

ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA



**Certifies that**

**RAJIV RANJAN**

**ಬ್ಯಾಚಲರ್ ಆಫ್ ಇಂಜಿನಿಯರಿಂಗ್**

ಪದವಿಗೆ ಅಗತ್ಯವಾದ ಅರ್ಹತೆಗಳನ್ನುಳ್ಳವರೆಂದು ಪರಿಗಣಿತವಾಗಿರುವ ಕಾರಣ  
ಮೇಲೆ ಕಾಣಿಸಿದ ಪದವಿಗೆ ಅವರನ್ನು ಅಂಗೀಕರಿಸಲಾಗಿದೆ

*has been duly admitted to the Degree of*

**Bachelor of Engineering**

*in recognition of the fulfilment of requirements*

*for the said degree*



ಪರೀಕ್ಷಾ ಕ್ರಮ ಸಂಖ್ಯೆ

University Seat Number : 3BK14ME057

ವಿಷಯ

Subject : Mechanical Engineering

ಶ್ರೇಣಿ

Class : First Class with Distinction

D 19 000921

ವಿಶ್ವವಿದ್ಯಾಲಯದ ಮುದ್ರೆಯೊಂದಿಗೆ ಕೊಡಲ್ಪಟ್ಟಿದೆ  
Given under the seal of the University

ಬೆಳಗಾವಿ

Belagavi

ದಿನಾಂಕ

Date : MAR 18, 2019

ಕುಲಪತಿ

VICE CHANCELLOR





# Visvesvaraya Technological University, Belagavi

## Karnataka State, INDIA

94489

### TRANSCRIPT AS PER RECORDS

We do not have GPA scheme of evaluation

Name : RAJIV RANJAN  
University Seat No : 3BK14ME057  
Year of Entrance : 2014  
Year of Leaving : 2018  
Degree Received : Bachelor of Engineering  
( Mechanical Engineering )

1. Duration of the Course : 4 Years
2. Medium of Instruction : English
3. First class with distinction (FCD) : Not less than 70% of the aggregate marks in first attempt
4. First class (FC) : Less than 70% but not less than 60% of the aggregate marks in first attempt
5. Second class (SC) : Less than 60% of the aggregate marks in first attempt

SUBJECTS	Hours Per Week		Marks Obtained	Max. Marks
	Lecture	Drawing/ Practical		
I Semester				
1 Engineering Maths-I	4		76	125
2 Engineering Chemistry	4		73	125
3 Programming in C & Data Structures	4		89	125
4 Computer Aided Engineering Drawing	2	4	110	125
5 Basic Electronics	4		78	125
6 Computer Programming Lab.		3	73	75
7 Engg. Chemistry Lab.		3	66	75
8 Environmental Studies	2		62	75
First Attempt Total: 565 / 775 ; Class : FCD ; # 1				
II Semester				
1 Engineering Maths-II	4		104	125
2 Engineering Physics	4		65	125
3 Elements of Civil Engg. & Engg. Mechanics	4		99	125
4 Elements of Mechanical Engineering	4		107	125
5 Basic Electrical Engineering	4		68	125
6 Workshop Practice		3	62	75
7 Engineering Physics Lab		3	64	75
8 Constitution of India & Professional Ethics	2		51	75
First Attempt Total: 569 / 775 ; Class : FCD ; # 1				
III Semester				
1 Engineering Mathematics-III	4		118	125
2 Material Science & Metallurgy	4		71	125
3 Basic Thermodynamics	4		92	125
4 Mechanics of Materials	4		69	125
5 Manufacturing Process - I	4		95	125
6 Computer Aided Machine Drawing	4		97	125
7 Metallography & Material Testing Lab		3	61	75
8 Foundry & Forging Lab		3	67	75
First Attempt Total: 670 / 900 ; Class : FCD ; # 1				
IV Semester				
1 Engineering Mathematics - IV	4		89	125
2 Mechanical Measurements & Metrology	4		76	125
3 Applied Thermodynamics	4		89	125
4 Kinematics of Machines	4		96	125
5 Manufacturing Process - II	4		98	125
6 Fluid Mechanics	4		72	125
7 Mech.Measurements & Metrology Lab		3	70	75
8 Machine Shop		3	67	75
First Attempt Total: 657 / 900 ; Class : FCD ; # 1				

