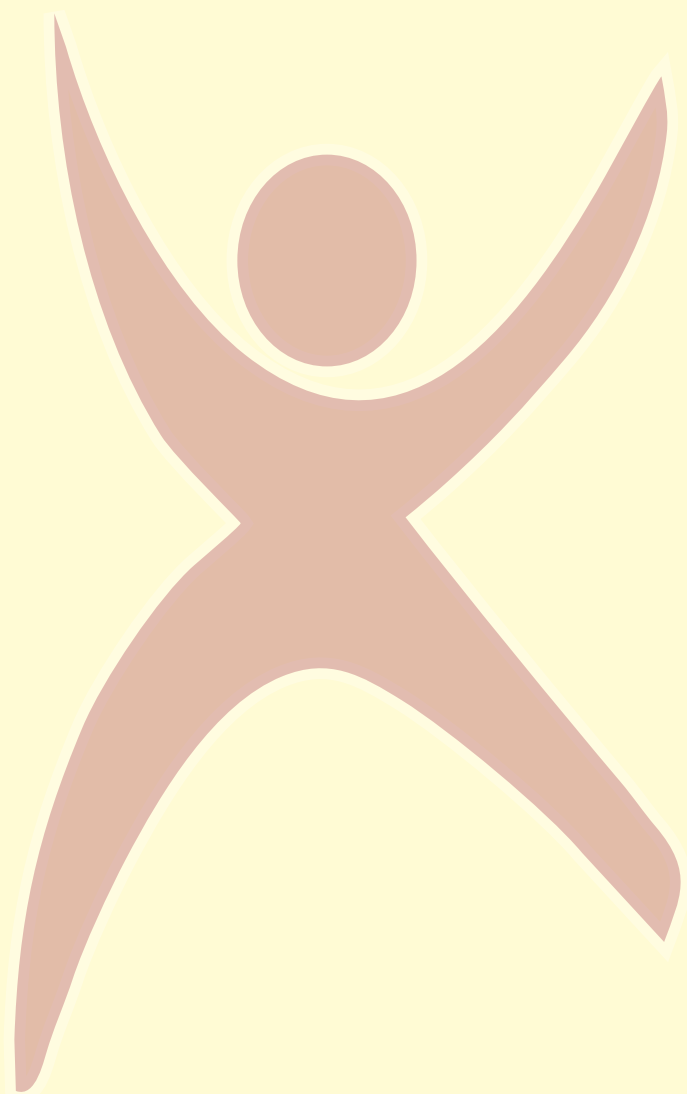


**IIIT R K Valley**  
**Rajiv Gandhi University of Knowledge**  
**Technologies**  
(A.P. Government Act 18 of 2008)



**Annual Report**  
**2016-17**



**RGUKT**

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## Message from the Vice chancellor



I am extremely happy to state that IIIT R K Valley of RGUKT has been identified as an institute that is involved in quality teaching in diverse fields of engineering. It is providing a homely environment to nearly six thousand (6000) students and it is also providing education to 1000 students of IIIT, Ongole. It takes pride in providing employment to its students with good packages through campus placements.

I affirm that the Hon'ble Chancellor Prof. D. Raj Reddy garu has played an instrumental role in founding this University with the mission to impart Technical Knowledge to the deprived lot. He has been a source of encouragement and inspiration

to every one of us. The consistent performance shown by the units of RGUKT is not by accident but because of continuous efforts of the students, staff and the support from the Government of Andhra Pradesh.

Thankfully, IIIT, R K Valley, RGUKT is more than successful on all these fronts and is stepping into an enviable position of excellence. In this connection, I feel confident that within the next few years a homogeneous group of diverse and inquisitive students, the faculty that never counted office hours, the devoted staff and the alumni would work collectively towards building this educational institution as a premier University. Academic initiatives of the University are always given high priority and the university always encourages faculty and students to participate in national and inter-national Seminars, Conferences and other research-oriented events. Honing the skills of the students, who are technically sound, industry-ready and well-trained, is one of our primary goals and it has resoundingly reflected in the recent job placements. We are pleased to declare that we were able to attain remarkable success in placements. Results of the Graduate Aptitude Test in Engineering 2017 brought good cheer to IIIT RK Valley. Most importantly our students, past and present, continue to make us proud by winning innumerable accolades in every field that they step into. RGUKT, today, is a university whose academic activities, facilities, campus, and infrastructure can be compared favourably with any of the premier Universities of the world.

## Message from the Director



I am delighted to say a few words that we as an Institute have achieved dramatic improvements in every area possible, which have in turn been instrumental in bringing fame and recognition to our University. In the area of academics, this year we have given the extra admissions of 1000 students to newly opened IIIT Ongole campus.

