

EVALUATOR PROGRAMME SUMMARY

INSTITUTE NAME: P.S.R.Engineering College, Sevalpatti- 626140, Tamil Nadu

PROGRAMME: UG in Mechanical Engineering

VISIT DATE: 19th – 21st August 2016

1. OVERVIEW

The visiting team of National Board of Accreditation (NBA) conducted a three day accreditation visit to P.S.R.Engineering College, to evaluate UG programme B. E. in Mechanical Engineering from 19 to 21 Aug 2016. The programme of UG in Mechanical Engineering offered in P.S.R.Engineering College. A Day 0 meeting was held on 18th Aug, 2016 at 09.30 PM to exchange of findings among evaluation team members, based on review of Self-Assessment Report (SAR) submitted by P.S.R.Engineering College and the pre-visit evaluation reports. During the Day 0 meeting, a list of queries was consolidated to seek further clarification and understanding on the programme in addition to the discussion of identified common issues to all programmes.

During the visit, the visiting team met with Head of the Institution Dr.B.G. Vishnuram. The briefing on the institution was given by Dr.B.G. Vishnuram and on the programme was given by the respective Head of the Department. The respective programme evaluators also visited the various facilities Lab facilities, Dept. Library, Class rooms, Faculty rooms, Tutorial rooms and additional facilities of the programme. Apart from comprehensive review of documental evidences pertaining to various accreditation criteria, the visiting team also held meeting and interviews with all the stakeholders such as faculty, staff members, alumni, employers, parents and students.

The Programme Evaluation Team found deficiencies in sub criteria 4.4.1, 5.8, 5.9, 8.5.3 and weakness overall criteria 5 in several sub criteria including 1.1.3, 1.4.2, 1.5, 2.2.1, 2.3.1, 2.4, 3.5.1, 4.4.4, 5.4, 5.6, 5.7, 5.10, 6.2, 6.4, 8.1.2, 8.2.2, 8.3.1, 8.4, 8.5.2, 8.7.4, 9.5 and 9.7, and several concerns in overall criteria 2, 4, 6, 7 and 8.

2. GENERAL INFORMATION

The B. E.in Mechanical Engineering was first started in 2005 (with an Intake of 60 which was enhanced in 2012 to 120). The programme is offered as a full-time programme for four years duration for applicants with 10+2 qualification. The total number of students in the programme is 508. The total

 20/8/16

number of faculty members with the programme is 28. The programme is B. E. in Mechanical Engineering.

3. GENERAL OBSERVATIONS

Criterion 1: Vision, Mission and Programme Educational Objectives

The Dept of Mechanical Engineering has established Vision as well as Mission for the Dept and established **FOUR** PEOs for the B. E. Programme in Mechanical Engineering and disseminated through Institute website and at the department. The administration system functioning in the department to monitor the process of attaining PEOs is not very efficient. Well defined process/mechanism for the periodic review and redefining PEOs is not established.

Criterion 2: Programme Outcomes

The Department has established **TWELVE** POs for the B. E. programme in Mechanical Engineering and published in the Institution website and in the department. Department has established the target for attaining them as 60%. The defined POs partially reflect the **GAs 5, 7 & 11** without explicitness. The dept has correlated the defined POs with COs wherein the format of assessment weakly reflects on the CO's attainment. The administrative system/process functioning in the dept is ineffective as a very large number of small subcommittees are entrusted to contribute in the attainment of POs. Appropriate assessment tools are less frequently used for assessment of attainment of various parameters.

Criterion 3: Programme Curriculum

The department has described the structure of the curriculum of the programme B. E. in Mechanical Engineering and addresses the concerns of **Programme Specific Criteria (PSC)** specified by the **ASME** but several core courses are being taught as electives. Although the institute was granted the autonomous status was back in 2012, major curriculum revision was not observed. The department has stated the components of the curriculum and their relevance to the POs and PEOs. The department has not established an administrative system to identify the curriculum gaps for the attainment of the COs/POs. Further, the dept's attempts are random (i.e. though expert lectures etc) in the delivery of content beyond syllabus for the attainment of COs/POs.


