

PART A

**Evaluator's Visit Report**

**Undergraduate Engineering Program**

**Tier-II**

**Name of the Institution**

SJC Institute of Technology, Chickballapur-562101, KARNATAKA,

**Name of the Program**

UG Civil Engineering

**Visit Dates**

Sept 14-16, 2018





# NATIONAL BOARD OF ACCREDITATION

NBCC Place, East Tower, 4<sup>th</sup> Floor, Bhisham Pitamah Marg,  
Pragati Vihar, New Delhi-110 003  
Tel: +91 11 2436 0620-22 ; Telefax: +91 11 4308 4903  
Website: www.nbaind.org



File No: 25-110/2010-NBA

Date: 08-11-2018

To  
The Principal  
S J C Institute of Technology,  
P.B. No.- 20, B.B. Road,  
Chickballapur – 562 101,  
Karnataka

**Subject: Accreditation status of programmes applied by S J C Institute of Technology, P.B. No.- 20, B.B. Road, Chickballapur – 562 101, Karnataka.**

Sir,

This has reference to your application ID No. 2642-30/11/2017 seeking accreditation by National Board of Accreditation in Tier-II format to UG Engineering programs offered by S J C Institute of Technology, P.B. No.- 20, B.B. Road, Chickballapur – 562 101, Karnataka.

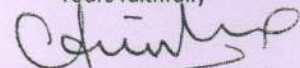
2. An Expert Team conducted on-site evaluation of the programs during 14th to 16th September, 2018. The report submitted by the Expert Team was considered by the concerned Committees constituted for the purpose in NBA. The competent authority in NBA has approved the following accreditation status to the programs as given in the table below:

Sl. No.	Name of the Program(s) (UG)	Basis of Evaluation	Accreditation Status
(1)	(2)	(3)	(4)
1.	Telecommunication Engineering	Tier-II June 2015 Document	Not Accredited
2.	Civil Engineering		Not Accredited

3. A copy each of Report of Chairman of the Visiting Team and Evaluators' reports in respect of the above programmes are enclosed.

4. If the Institute is not satisfied with the decision of NBA, it may appeal within thirty days of receipt of this communication giving reasons for the same and by paying the requisite fee.

Yours faithfully

  
(Dr. Anil Kumar Nassa)  
Member Secretary

Encls:

1. Copy of Report of Chairman of the Visiting Team.
2. Copy each of Expert Reports of the Visiting Team.



## Program Evaluator Summary

### **Overview**

The Expert team of National Board of Accreditation (NBA) conducted a three day accreditation visit from Sept 14, 2018 to Sept 16, 2018 SJC Institute of Technology, Chickballapur-562101, to evaluate UG Engineering program **Civil Engineering**

Pre visit meeting of the expert team was held on at Sept 13, 2018 to exchange the respective findings with the evaluation team members, based on review of Self-Assessment Report (SAR) and the pre-visit evaluation reports.

During the visit, the visiting team met with Head of the Institution/Dean Prof. K.M.Ravi Kumar. The briefing on the institution was given by Prof. K.M.Ravi Kumar and on the program was given by **Prof. G. Narayana**. The respective program evaluators also visited the various facilities of the program. Apart from comprehensive review of documental evidences pertaining to various accreditation criteria, the visiting team also held meeting and discussions with the following stakeholders (kindly tick).

Faculty	<input checked="" type="checkbox"/>	Alumni	<input checked="" type="checkbox"/>
Employers	<input checked="" type="checkbox"/>	Parents	<input checked="" type="checkbox"/>
Staff members	<input checked="" type="checkbox"/>	Students	<input checked="" type="checkbox"/>

The Program Evaluation Team found that there are Concern in Criteria Nos. 1, 2 and 4 and weakness in Criteria No. 3, 5, 6 & 7.

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16/9/18



**Program Details**

Name of the Program			
UG CIVIL ENGINEERING			
Year of Commencement	1986		
Student	Year	Sanctioned Intake	Actual Admitted
	CAY (2017 - 2018)	150 <sup>120</sup>	86
	CAY m1 (2016 - 2017)	150 <sup>120</sup>	148
	CAY m2 (2015 - 2016)	150 <sup>120</sup>	158
	Total Students in the Programme 1 <sup>st</sup> to Final Year	419	
Averaged over three assessment years	93.11%		
Placement %	CAY (2017 - 2018)	35.29	
	CAY m1 (2016 - 2017)	34.82	
	CAY m2 (2015 - 2016)	66.39	
	Averaged over three assessment years	45.50	
Faculty (Attach a Copy of faculty list compared with Time Table)	Regular	Professor	03
		Associate professor	03
		Assistant professor	25
	Contractual	Professor	00
		Associate professor	00
		Assistant professor	02
	No. Of Ph.d available in the department	04	
Student-Teacher ratio	19.50		
Previous accreditation( if any)	First accreditation	No. of years accredited for	
		With effect from	10/09/2004
	Previous accreditation	No. of years accredited for	03
		With effect from	19/07/2008