SUBJECTS		Hours Per Week		Marks Obtained	Max. Marks
		Lecture	Drawing/ Practical		
V Semester					
1	Management & Entrepreneurship	4		81	125
2	Design of Machine Elements - I	4		74	125
3	Energy Engineering	4		96	125
4	Dynamics of Machines	4		86	125
5	Manufacturing Process - III	4		86	125
6	Turbo Machines	4		89	125
7	Fluid Mechanics & Machines Lab.		3	70	75
8	Energy Conversion Engg. Lab.		3	69	75
First Attempt Total		651	/ 900	: Class:	FCD : # 1
VI Semester					
1	Computer Integrated Manufacturing	4		90	125
2	Design of Machine Elements - II	4		78	125
3	Heat & Mass Transfer	4		69	125
4	Finite Element Methods	4		90	125
5	Mechatronics & Microprocessor	4		90	125
6	Non-Traditional Machining	4		90	125
7	Heat & Mass Transfer Lab.		3	70	75
8	CAMA Lab.		3	74	75
First Attempt Total		651	/ 900	: Class:	FCD : # 1
VII Semester					
1	Economics	4		106	125
2	Mechanical Vibrations	4		91	125
3	Hydraulics & Pneumatics	4		86	125
4	Operations Research	4		104	125
5	Total Quality Management	4		93	125
6	Experimental Stress Analysis	4		85	125
7	Design Lab.		3	69	75
8	CIM & Automation Lab.		3	71	75
First Attempt Total		705	/ 900	: Class:	FCD : # 1
VIII Semester					
1	Operations Management	4		97	125
2	Control Engineering	4		113	125
3	Power Plant Engineering	4		107	125
4	Automotive Engineering	4		104	125
5	Project Work		6	196	200
6	Seminar	3		49	50
First Attempt Total		666	/ 750	: Class:	FCD : # 1
Grand total of V to VIII Semester		2673		out of	3450 (max.)

Class of the Degree \* : First Class with Distinction

06/10/14CIP/06/10/14CIV18/28 is not considered for Grand Total and the Class Declaration

**AUTHENTIC**



*Amiga*

Registrar (Evaluation)

\*Based on First Attempt Marks of V to VIII Semesters # Number of Attempts taken to clear the semester  
( \* and # not applicable to Choice Based Credit System )



ಬಸವಕಲ್ಯಾಣ ಎಜುಕೇಶನಲ್ ಟ್ರಸ್ಟ್ (ಲ)  
**ಬಸವಕಲ್ಯಾಣ ತಾಂತ್ರಿಕ  
ಮಹಾವಿದ್ಯಾಲಯ**

ಎನ್.ಎಚ್.೯, ಬಸವಕಲ್ಯಾಣ - ೫೮೫ ೩೨೭  
ಜಿ. ಬೀದರ್ - ಕರ್ನಾಟಕ



Basavakalyan Educational Trust's (R)

**Basavakalyan  
Engineering College**

NH9, Basavakalyan - 585 327  
Dist. Bidar - Karnataka

Phone : 08481 - 254264 - 254146 • Fax : 08481-254143 • Email : principalbetbkec@gmail.com • Website : www.betbkec.com

Approved by AICTE New Delhi & Affiliated to VTU, Belagavi

REGD. NO.: 35/95-96 26-9-1995

Ref. No. BET/BKEC/ 53 2018 -20 19) 20064

Date : 03/10/18

## CHARACTER CERTIFICATE

This is to certify that **Mr. Rajiv Ranjan S/o. Surendra Sharma** bearing V.T.U Reg. No. **3BK14ME057** was the student of this college during the year from **2014 to 2018**. He has studied & successfully completed B.E. In Mechanical Engineering from this college.

He bears good moral character.

