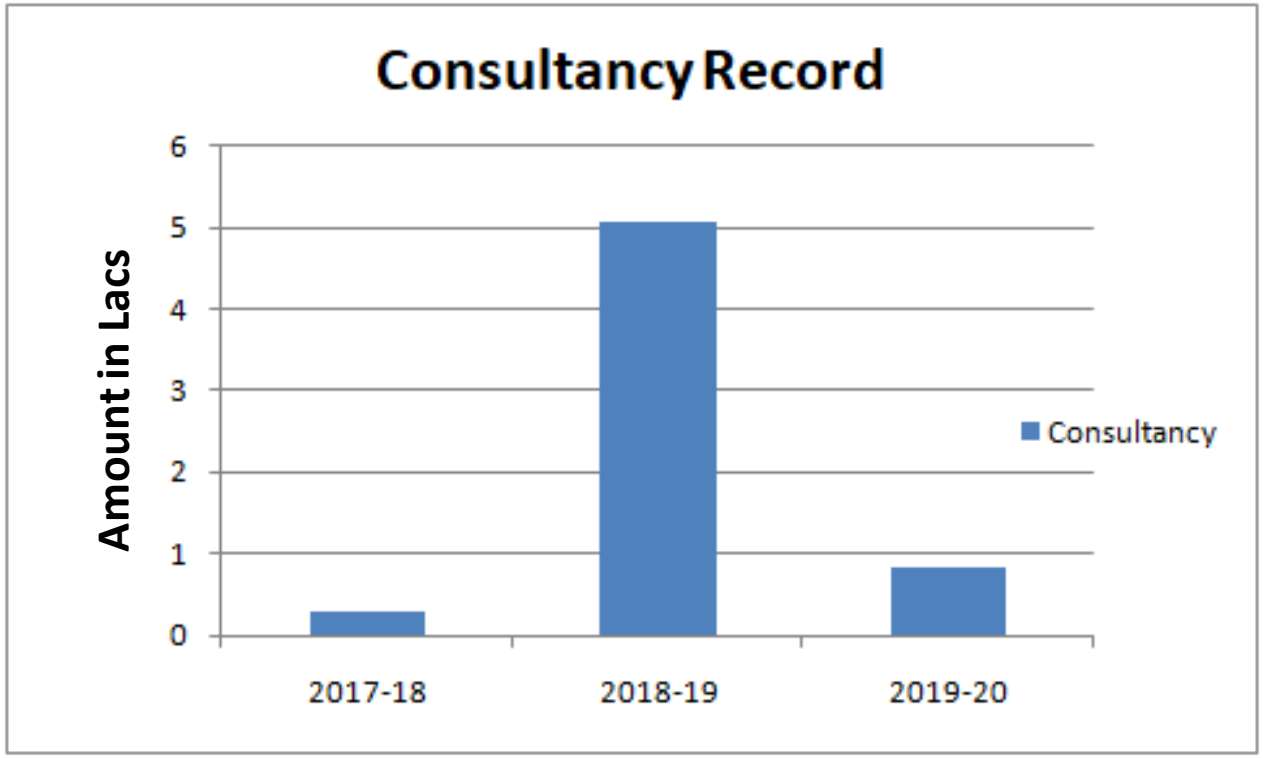
ACADEMIC RESEARCH

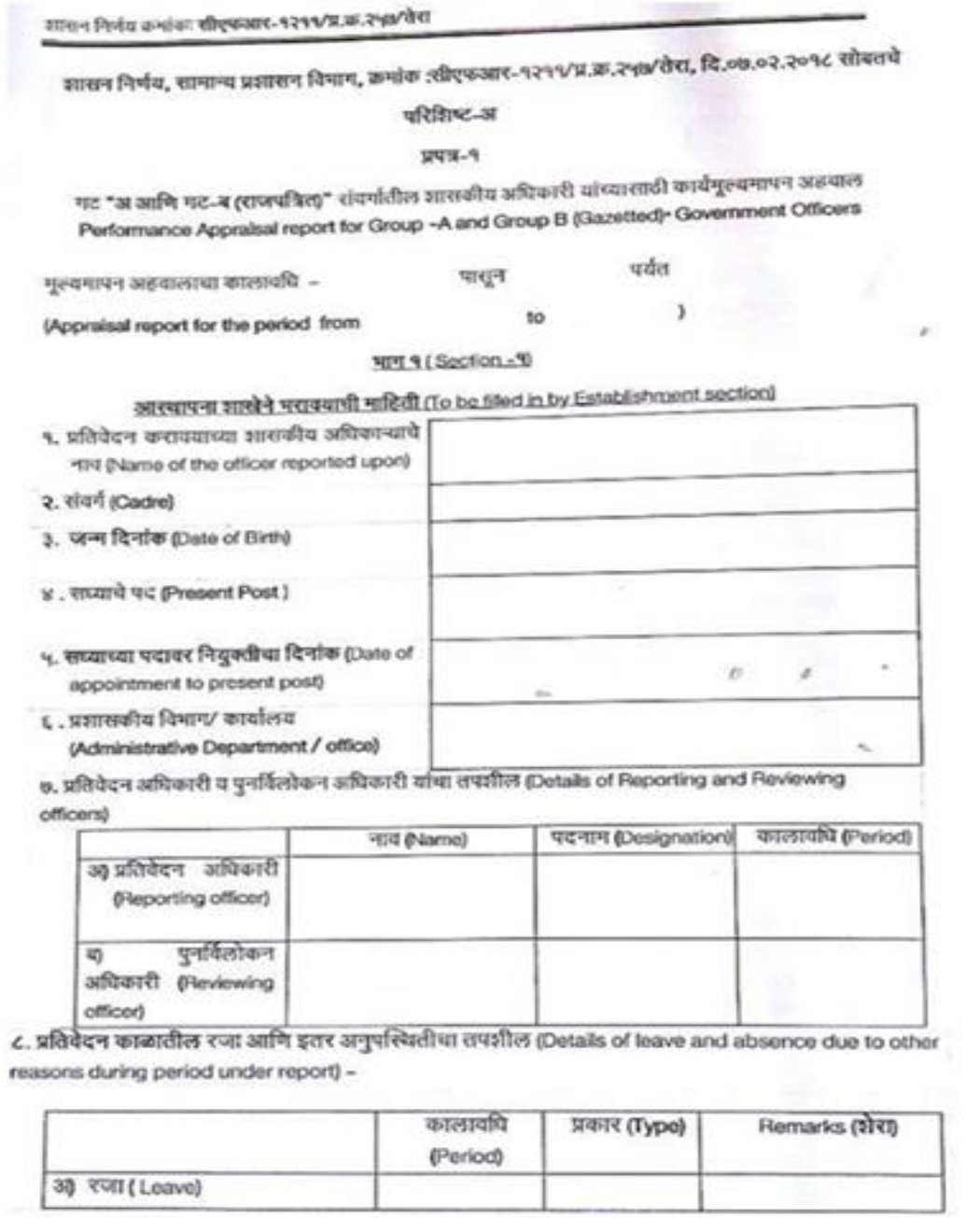
STTP /WORKSHOP GUEST LECTURE ORGANIZED BY FACULTIES

No	Title of Workshop	Name of Faculty coordinator	Organised By	Duration
1	Fuel and Combustion	Prof M S Harne Prof. S R Kulkarni	GECA Aurangabad and IIT Bombay Speaker: Dr Neeraj Kumbhakarna	2017
2	3 D Printing	Prof. S R Kulkarni Prof M S Harne	GECA Aurangabad and IIT Bombay Speaker : Dr Karunakaran	2017
3	Design of Experiment	Dr S B Chikalthankar	GECA Aurangabad and IIT Bombay Speaker : Dr Suhas Joshi	2017
4	Computational Fluid Dynamics	Dr S A Sonawane Prof K S Wasankar	G GECAAurangabad and IIT Bombay Speaker :Dr Atul Sharma	2017
6	Creo Parametric	Prof S R Kulkarni	Government College of Engineering, Aurangabad in association with IGTER Aurangabad	5 Aug 19-21 Aug 19