To solve industrial and societal problems we are trying to impart quality engineering education with new discoveries to translate the knowledge into outcomes. We have brought in a revised syllabus for advanced courses for the students taking into account the current industry needs. We have also introduced the flexibility of pursuing internships in the fifth and sixth years of 6 year integrated B. Tech. program for the students.

In tune with the main aim of our Hon'ble Chief Minister and the Chancellor to provide ICT (Information and Communication Technologies) based education to permit the scaling of the learning environments by one to two orders of magnitude, we have introduced Flipped Classroom method using online lectures followed by problem solving sessions that reinforce the regular teaching and add to the effectiveness of curriculum. ICT based Audio-Visual/Wi-Fi Seminar Halls have been fully established in the recently built Central Library for delivering MOOC Lectures in a Flipped Classroom Model.

It moves activities, including those that may have traditionally been considered homework, into the classroom. In a flipped classroom, students watch online lectures, collaborate in online discussions, engage in concepts in the classroom with the guidance of a mentor and carry out in depth analysis with innovative ideas at home which may lead to future research. With such a learner centered innovative education, we achieved many milestones in this year. A few of them are (i) our students bagged 1<sup>st</sup>, 9<sup>th</sup> and 17<sup>th</sup> ranks in the prestigious National Level GATE exam, (ii) RGUKT, RK Valley campus got a ranking position for the first time in the NIRF (National Institute Ranking Framework) Rank band 151-200 out of the total 665 Indian Universities and (iii) in a competition entitled "ZF Innovation Challenge" among various Universities of Andhra and Telangana conducted by M/s ZF

Technologies, a 100+ years good old company, RK Valley bagged the first prize and also the third prize.

Our Institute has been recognized as Skill Development Institute under APSSDC and as a centre for implementing Prime Minister Skill Development Scheme and started conducting various programs. The aim of these programs is to improve the working skills of not only the students of R K Valley but also the outside unemployed youth for better employability.

In the area of Infrastructure and Institutional Development, we are doing our level best to advance our existing set of academic blocks, laboratories, staff quarters etc. In pursuit of this we have completed the construction of Central Library Building through NBCC, which was inaugurated on 15-8-2016 by the Hon'ble HRD Minister and our Chancellor Raj Reddy garu. Departmental buildings like ECE, CSE and ME, Cafeteria and Laundry building are also on the verge of completion. Three faculty quarters and a children's playground with many recreation items have been built. The campus is on the verge of becoming a fully Wi-Fi campus.

The Institute has been actively contributing to Swachh Bharat, Vanam Manam etc. To make the Institute neat, clean and green, landscaping has been done and around 2500 plants with 50 varieties of flora have been planted so far with permanent provision for watering. Let use this opportunity to thank Government of Andhra Pradesh for providing sufficient funding to impart technical education to rural youth of Andhra Pradesh.

# **1. Perspective plan of RGUKT**



## **1.1 Establishment of RGUKT**

The Govt. of A.P. established RGUKT in 2008 vide Act No 18 of 2008 with three institutes at Basara, Nuzvid and R K Valley. Nuzvid and R.K. Valley institutes came in the separated A.P. From this academic year 2016-17, RGUKT has started two more institutes at Ongole and Srikakulam. The newly joined PUC students of Ongole and Srikakulam have been respectively admitted at R.K. Valley and Nuzvid Campuses with all students' amenities and continue their studies here till the buildings and other infrastructure get ready at their respective campuses. Our campus popularly known as Rajiv Knowledge Valley is a wide spread beautiful place in an area of 354.73 acres surrounded by Sheshachala mountain range. The Government of Andhra Pradesh is providing highly subsidised quality technical education to top 1% rural youth of Andhra Pradesh.

Since the inception of RGUKT, the education model followed by the University is ICT (Information and Communication Technology) based pedagogy and it is completely well advanced education model when compared to conventional Universities education model. Phrases such as "Learning by Example", "Learning by Doing", "Problem-Based Learning", "Self-Paced Learning", etc become facilitated when every student can be assured to have a personal computer that does not have to be shared with anyone else. Education at RGUKT is based on the intensive use of Information Technology. Every student has access to a laptop and is enabled to use the latest advances in Learning Sciences. Online lectures are provided and then lectures are followed by problem solving sessions that reinforce what has been covered in each lecture.