  
Principal  
**PRINCIPAL**  
Basavakalyan Engineering College  
Basavakalyan-585327





# Visvesvaraya Technological University

"Jnana Sangama"

Belagavi-590018, Karnataka State, INDIA

Registrar (Evaluation)

Phone : +91-831-2498133

Fax : +91-831-2405461

Date : 4 OCT 2013

## TO WHOMSOEVER IT MAY CONCERN

This is to certify that, Mr./Ms. Rajiv Ranjan bearing University Seat No. 3BK14ME057 was a bonafide student of Basavakalyan Engineering College, Basavakalyan which is affiliated to Visvesvaraya Technological University, Belagavi, has completed the degree of Bachelor of Engineering (Mechanical Engineering). The Medium of Instruction of the course was English.



(Prof. Satish Annigeri)

**REGISTRAR (EVALUATION)**

**Registrar (Evaluation)**

**Visvesvaraya Technological University**

**"Jnana Sangama", Belgaum-590018**

For queries and clarifications: 91- 831-2498133-136, Fax: 91-831-2405464

Email: [re@vtu.ac.in](mailto:re@vtu.ac.in) web: [www.vtu.ac.in](http://www.vtu.ac.in)





Basavakalyan Educational Trust's ®

**ಬಸವಕಲ್ಯಾಣ ತಾಂತ್ರಿಕ ಮಹಾವಿದ್ಯಾಲಯ**  
**BASAVAKALYAN ENGINEERING COLLEGE**

NH-65, Basavakalyan - 585327. Dist. Bidar - Karnataka

Approved by AICTE New Delhi and Affiliated to VTU, Belagavi  
REGD. NO.: 35/95-96 26-9-1995



Ref. No. BET/BKEC/Mech 2020 - 2021 | 22922/2

Date: 23/3/2021

**LETTER OF RECOMMENDATION**

It's my pleasure and honor to recommend **Mr. RajivRanjan** for his admission in your esteemed university. I have known him for the past four years as a student of undergraduate study in the Department of Mechanical Engineering in our institute.

During this period I have taught him "**Operation Research**" and "**Control Engineering**". In that time span I came to know about many of his unique abilities and personality. Based on my experience with Rajiv, I can say without the shadow of a doubt that he is one of the most naturally talented and hardworking student which make him different from others. Whenever tasks like seminar or projects had been given to him, he took it as challenge and worked sincerely by giving it his best.

High-grasping power and logical reasoning are some of the best skills in him. His way of convincing has always impressed me. The recent incident, which I remember is when he convinced our college principal for industrial trip of three days to Hyderabad, India. The trip was a great success and it polished his organising and leadership skills.

In a nutshell, he is a multifaceted person with zeal for academic, cultural and extracurricular activities. He is an exceptional candidate and it is with the utmost confidence that, I recommend him to your esteemed university. In my opinion, student of his qualities deserves admission into your esteemed university. If I can be helpful for any further assistance, or information regarding him, please do not hesitate to contact me.

Sincerely,

**Veeresh M L**

Assistant Professor

Department of Mechanical Engineering

Basavakalyan Engineering College, Basavakalyan

Contact no: - +91 9611343410

E-mail Id: [veereshmlbk@gmail.com](mailto:veereshmlbk@gmail.com)



Principal  
Basavakalyan Engineering College  
BASAVAKALYAN-585327



Ph: 08481-254264, 254146 | Fax: 08481-254143



Email: [principalbetbkec@gmail.com](mailto:principalbetbkec@gmail.com) | Website: [www.betbkec.com](http://www.betbkec.com)





Basavakalyan Educational Trust's ®

# ಬಸವಕಲ್ಯಾಣ ತಾಂತ್ರಿಕ ಮಹಾವಿದ್ಯಾಲಯ BASAVAKALYAN ENGINEERING COLLEGE

NH-65, Basavakalyan - 585327. Dist. Bidar - Karnataka

Approved by AICTE New Delhi and Affiliated to VTU, Belagavi

REGD. NO.: 35/95-96 26-9-1995



Ref. No. BET/BKECMech 2020 - 2021 / 22921

Date: 22/03/2021

## LETTER OF RECOMMENDATION

It is with much pleasure and enthusiasm that I am writing to you to support candidacy of **Mr. Rajiv Ranjan** for admission to your esteemed university. He was one of the exceptional student that I have ever known in my teaching career.

As his professor for mechanical courses, I taught him "**Engineering Economy**" and "**Operation Management**". I found him extraordinary student as he has wide spectrum of knowledge, good communication skills, psychological skills and social skills which make him popular among his peers.