CONSULTANCY RECORD

Year	Consultancy Amt. In Lacs
2017-18	0.29
2018-19	5.07
2019-20	0.82





शासन निर्णय, सामान्य प्रशासन विभाग, क्रमांक :सीएचआर-१२१९/प्र.क्र.२५७/तेरा, दि.०७.०२.२०१८ सोबतचे

परिशिष्ट-अ

प्रपत्र-१

गट "अ आणि गट-ब (राजपत्रित)" संवर्गातील शासकीय अधिकारी यांच्यासाठी कार्यमूल्यमापन अहवाल
Performance Appraisal report for Group -A and Group B (Gazetted)- Government Officers

मूल्यमापन अहवालाचा कालावधि – पासून पर्यंत

(Appraisal report for the period from to)

भाग १ (Section -१)

आस्थापना शाखेने भरावयाची माहिती (To be filled in by Establishment section)

१. प्रतिवेदन करावयाच्या शासकीय अधिकाऱ्याचे नाव (Name of the officer reported upon)	
२. संवर्ग (Cadre)	
३. जन्म दिनांक (Date of Birth)	
४. सध्याचे पद (Present Post)	
५. सध्याच्या पदावर नियुक्तीचा दिनांक (Date of appointment to present post)	
६. प्रशासकीय विभाग/ कार्यालय (Administrative Department / office)	

७. प्रतिवेदन अधिकारी व पुनर्विलोकन अधिकारी यांचा तपशील (Details of Reporting and Reviewing officers)

	नाव (Name)	पदनाम (Designation)	कालावधि (Period)
अ) प्रतिवेदन अधिकारी (Reporting officer)			
ब) पुनर्विलोकन अधिकारी (Reviewing officer)			

८. प्रतिवेदन काळातील रजा आणि इतर अनुपस्थितीचा तपशील (Details of leave and absence due to other reasons during period under report) –

	कालावधि (Period)	प्रकार (Type)	Remarks (शेरा)
अ) रजा (Leave)			

FACULTY APPRAISAL FORM

ब) इतर कारणे (विशद करा) जसे की, बेपत्तागिरी वगैरे /फरार. (Other reasons (specify) such as absconding, unauthorized absence, etc.)			

९. प्रतिवेदन काळात घेतलेल्या प्रशिक्षणाचा तपशील (Details of training undergone during period under report)

अ. क्र.	कालावधि (Period) पासून (from) पर्यंत (to)	संस्था (Institute)	विषय (Subject)
१.			
२.			
३.			

१०. संबंधित अधिकाऱ्याने मूल्यमापनाच्या मागील वर्षापर्यंत प्रतिवेदन / पुनर्विलोकन अधिकारी म्हणून न लिहिलेल्या गोपनीय/मूल्यमापन अहवालाचा तपशील (Details of Confidential/Assessment Reports not Written/ Reviewed, as Reporting/ Reviewing officer, by officer under report up to previous assessment year)

अ.क्र.	कालावधि (Period) पासून (from) पर्यंत (to)	प्रतिवेदन/पुनर्विलोकन (Reporting/Review)	अधिकारी/कर्मचारी यांचे नाव व पदनाम (Name and Designation of officer/employee)
१.			
२.			