CAY: Current Assessment Year

CAYm1: Current Assessment Year minus 1

CAYm2: Current Assessment Year minus 2

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### **Explicit observations about the program**

*(Please use additional sheets if necessary to elaborate)*

**Program title UG Civil Engineering**

#### **Strengths:**

1. Vision and Mission of the Department and Institute is available and correlated to each other and well published.
2. Well qualified faculty is available.
3. Laboratories are mostly well equipped with proper maintenance and good safety measures adopted.
4. Quality of internal semester Question papers, assignments and Evaluation is good.
5. Gap in curriculum are proper identified and are implemented properly.
6. Student enrolment is good.
7. Faculty qualification and retention is good.
8. Well documented course files and laboratory manuals are in place.

#### **Weakness/Areas of improvement:**

1. All stake holders are not aware of the Vision, Mission and PEOs.
2. The process of defining Vision, Mission and PEOs are neither documented nor implemented adequately.
3. Outcome based analysis is not proper and also not understood clearly.
4. Documentary evidences are not available for involvement of stake holders.
5. Quality of Teaching in classrooms and laboratory is poor.
6. The student feedback on teaching learning process is in existence but no follow up action is taken.
7. No defined process for internal semester question paper setting and evaluation.
8. No evidence of assessment of individual and team performance in student project work.
9. No Industry supported laboratory. Further the industry has no role in program design, yet they are involved in delivery of some course and extra mural activities. However, no impact analysis is done.
10. Initiatives related to industry internship/summer training duration is very small
11. Overall performance parameters of students are poor.
12. Placement, higher studies and entrepreneurship is poor.
13. Poor research and consultancy contributions. Majority of the publication are not in quality or SCI/SCOPUS journal.
14. There is a shortage in Technical support staff.
15. No evidence of external or internal academic audit.

#### **Deficiencies:**

1. Salaries paid to Faculty and supporting staff is not conformant to 6<sup>th</sup> Pay commission.

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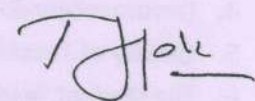


**Department/Programme Specific Criteria:**

S. No.	Criteria	Max Marks	Marks Awarded	Remarks
1.	Vision, Mission and Program Educational Objectives	60	37	
2.	Program Curriculum and Teaching-Learning Processes	120	73	
3.	Course Outcomes and Program Outcomes	120	64	
4.	Students' Performance	150	86	
5.	Faculty Information and Contributions	200	126	
6.	Facilities and Technical Support	80	46	
7.	Continuous Improvement	50	23	
<b>TOTAL</b>		<b>780</b>	<b>455</b>	



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**Signature**  
**(Program Evaluator 1)**



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**Signature**  
**(Program Evaluator 2)**



## Part B-Program Assessment Worksheet

### Program Level Criteria - To be Assessed by Evaluator

Name of the Institution  
Name of the Program

SJC Institute of technology, Chickballapur - 562101  
UG Civil Engineering

Criterion 1: Vision, Mission and Program Educational Objectives (60)						
S.No	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	
1.1.	State the Vision and Mission of the Department and Institute	5	A. Availability of statements (1)	1	4	Missions are not very relevant to vision
			B. Appropriateness/Relevance of the Statements (2)	1		
			C. Consistency of the Department statements with the Institute statements (2)	2		
1.2.	State the Program Educational Objectives (PEOs)	5	Program Educational Objectives (3 to 5) (5) Appropriateness	4	4	
1.3.	Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders	10	A. Adequacy in respect of publication & dissemination (2)	2	6	All stake holders are not aware of the Vision, Mission and PEOs.
			B. Process of dissemination among stakeholders (2)	1		
			C. Extent of awareness of Vision, Mission & PEOs among the stakeholder (6)	3		
1.4.	State the process for defining the Vision and Mission of the Department, and PEOs of the program	25	A. Description of process for defining the Vision, Mission of the Department (10) B. Description of process for defining the PEOs of the program (15)	5 9	14	The process of defining Vision, Mission and PEOs are not documented and implemented adequately.
1.5.	Establish consistency of PEOs with Mission of the Department	15	A. Preparation of a matrix of mapping PEOs and elements of Mission statement (5)	3	9	The mapping of PEOs with Mission statement is poor.
			B. Consistency/justification of mapping of the matrix (10)	6		
<b>Total:</b>		<b>60</b>			<b>37</b>	