The unique objective of the University is to bring in inclusiveness in quality engineering education to meritorious rural youth deprived of this opportunity through an innovative blend of modern computer assisted, learner-centric instructional methodology along with traditional teaching. The aim of inclusiveness is made by a provision in admission procedure by adding a deprivation score of 0.4 to the 10<sup>th</sup> class GPA (Grade Point Average) to those students who have passed from non-residential Govt. schools including Zilla Parishad and Municipal schools in allocation of seats as per merit order among the top 1%. The rules of reservation for different categories including local (85%) and non-local (15%) are broadly the same as per the A.P. Govt. with a minimum representation of one seat for each Mandal. With

these unique policies, as on today the strength of the girl students is higher than the boys i.e., around 53% which is a unique feature of RGUKT.

RGUKT offers 6 years integrated B. Tech program with Pre University course (PUC) for the first two years and four year engineering in six branches (CHE, CE, CSE, ECE, ME and MME). Students during PUC study Mathematics, Physics, Chemistry, Information Technology, English and Telugu. After PUC, branches will be given based on their percentage in PUC and following the reservation. To solve industrial and societal problems we are trying to impart quality engineering education with new pedagogy to translate the knowledge into outcomes. We have brought a revised syllabus for advanced courses taking into account the current industry needs. We have introduced the flexibility of pursuing long term internships up to two years in the fifth and sixth years of 6 year integrated B. Tech program, to get an industrial hands-on experimental experience to have a better employability. Another unique opportunity for the students in these last two years is that they can involve as teaching assistants for their juniors with good amount of stipend.

We are constantly striving to excel in providing On-Campus Placement Opportunity for all students through our Career Development and Placement Cell (CDPC) by strengthening industry contacts and also by inculcating entrepreneurship amongst the students so that they can venture on their own. In the current batch, 288 students have got the placements in 40 reputed companies and 96 students have gone for long term internships in prestigious companies and most of them are likely to get the placements in them.

If Academics are the walls, then Extra-Curricular activities are the frescos on them. Two teams of IIIT R K Valley Students were selected for NASA International Space Development Conference (ISDC 2016). CSE First Year student Mr. A.V. Yugesh secured the National Level Runner-up position in the Tata Building India Essay Competition and he was invited to meet the Hon'ble President of India. A total of 17 students got "Pratibha Awards" in 2016. Two student teams got first prize in Engineering Working Model Presentation in an International Conference on emerging trends in Sustainable Energy Technologies for Smart and Clean Cities held at IIT Tirupati. One of our students (2016) Mr. G. Prasad, a B. Tech passed out student secured 45<sup>th</sup> rank in IES examination in the first attempt. Sports Activities are

another area where we encourage our students to actively participate and this has resulted in their achieving laurels at district and state level sports meets comprising of sports like Cricket, Hockey, Gymnastics, Swimming and Power Lifting.

The Institute has been actively contributing to Swacch Bharat campaign, Skill Development campaign, Start-up India Campaign and various other programs to promote the vision of our Hon'ble Prime Minister as well as the programs of our Hon'ble Chief Minister like Navnirman Varotsavulu, Smart City/Village etc. Efforts are being carried out towards cashless transactions in the campus in view of recent demonetization drive in the country. The Institute has implemented Biometric Attendance System for all students and staff members.

Overall, the modern education system implementing in RGUKT reached to the people of Andhra Pradesh and it became a premier technological institute in a short period of time. Hence, the competition for getting a seat in RGUKT has been increased and for the current academic year (2016-17) the last seat in open competition is closed with a CGPA of 10. The total strength of the students at present is around six thousand. RGUKT is catering to the educational needs of talented rural youth with free of cost. For smooth running of the institute, the following requirements are to be fulfilled as immediately as possible with the help of Government.

- Recruitment of additional teaching and non-teaching staff as the existing staff is very less
- Increase of IT Infrastructure and Wi-Fi facilities
- Construction of adequate staff quarters
- Construction of Open Air Theatre and Auditorium
- Construction of a sports complex
- Construction of a new administration block
- Construction of new Departmental buildings for Basic Sciences and Humanities

## **2. Overview of the Institute**

## **2.1 Vision**

The vision of the University is to emerge as a top university in the world with excellence in teaching and research in emerging areas of Science and Technology

## **2.2 Mission**

- To lead the students toward participating in Nation's socio-economic development with competence and character to play a lead role in building knowledge society.
- To conduct teaching and research in areas that reconciles national developmental needs and regional priorities and resources.
- To promote and disseminate innovative teaching and research programs and create excellent centers of learning/training.
- To create the ambience for the University-Industry interaction, to foster in the students the outlook for acquiring the know-how and the do-how associated with the development and utilization of cutting edge technology.
- To develop collaboration with leading National and International agencies to provide rewarding campus experience to them.
- To develop paradigms of Public-Private partnerships for the development of academics and infrastructure of the University.
- To help the students launch on the path of self discovery.