FACULTY APPRAISAL FORM

शासन निर्णय क्रमांक: सीएफआर-१२११/प्र.क्र.२५७/तेरा

भाग - २ (Section - २)

स्वयंमूल्यनिर्धारण अहवाल (Self-Appraisal Report)
(ज्यांचे प्रतिवेदन व पुनर्विलोकन होईल त्या अधिकारी यांनी भरावयाची माहिती)
(To be filled in by officer reported upon and reviewed)

१. धारण केलेल्या पदावरुन करणे अपेक्षित असलेल्या कामाचे थोडक्यात विवरण (Brief description of tasks required to be performed while holding the post.) (५० शब्द)

२. वार्षिक/ प्रतिवेदनाच्या कालावधिकरिता कार्य नियोजन आणि कार्यसिद्धी (Work plan and output during the year or period reported upon) :-

		प्रदेये (Deliverables)		
अ.क्र. (Sr. No.)	करावयाचे काम (Task to be performed)	सुरुवातीची (Initials)	मध्य-वर्ष (Mid Year)	प्रत्यक्ष पूर्ण केलेले उद्दीष्ट Actual Achievement
१.				
२.				
३.				

३. वर्षभरात / सदर कालावधित पार पाडलेल्या ४-५ महत्त्वाच्या व उल्लेखनीय कामांचे संक्षिप्त वर्णन (List ४-५ important and noteworthy works done during the period) (१०० शब्दात)

FACULTY APPRAISAL FORM

४. जे उद्दीष्टे पूर्ण होऊ शकली नाहीत, त्याकरीता आलेल्या अडचणी (Difficulties faced in not achieving certain targets)

५. कार्यक्षमता वाढविण्याकरीता स्वत:स आवश्यक वाटते असे प्रशिक्षणाचे क्षेत्र (Mention areas of required training which you feel necessary for higher efficiency)

लगतच्या सेवाकालावधिसाठी (for near future in service period)

दीर्घकालीन सेवाकालावधिसाठी (for long term service period)

६. आपण प्रतिवेदन अधिकारी असलेल्या अधिकाऱ्यांकरीता/कर्मचाऱ्यांकरीता वार्षिक कार्यनियोजन तयार केले आहे काय? :- होय / नाही (Have you prepared Annual Work Plan for officers /employees for whom you are reporting officer ? :- Yes / No)

७. मागील वर्षाच्या दि. ३१ मार्च अखेरचे वार्षिक मालमत्ता विवरणपत्र संबंधित प्राधिकाऱ्याकडे सादर केले आहे काय? होय / नाही, सादर केले असल्यास दिनांक) (Whether Assets and Liability statement of previous year, submitted to concerned authority? - Yes / No, Date of submission, if submitted)

ठिकाण (Place)

दिनांक (Date)

अधिकाऱ्याची सही, नाव व पदनाम

Signature, Name and Designation of officer

FACULTY APPRAISAL FORM

शासन निर्णय क्रमांक: सीएफआर-१२११/प्र.क्र.२५७/तेरा

भाग -३ (Section - 3)