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Criterion 2: Program Curriculum and Teaching – Learning Processes (120)						
S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	
2.1.	Program Curriculum	20				
2.1.1.	State the process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes (POs) & Program Specific Outcomes (PSOs), mention the identified curricular gaps, if any	10	A. Process used to identify extent of compliance of University curriculum for attaining POs & PSOs (6)	3	7	Gaps in the curriculum properly identified. However the compliance is lacking.
			B. List the curricular gaps for the attainment of defined POs & PSOs (4)	4		
2.1.2.	State the delivery details of the content beyond the syllabus for the attainment of POs & PSOs	10	A. Steps taken to get identified gaps included in the curriculum.(letter to university/BOs) (2)	2	9	Gaps identified, steps taken to include in the curriculum, content beyond syllabus delivered, and mapping was also carried out.
			B. Delivery details of content beyond syllabus (5)	4		
			C. Mapping of content beyond syllabus with the POs & PSOs (3)	3		
2.2.	Teaching-Learning Processes	100				
2.2.1	Describe the Process followed to improve quality of Teaching Learning	25	A. Adherence to Academic Calendar (3)	3	14	Quality of Teaching in classrooms and laboratory is poor. The student feedback on teaching learning process is in existence but no follow up action is taken.
			B. Use of various instructional methods and pedagogical initiatives (3)	1		
			C. Methodologies to support weak students and encourage bright students(4)	4		
			D. Quality of classroom teaching (Observation in a Class) (3)	1		
			E. Conduct of experiments (Observation in Lab )(3)	1		
			F. Continuous Assessment in the laboratory (3)	1		
			G. Student feedback on teaching learning process and actions taken (6)	3		
2.2.2.	Quality of internal semester Question papers, assignments and Evaluation	20	A. Process for internal semester question paper setting, evaluation and effective process implementation (5)	2	13	No defined process for internal semester question paper setting and evaluation. Quality of internal semester Question papers, assignments and Evaluation is good.
			B. Process to ensure questions from outcomes/learning levels perspective (5)	4		
			C. Evidence of COs coverage in class test / mid-term tests (5)	4		
			D. Quality of Assignment and its relevance to COs (5)	3		



S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines (Marks)	Marks Awarded		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	
2.2.3.	Quality of student projects	25	A. Identification of projects and allocation methodology to Faculty (3)	3	16	No evidence of assessment of individual and team performance in student project work.
			B. Types and relevance of the projects and their contribution towards attainment of POs and PSOs(5)	3		
			C. Process for monitoring and evaluation (5)	3		
			D. Process to assess individual and team performance(5)	2		
			E. Quality of completed projects/working prototypes (5)	3		
			F. Evidences of papers published /Awards received by projects etc. (2)	2		
2.2.4.	Initiatives related to industry interaction	15	A. Industry supported laboratories (5)	0	5	No Industry supported laboratory. Further the industry has no role in program design, yet they are involved in delivery of some course and extra mural activities. However, no impact analysis is done.
			B. Industry involvement in the program design and partial delivery of any regular courses for students (5)	3		
			C. Impact analysis of industry institute interaction and actions taken thereof (5)	2		
2.2.5.	Initiatives related to industry internship/summer training	15	A. Industrial training/tours for students (3)	2	9	Initiatives related to industry internship/summer training duration is very small
			B. Industrial /internship /summer training of more than two weeks and post training Assessment (4)	2		
			C. Impact analysis of Industrial training (4)	3		
			D. Student feedback on initiative (4)	2		
Total:		120			73	