20/07/16

Criterion 4: Students' Performance

Although the admissions trends is slightly decreasing, it is observed that the students are performing consistently in academics. About 50% of the students are getting placement at the time of completing the programme although the pay package is meagre. The department has taken a meager effort to promote the professional society activities for the programme. Few teams of students, however, have participated in competitions such as quizzes. Not all the students opt for internship/training and are not aware of their involvement in the OBE processes. Majority of students in department are from the rural background and weak in English perhaps that is the reason why most of the teachings don't transform in effective learning.

Criterion 5: Faculty Contributions

The students are appreciative to the efforts of the faculty members. The faculty member's involvement in various processes of OBE appears very inadequate. The student to teacher ratio is maintained as per requirement but the faculty retention needs improvement. The cadre ratio is poorly maintained with two professors only very recently appointed. Strengthening of their competencies in certain domains is required. The interaction with the outside world is limited. Limited faculty members have attended faculty development/training activities. Few faculty members have published research papers in the journals out of which only very few research papers are published in quality journals. The faculty members' involvement in innovative activities to claim for IPR is required. Further the interaction with the outside world is also limited.

Criterion 6: Facilities and Technical Support

The dept has adequate halls for lectures and seminars, but only one tutorial room for the programme with reasonable teaching aids along with amenities/facilities. Faculty members are not provided with individual rooms several faculty members share work space in labs and even in department library. The dept library is not adequate. The department has eight laboratories but only four technical staff for them. The laboratories are however spacious to accommodate the students. The experiments are done by the students in large groups with limited technical supporting faculty. The computing facilities available in the dept are adequate in attaining the programme objectives (POs and PEOs).

Criterion 7: Academic Support Units and Teaching-Learning Process

The First year Student Teacher Ratio and the Qualifications of the Faculty handling first year courses are



good. The institute has a library that often less frequented by the student and more digitization/automation may be needed. The setup and the operation of the Language laboratory were found to be good. The sports facilities and the the indoor games facility is found to be good. The operation, documentation and the activities conducted by the Training and Placement may have scope for improvement. The Feedback analysis is not transparent.

Criterion 8: Governance, Institutional Support and Financial Resources

The academic Infrastructure, Electricity, power backup, and security are found to be very good. The Institute's rules for promotion appear to be non transparent. The budgetary allocation and the utilization thereof are inadequate. The ambience is found to be good. Sufficient titles and volumes are available in the library for the Programme. Recent Titles and volumes are not available in the library.

The Safety Norms and Checks, Fire-fighting measurements, Safety of civil structure, is found to be good. Emergency Medical Care with a regular doctors is lacking.

Criterion 9: Continuous Improvement

Success index as well as academic performance index of the students are stable for the past three years. The student-to-teacher found to be stable. The faculty members have taken efforts for research publications, they have taken meager initiatives for the R&D and consultancy works. The dept has made moderate efforts in providing continuing education.

A handwritten signature in black ink, followed by the date '23/12/16' written vertically.

4. AREAS FOR IMPROVEMENTS

1. The administrative system/process of establishing and assessment of the attainment of PEOs and POs.
2. Use of correct tools for the measurement of attainment of COs and POs effectively and appropriate delivery methods.
3. Professional activities for the programme.
4. The curriculum gaps are seldom identified and CBS is hardly planned systematically.
5. Strengthening of Programme specific laboratories with additional facilities and creation of more number of labs.
6. Contribution of faculty members for R&D, Publication in quality journals and consultancy work.

5. ACKNOWLEDGEMENT

The NBA Evaluation Team would like to thank P.S.R. Engineering College for their cooperation for smooth conducting of evaluation.