प्रतिवेदन अधिकाऱ्याने लिहावयाचा मूल्यमापन अहवाल

Performance Appraisal Report prepared by reporting officer

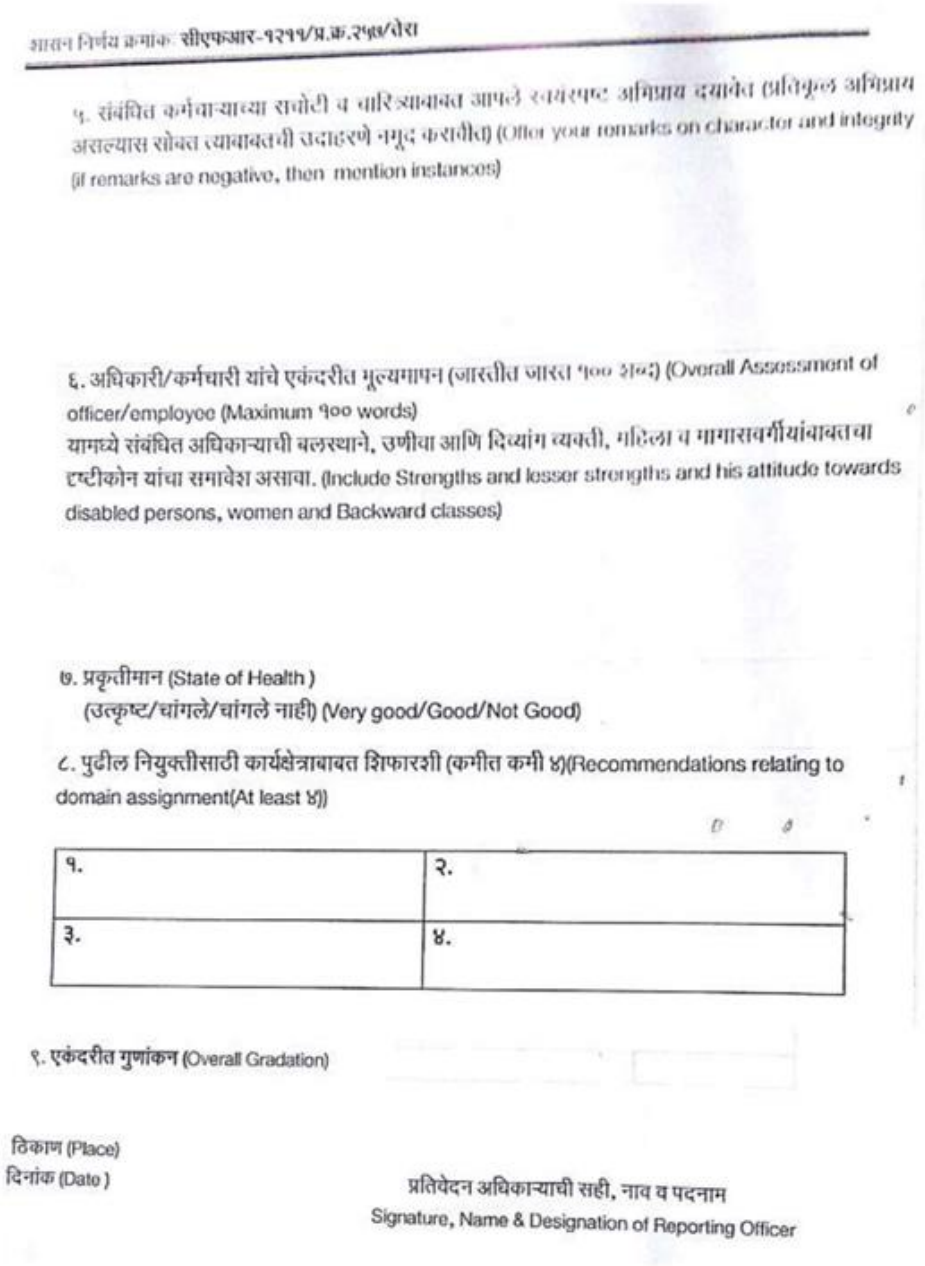
१. भाग - २ मध्ये नमूद करण्यात आलेल्या स्वयंमूल्यनिर्धारण अहवालाशी आपण सहमत आहात काय? नसल्यास, वस्तुस्थितीदर्शक अभिप्राय द्यावेत. (Whether you agree with self-assessment recorded in part two? If not, then state factual position)

२. प्रतिवेदन कालावधित पार पाडलेल्या महत्त्वपूर्ण व उल्लेखनीय कामांसंदर्भात आपले स्पष्ट अभिप्राय द्यावेत. (Offer your remarks on important and noteworthy works mentioned in self-assessment report)

३. प्रतिवेदित अधिकारी/कर्मचारी यांचे त्यांच्या कामाच्या संदर्भात लक्षणीय अपयश निदर्शनास आले असल्यास वस्तुस्थितीदर्शक अभिप्राय द्यावेत. (Has the officer/employee reported upon met with significant failures in respect of his work? If yes, please furnish factual details)

४. संबंधित अधिकाऱ्यांनी कार्यक्षमता वाढविण्याकरीता आवश्यक असलेल्या प्रशिक्षणाचे क्षेत्रास सहमत आहात काय ? (Do you agree with the skill up-gradation needs as identified by the officer?)