Criterion 3: Course Outcomes and Program Outcomes (120)						
S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	
3.1.	Establish the correlation between the courses and the POs & PSOs	20				
3.1.1.	Course Outcomes	5	Evidence of COs being defined for every course (5)	5	5	
3.1.2.	CO-PO/PSOs matrices of courses selected in 3.1.1 (six matrices)	5	Explanation of table to be ascertained (5)	2	2	No proper explanation could be provided.
3.1.3.	Program level Course-PO/PSOs matrix of ALL courses including first year courses	10	Explanation of tables to be ascertained (10)	4	4	No explanation was provided.
3.2.	Attainment of Course Outcomes	50				
3.2.1.	Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based	10	A. List of assessment processes (2)	1	6	The quality /relevance of assessment processes & tools used are inappropriate.
			B. The quality /relevance of assessment processes & tools used (8)	5		
3.2.2.	Outcomes of all courses with respect to set attainment levels	40	Verify the attainment levels as per the benchmark set for all courses (40)	15	15	Attainment of CO levels are not properly defined and explained.
3.3.	Attainment of Program Outcomes and Program Specific Outcomes	50				
3.3.1.	Describe assessment tools and processes used for assessing the attainment of each of the POs &	10	A. List of assessment tools & processes (5)	4	5	The quality/relevance of assessment tools/processes used is inappropriate
			B. The quality/relevance of assessment tools/processes used (5)	1		
3.3.2.	Provide results of evaluation of each PO & PSO	40	A. Verification of documents, results and level of attainment of each PO/PSO (24)	20	27	
			B. Overall levels of attainment (16)	7		
Total:		120			64	

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Criterion 4: Students' Performance (150)						
S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	
4.1.	Enrolment Ratio (20)	20	A. $\geq$ 90% students enrolled at the First Year Level on average basis during the period of assessment (20) B. $\geq$ 80% students enrolled at the First Year Level on average basis during the period of assessment (18) C. $\geq$ 70% students enrolled at the First Year Level on average basis during the period of assessment (16) D. $\geq$ 60% students enrolled at the First Year Level on average basis during the period of assessment (14) E. Otherwise '0'.	18	18	Enrolment ratio is 87.78
4.2.	Success Rate in the stipulated period of the program	40				
4.2.1.	Success rate without backlogs in any Semester/year of study Without Backlog means no compartment or failures in any semester/year of study	25	$SI = \frac{\text{Number of students who graduated from the program without backlog}}{\text{Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry and separate division, if applicable}}$ Average SI = Mean of success index (SI) for past three batches Success rate without backlogs in any year of study = $25 \times \text{Average SI}$	8	8	Ave S.I. is 0.347
4.2.2.	Success rate in stipulated period (actual duration of the program)	15	$SI = \frac{\text{Number of students who graduated from the program in the stipulated period of course duration}}{\text{Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry and separate division, if applicable}}$ Average SI = mean of success index (SI) for past three batches Success rate = $15 \times \text{Average SI}$	6	6	Ave S.I. with backlog is 0.3831

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S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	
4.3.	Academic Performance in Third Year	15	Academic Performance = 1.5 * Average API (Academic Performance Index)	11	11	Ave API is 7.12
4.4.	Academic Performance in Second Year	15	Academic Performance Level = 1.5 * Average API (Academic Performance Index)	9	9	Ave API is 6.2
4.5.	Placement, Higher studies and Entrepreneurship	40	Assessment Points = 40 * average of three years of $[(x + y + z)/N]$ where, $x$ = Number of students placed in companies or Government sector through on/off campus recruitment $y$ = Number of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National level tests, GRE, GMAT etc.) $z$ = No. of students turned entrepreneur in engineering/technology. $N$ = Total number of final year students	18	18	Average Placement Index is 0.4605
4.6.	Professional Activities	20				
4.6.1.	Professional societies/chapters and organizing engineering events	5	A. Availability & activities of professional societies/chapters (3) B. Number, quality of engineering events (organized at institute) (2)	3	5	
4.6.2.	Publication of technical magazines, newsletters, etc.	5	A. Quality & Relevance of the contents and Print Material (3) B. Participation of Students from the program (2)	3	5	
4.6.3.	Participation in inter-institute events by students of the program of study (at other institutions)	10	A. Events within the state (2) B. Events outside the state (3) C. Prizes/awards received in such events (5)	2 0 4	6	No Participation outside the state.
Total:		150			86	

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Criterion 5: Faculty Information and Contributions (200)