Throughout his academic career, he has been an active participant in both academic as well as extracurricular activities. Under his leadership different technical programs like mini projects, seminars, software courses and techno fest have been conducted.

I have found him immensely articulate in speech as well as in expression and he proved his ability to speak fluently and coherently in seminar on the topic "**Enhancement of Agriculture with Artificial Intelligence**" conducted by department of mechanical engineering. This shows his proficiency in English. Good communication and organisational skills help him to be at the forefront of organising seminars and group discussion classes.

I am confident that **Mr. Rajiv Ranjan** will continue to do the great and innovative works in his life and show the same dedication, perseverance and positivity that he showed to us and his peers. I support his strong decision to move forward and take his skills to higher level through your esteemed university. If you have any doubt regarding his personality, please feel free to contact me.

Sincerely,

  
**Nagesh Shankarshetty**

Professor

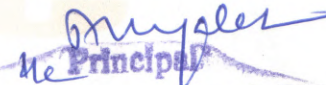
Department of Mechanical Engineering

Basavakalyan Engineering College, Basavakalyan

Contact no: - +91 9986696487

Email Id: [nagesh.ms039@gmail.com](mailto:nagesh.ms039@gmail.com)



  
Principal  
Basavakalyan Engineering College  
BASAVAKALYAN-585327



Ph: 08481-254264, 254146 | Fax: 08481-254143



Email: [principalbetbkec@gmail.com](mailto:principalbetbkec@gmail.com) | Website: [www.betbkec.com](http://www.betbkec.com)





Basavakalyan Educational Trust's ®

**ಬಸವಕಲ್ಯಾಣ ತಾಂತ್ರಿಕ ಮಹಾವಿದ್ಯಾಲಯ**  
**BASAVAKALYAN ENGINEERING COLLEGE**

NH-65, Basavakalyan - 585327. Dist. Bidar - Karnataka

Approved by AICTE New Delhi and Affiliated to VTU, Belagavi  
REGD. NO.: 35/95-96 26-9-1995



Ref. No. BET/BKEC/Mech 2020 - 2021 / 22922

Date: 22/03/2021

**LETTER OF RECOMMENDATION**

It is my great pleasure to write this letter of recommendation on behalf of **Mr. Rajiv Ranjan** in his desire of attaining master degree program in your university. Though many students ask me to make this request in their behalf, I only recommend student whom I feel is well-suited for the program of their choice. **Mr. Rajiv Ranjan** is one of those students and therefore, I highly feel that he should be provided the opportunity to attend your university.

I have known him for the past four years as a student of undergraduate study under the department of mechanical engineering in our institute. As a professor I taught him "**Computer Integrated Manufacturing**" and "**Mechanical Vibration**". As his professor, I have had an opportunity to observe his participation and interaction in class and to evaluate his knowledge of subject matter. He is an outstanding student in all respects.

Though he has consistently exceeded in all areas of his coursework, the best example of his intelligence demonstrated through a final year project titled "**WIRELESS PORTABLE CNC MACHINE WITH RENEWABLE POWER SOURCE**" carried out by him as a team leader where he and his team built customizable model at a low cost. The work clearly showed his ideas to be innovative and creative.

I have nothing but impressed by the academic commitment and social maturity **Mr. Rajiv Ranjan** has shown. I am sure you will find him as the student whose talent will only shine further through your post-graduate program. It is my hope that you will accept his admission in your esteemed university. Please feel free to contact me if you require any further information regarding him.

Sincerely,

**Sujeeth Kumar Sadlapur**

Professor and Head of Mechanical Department  
Basavakalyan Engineering College, Basavakalyan  
Contact no: - +91 9538335374

Email Id: [sujeethsu@gmail.com](mailto:sujeethsu@gmail.com)

**HOD**  
Mechanical Dept  
BKEC, Basavakalyan



**Principal**  
Basavakalyan Engineering College  
Basavakalyan-585327



Ph: 08481-254264, 254146 | Fax: 08481-254143



Email: [principalbetbkec@gmail.com](mailto:principalbetbkec@gmail.com) | Website: [www.betbkec.com](http://www.betbkec.com)