FACULTY APPRAISAL FORM



शासन निर्णय क्रमांक: सीएफआर-१२११/प्र.क्र.२५५/तेरा

५. संबंधित कर्मचाऱ्याच्या सचोटी व चारित्र्याबाबत आपले स्पष्टअभिप्राय द्यावेत (प्रतिकूल अभिप्राय असल्यास सोबत त्याबाबतची उदाहरणे नमूद करावीत) (Offer your remarks on character and integrity (if remarks are negative, then mention instances)

६. अधिकारी/कर्मचारी यांचे एकंदरीत मूल्यमापन (जास्तीत जास्त १०० शब्द) (Overall Assessment of officer/employee (Maximum १०० words)
यामध्ये संबंधित अधिकाऱ्याची बलस्थाने, उणीवा आणि दिव्यांग व्यक्ती, महिला व मागासवर्गीयांबाबतचा दृष्टीकोन यांचा समावेश असावा. (Include Strengths and lesser strengths and his attitude towards disabled persons, women and Backward classes)

७. प्रकृतीमान (State of Health)
(उत्कृष्ट/चांगले/चांगले नाही) (Very good/Good/Not Good)

८. पुढील नियुक्तीसाठी कार्यक्षेत्राबाबत शिफारशी (कमीत कमी ४)(Recommendations relating to domain assignment(At least ४))

१.	२.
३.	४.

९. एकंदरीत गुणांकन (Overall Gradation)

ठिकाण (Place)
दिनांक (Date)

प्रतिवेदन अधिकाऱ्याची सही, नाव व पदनाम
Signature, Name & Designation of Reporting Officer

FACULTY APPRAISAL FORM

LABORATORIES

SR. NO.	LABORATORY NAME
01	Thermodynamics Lab
02	Theory of Machines Lab
03	Metallurgy Lab
04	Heat Transfer and RAC Lab
05	Mechanical Measurement Lab
06	IC Engine and Automobile Lab
07	Mechatronics Lab
08	Automatic Control systems
09	CAD/CAM Lab
10	Metrology and Quality Control Lab
11	Automobile Lab
12	Vibration Lab

LABORATORIES DETAILS

Sr.No.	Name of Laboratory	Area in SQ.Meter	Cost of Equipments (Lacs)	List of Major Equipments
1	Thermodynamics Lab	102.19	5.5	1.Boy's gas calorimeter test rig 2.Separating & throttling calorimeter 3.Reciprocating air compressor test rig
2	Theory of Machines Lab	55.74	14.45	1.Computerised Pin on Disc M/C 2.Wear and Frinction Moniter test rig. 2.Journal Bearing tester 3.Universal vibration tester
3	Metallurgy Lab	92.9	15.71	1.Inverted Metallurgical Moterised Stage Microscope. 2. Hounsefield Tensometer 3.Ultrasonic flow detector vibronics.
4	Heat Transfer and RAC Lab	120.77	7.71	1.Critical Heat flux apparatus 2.Thermal conductivity of composite slab apparatus 3.DropwiseFilmwise condensation apparatus

LABORATORIES DETAILS

Sr.No.	Name of Laboratory	Area in SQ.Meter	Cost of Equipments (Lacs)	List of Major Equipments
5	Mechanical Measurement Lab	92.9	15.71	1.Simson oscilloscope 2.Stroboscope 1101 3. Omnigraphic series 2000 recorder
6	IC Engine Lab	102.19	14.77 7.71	1.Single cylinder 4 stroke diesel engine 2.Computerized variable compression ratio test rig 3.Sectionised 2 stroke engine with ignition system
7	Mechatronics Lab	44.592	25.78	1.Mechatronic simulation software 2.Advanced customized eletro hydraulic trainer 3.Microcontroller based water level measuring system