TIER II

S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	
5.1.	Student-Faculty Ratio (SFR)	20	<p>Marks to be given proportionally from a maximum of 20 to a minimum of 10 for average SFR between 15:1 to 20:1, and zero for average SFR higher than 20:1 (Refer calculation in SAR)</p> <p>Regular Faculty means:</p> <ul style="list-style-type: none"> <li>• Full time on roll with prescribed pay scale. An employee on contract for a period of not less than two years AND drawing consolidated salary not less than applicable gross salary shall only be counted as a regular employee.</li> <li>• Prescribed pay scales means pay scales notified by the AICTE/Central Government and Implementation as prescribed by the State Government. In case State Government prescribes lesser consolidated salary for a particular cadre then same will be considered as reference while counting faculty as a regular faculty.</li> </ul>	16	12	Average SFR = 19.2
5.2.	Faculty Cadre Proportion	25	<p>Cadre Proportion Marks =</p> $\left[ \frac{AF3}{RF1} \right] + \left[ \frac{AF2 \times 0.6}{RF2} \right] + \left[ \frac{AF3 \times 0.4}{RF3} \right] \times 12.5$ <ul style="list-style-type: none"> <li>• If AF1 = AF2 = 0 then zero marks</li> <li>• Maximum marks to be limited if it exceeds 25</li> </ul>	21	21	AF1=2.67, RF1=3.0, RF2=6.0, AF2=2.67, RF3=17, AF3=24;
5.3.	Faculty Qualification	25	<p>FQ = 2.5 x [(10X + 6Y)/F] where                      X is no. of faculty with Ph.D., Y is no. of faculty with M.Tech, F is no. of faculty required to comply 1:15 Faculty Student ratio                      (no. of faculty and no. of students required to be calculated as per 5.1)</p>	13	13	Ave assessment is 13.4
5.4	Faculty Retention	25	<p>A. ≥ 90% of required Faculties retained during the period of assessment keeping CAYm2 as base year (25)                      B. ≥ 75% of required Faculties retained during the period of assessment                      C. ≥ 60% of required Faculties retained during the period of assessment                      D. ≥ 50% of required Faculties retained during the period of assessment keeping CAYm2 as base year (10)                      E. Otherwise (0)</p>	25	25	Less than 100%

Criterion 6: Facilities and Technical Support (80)

TIER II

S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	
6.1.	Adequate and well equipped laboratories, and technical manpower	30	A. Adequate well-equipped laboratories to run all the program-specific curriculum (20)	17	23	Adequate and well equipped laboratories (except Soil Mechanics Lab), however there is a shortage of technical staff.
			B. Availability of adequate technical supporting staff (5)	2		
			C. Availability of qualified technical supporting staff (5)	4		
6.2.	Additional Facilities created for improving the quality of learning experience in Laboratories	25	A. Availability and relevance of additional facilities(10)	2	2	No evidence of additional facilities created.
			B. Facilities utilization and effectiveness (10)	0		
			C. Relevance to POs and PSOs (5)	0		
6.3.	Laboratories: Maintenance and overall ambience	10	Maintenance and overall ambience (10 )	8	8	Good maintenance of equipment and laboratories (except Soil Mechanics Lab).
6.4.	Project laboratory	5	Facilities & Utilization (5)	3	3	No specific project laboratories available, however the work is done in regular laboratories.
6.5.	Safety measures in laboratories	10	Safety measures in laboratories (10)	10	10	Good safety measures are in place.
Total:		80			46	



Criterion 7: Continuous Improvement (50)

TIER II

S.No.	Sub Criteria	Max. Marks	Evaluation Guidelines	Marks Awarded		Observations of Evaluators (Provide Justifications/ Reasons)
				Marks	Total	
7.1.	Actions taken based on the results of evaluation of each of the POs and PSOs	20	A. Documentation of POs and PSOs attainment levels (5)	4	18	This part of work is good.
			B. Identification of gaps/shortfalls (5)	4		
			C. Plan of action to bridge the gap and its Implementation (10)	10		
7.2.	Academic Audit and actions taken during the period of Assessment	10	Assessment shall be based on conduct and actions taken in relation to continuous improvement (10)	0	0	No external academic audit is carried out.
7.3.	Improvement in Placement, Higher Studies and Entrepreneurship	10	A. Improvement in Placements (5)	1	2	There is a continuous fall observed in Placement, Higher Studies and Entrepreneurship. Further, large of appointment letters do not provide the details of salary package.
			B. Improvement in Higher Studies (3)	1		
			C. Improvement in number of Entrepreneurs (2)	0		
7.4.	Improvement in the quality of students admitted to the program	10	Assessment is based on improvement in terms of ranks/score in qualifying state level/national level entrances tests, percentage Physics, Chemistry and Mathematics marks in 12th Standard and percentage marks of the lateral entry students	3	3	There is a continuous fall in admission and quality of students.
Total		50			23	