6. PROGRAMME EVALUATION FORM

The observations of the NBA Evaluation Team for consideration of the Programme relating to various criteria are contained in Appendix 1: Programme Evaluation worksheet – A and Appendix 2: Programme Evaluation worksheet – B.

Prepared and submitted by Programme Evaluation Team

Evaluator: Name & Signature



Prof Arshad Noor Siddiquee



PROGRAMME EVALUATION WORKSHEET – PART A

INSTITUTION

Name of institution/university	P.S.R.Engineering College
Address with Phone and email	Appayanaickenpatti, Sevalpatti – 626 140 Sivakasi, Virudhunagar District, Tamil Nadu, India. Phone: 0 4562 – 239178, contact@psr.edu.in
Name of affiliating university (if applicable)	Anna University, Chennai 600 025

PROGRAMME FOR ACCREDITATION

Name of the programme (as it appears on graduate's certificate)	UG in Mechanical Engineering
Abbreviation of Programme	B.E.(Mechanical Engineering)
Name of the Department/School	Department of Mechanical Engineering
Year of starting of the programme	2005
Expiry date of last accreditation (if applicable)	N.A.

EVALUATION TEAM

Name, designation and affiliation of Visiting Team Chairperson	Prof Bidya Sagar Pani Emeritus Fellow, Dept of Civil Engineering, Indian Institute of Technology Powai, Mumbai-400 076 Maharashtra
Name, designation and affiliation of Programme Evaluator 1	Professor Arshad Noor Siddiquee Department of Mechanical Engineering Jamia Millia Islamia New Delhi - 110025
Name, designation and affiliation of Programme Evaluator 2	N.A.
Dates of the present accreditation visit	19th – 21st August, 2016


20/8/16


141
/6

For all accreditation criteria, the findings shall be 'Y' Compliance, 'C' Concern, 'W' Weakness and 'D' Deficiency. No cells are to be left blank. Justification is required for 'C' Concern, 'W' Weakness and 'D' Deficiency. Please provide the justification below the table.

CRITERION-1 VISION, MISSION AND PROGRAMME EDUCATIONAL OBJECTIVES	COMPLIANCE	OBSERVATION AND REMARKS FOR NON- COMPLIANCE
The published PEOs should reflect the professional and career accomplishments of graduates and be in line with the mission	Y	
Administrative system should be in place to monitor the process of attaining PEOs	C	Its there but too many sub-committees are involved and articulation is ineffective.
There should be documented process to assess the attainment of PEOs	Y	
Published PEOs must be achieved through the attainment of POs	C	PO/PEO mapping is established but expected targets are short and tool usage in less effective.
There must be a documented and effective process for the periodic review and revision of these PEOs	Y	
CRITERION-2 PROGRAMME OUTCOMES	COMPLIANCE	OBSERVATION AND REMARKS FOR NON- COMPLIANCE
There must be a documented process in place to measure the attainment of defined POs	Y	
The defined COs must contribute to the attainment of POs	C	But the format of internal/end semester assessment and assessment tool usage less effective
Attainment of defined POs with respect to the Graduate Attributes (GAs) of NBA	Y	
1. Engineering Knowledge		
2. Problem Analysis		
3. Design/development of solutions		