LABORATORIES DETAILS

Sr.No.	Name of Laboratory	Area in SQ.Meter	Cost of Equipments (Lacs)	List of Major Equipments
8	Automatic Control systems	44.59	15.75	1.P PI PID Control System trainer for Demo apparatus 2.Temperature measurement using radiation sensor 3.Digital trans putional and rotary encoder
9	CAD/CAM Lab	78.03	135.27	1. Hypermesh software research version 12.0. 2.Catia Software V5 R20 3.Ansys Software 4.Matlab Software
10	Metrology and Quality Control Lab	47.37	25.99	1.Universal measuring microscope 2.Piston ring tester 3.Auto-collimeter.

LABORATORIES DETAILS

Sr.No.	Name of Laboratory	Area in SQ.Meter	Cost of Equipments (Lacs)	List of Major Equipments
11	Vibration & Noise Control Lab	102.19	8.69	1.Vibration and Noise Analyzer
12	Automobile Lab	102.19	7.71	1. Diesel Smokemeter 2. Exhaust Gas Analyzer AVL

RESEARCH LABORATORY

Sr.No.	Name of Equipments	Qty	Cost of Equipments (Lacs)	Year of Purchase
1	Scrath Tester Make- Ducom with Laptop	1	15.63	2019
2	Tribometer with cooling system	1	15.04	2019
3	Data Acquisition System	1	14.88	2014
4	Thermal Image Analyzer Hand Held	1	6.96	2019
5	3D Printer	1	5.60	2019
6	LabView Software	1	1.53	2020

CONTINUOUS IMPROVEMENT

Actions taken based on the results of evaluation of each of the COs, POs &PSOs(30) For CAY

POs	Target level	Attainment level	Observations
PO1: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	79.32	77.70	Attainment of Target not Achieved Observations: 1. Some lateral entry students are not exposed to fundamental in the mathematics/Science subjects before joining their engineering course 2. Some students find it difficult to understand mathematical based engineering subjects. 3. Some students can't relate basic engineering subject to core engineering subject.
Actions **Following Technical activities have been organized by department to achieve the target:** **1. Additional theory classes and tutorial classes were conducted to introduce and understand the concepts of basic science and engineering subjects.** **2. More practical teaching has been emphasized.** **3. More problems are given for practice**			

ACADEMIC AUDIT

- Academic audits are conducted as per institute's policy in order to monitor and evaluate the teaching learning process and enhance the quality of academics and to improve outcomes.

- It consists of internal audit and external audit.

Summary

Sr. No.	Parameters of Evaluation	Page No.	Max. Marks	Marks Scored
1	Curricula	3	100	
2	Academic Facilities	4	100	
3	Teaching Learning Process	5-6	200	
4	Assessment System	7-8	150	
5	Result	9	100	
6	General Academic Activities	10	100	
7	Feedback and Corrective Action	11	100	
8	Faculty Performance/Upgradation	12	150	
Total			1000	

Grading System:

Grade	Details	Total Marks scored
A+	Excellent	800 and above
A	Good	700-799
B	Acceptable	550-699
C	Not-acceptable	Below 550

1 . Strengths

2. Weaknesses-

3. Suggestions based on information

CONCLUSION


Consistent increase in intake with 100% admission
Qualified Faculty & well Equipped labs
100% Term grant.
Conclusion
onsistent c mpus placem ents & higher studies
Consistent Success rate with average 80%
Consistent in ooking forward to achieving t he patents Filed.

THANK YOU

GECA

In pursuit of Technical Excellence

(An Autonomous Institute of Government of Maharashtra)

Government College of Engineering, Aurangabad

शासकीय अभियांत्रिकी महाविद्यालय, औरंगाबाद

महाराष्ट्र शासन