2/6

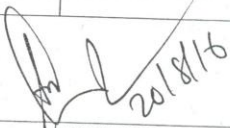
142

 20/8/16


4. Conduct investigations of complex problems		
5. Modern tool usage		
6. The engineer and society		
7. Environment and sustainability		
8. Ethics		
9. Individual and team work		
10. Communication		
11. Project management and finance		
12. Life-long learning		
Appropriate content delivery and assessment methods/tools should be employed in attainment of POs	W	Use of correct available tools is not adequately articulated
Curricular delivery and assessment methods should be amended based on the attainment of POs	W	Process of amendment and use of feedback for corrective measures not adequately evidenced.
Each PO must contribute significantly to achieve at least one of the PEOs	Y	
There must be a documented and effective process for the periodic review and revisions of these POs	Y	
CRITERION-3 PROGRAMME CURRICULUM		
The structured curriculum must address programme specific criteria	Y	
Components of the curriculum must sufficiently address these defined POs/COs	Y	
Outcomes of the core engineering courses must help the graduate to acquire the professional competence, knowledge and skills.	C	Some of the core courses are taught as elective.
The process must have the feature of justifying the requirements for improvement in courses, curriculum, content delivery and assessment methods	C	Feedback usage to be used for corrective measures inadequate.
The programme must have the participation/involvement of relevant industries in content delivery and curriculum design.	C	Industry/Alumni are engaged for expert lectures only.

3/6

 20/8/16

CRITERION-4 STUDENT PERFORMANCE	COMPLIANCE	OBSERVATION AND REMARKS FOR NON- COMPLIANCE
Success rate, Academic performance, Placement and Higher Studies and Professional activities which include entrepreneurship initiative, product design, innovations etc., must be in consistent with attained POs and PEOs.	C	Professional society activity and entrepreneurship development is lacking
CRITERION-5 FACULTY CONTRIBUTIONS	COMPLIANCE	OBSERVATION AND REMARKS FOR NON- COMPLIANCE
Faculty strength, qualification, cadre and competencies must help the graduates to attain the defined COs and POs	W	Cadre ratio, High qualification their competencies needs improvement
Research activities of faculty including consultancy and knowledge transfer must contribute for better content delivery and project work towards the attainment of COs and POs	W	FRDC, Interaction with outside word needs improvements.
CRITERION-6 FACILITIES AND TECHNICAL SUPPORT	COMPLIANCE	OBSERVATION AND REMARKS FOR NON- COMPLIANCE
Facilities provided to faculty and students including teaching aids, lecture halls, faculty rooms, engineering laboratories, equipment etc. and competent technical staff must be helpful to enhance and innovate the teaching – learning process towards the attainment of POs	C	Individual faculty rooms with necessary aids not available, technical staff strength is poor
		
COMPLIANCE		OBSERVATION

4/6

CRITERION-7 ACADEMIC SUPPORT AND TEACHING AND LEARNING PROCESS		AND REMARKS FOR NON- COMPLIANCE
Academic support units such as basic science/engineering laboratories, language laboratory, etc., must fulfill the prerequisite of core and optional engineering courses	Y	
Teaching learning process including tutorial classes, mentoring system, feedback analysis, scope for self-learning, career guidance etc., must be functionally in place to impart knowledge and inculcate skills and attitudes in relation to basic science, mathematics and engineering.	Y	
CRITERION-8 GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES		
	COMPLIANCE	OBSERVATION AND REMARKS FOR NON- COMPLIANCE
Campus Infrastructure and other related facilities as library, internet, safety equipment's, counselling and emergency medical care facilities must satisfy the requirements of the programme	C	Emergency facility inadequate specially when the institute is situated in rural area.
Budget allocated and utilized must be adequate to run the programme and audited statements must be made available for stakeholders	C	Inadequate budgetary provisions
Governing body, functional administrative structure, policies and procedures, decentralization of power, delegation of financial power, grievance redressal mechanism etc., must satisfy the requirements/norms of concerned regulatory authorities and helpful to progress towards vision.	C	Lacks more transparency.
		
	COMPLIANCE	OBSERVATION

5/6

CRITERION-9 CONTINUOUS IMPROVEMENT		AND REMARKS FOR NON- COMPLIANCE
Improvements/attainments in SI, API, STR, FQI, FRP etc., must be appreciable	C	Improvement in API, FRP etc required.
Efforts made by the faculty towards continuing education, new facility created and overcoming the shortcomings listed during the last accreditation/since the inception of the programme must be evident.	C	Adequate efforts need to be made

6/6

 20/8/16