## **2.3 Objectives**

- To impart to each student broad skills of Learning to Learn, Learning to Think and Learning to Live
- To reinforce core values of integrity, respect for all, and care for environment
- To disseminate and advance knowledge in the emerging fields such as Information Technology, Nanotechnology, etc.,
- To make special provisions for integrated courses including Humanities, Social Sciences and other interdisciplinary areas to impart broad-based education including soft skills.
- To function as a resource center for knowledge management and entrepreneurship development in the emerging technologies.
- To establish close linkage with industry to make teaching and research at the institutes relevant to the needs of the economy, at national and global levels.

## 2.4 Unique Features

RGUKT is a unique university established by the Government of Andhra Pradesh. It is different in several ways from conventional universities in the country and has several innovative features such as the following.

- The first institution in the country that provides special opportunities to those rural students who are deprived of quality educational opportunities.
- Perhaps, the only university in India to offer free-education to top 1% SSC passed out students with all amenities by the State Government. Around 95% of the students of the university are socially and economically backward.
- The first institution in the country in using the ambitious NPTEL course content generated by MHRD, Govt. of India under National Mission on Education through Information Communication Technologies (NMEICT) to provide multiple course content.
- The first university in the country to employ the pedagogy of learning-by-doing.
- The first university in the country to offer Minor degree in Humanities and Social Sciences including in classical performing arts alongside a Major degree in Engineering.
- Perhaps, the only university in the country to admit students after class X to provide a pre-university education that strives to bridge the rural-urban divide.

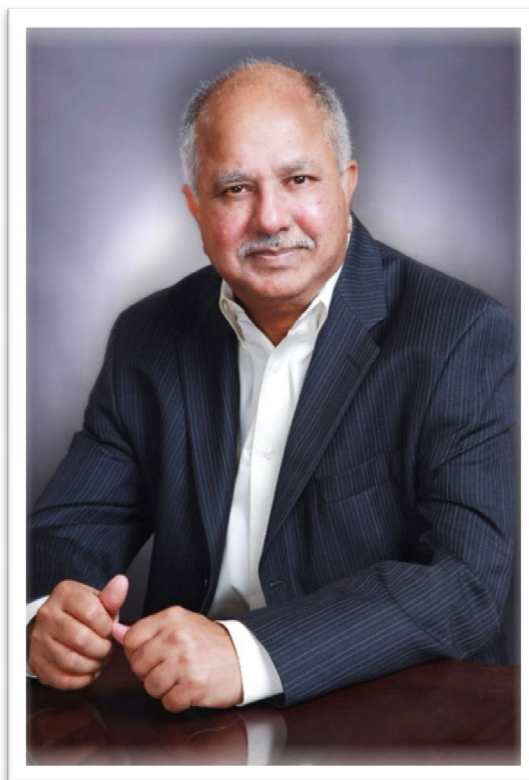
## 2.5 IIIT RK Valley Campus

R K Valley is a picturesque campus with a beautiful panoramic view of adjacent hills. It is located on the footsteps of Nallamala forest range in YSR Kadapa District. R K Valley (Rajiv Knowledge Valley) is, formally known as Idupulapaya, located in lush green lands surrounded by pleasant nature, its beauty doubles in winter season particularly with peacock's lou lou, waterfalls from top of hills, all it makes one feel, being at the midst of nature's beauty. IIIT R K Valley built in 354.73 acres wide area and adjacent to the popular Ex. Chief Minister Y.S. Rajashekar Reddy's estate. It is nearer to Famous tourism spot Gandhi.

## 2.6 About the Chancellor

As per the RGUKT Act 2008, the chancellor of the university should be an eminent personality in the field of research and education. Therefore an eminent computer scientist, Dr. Raj Reddy, the Moza Bint Nasser University Professor in the School of Computer Science at Carnegie Mellon University, USA is appointed as the Chancellor of RGUKT in 2008 by the Government of Andhra Pradesh.

Professor Raj Reddy received B. E degree from University of Madras in 1958, M. Tech. from the University of New South Wales, Australia, in 1960 and Ph.D. degree in Computer Science from Stanford University in 1966. Dr. Reddy is from Kattor village and attended Zilla Parishad High School, Kalahasthi, Andhra Pradesh. Prof. Reddy excelled in his career from a school child of Z. P. H. School in Andhra Pradesh to an eminent computer scientist from Carnegie Mellon University to receive ACM Turing award, the highest award in Computer Science. Therefore, the RGUKT has become a brain child of Honourable Chancellor Dr. Raj Reddy.





## 2.7 About the Vice-Chancellor

Dr. V. Ramachandra Raju received his Bachelor's from Mysore University in Mechanical Engineering with first class and distinction. He took his M. Tech. degree from N.I.T. Suratkal with specialization in Heat Power Engineering. He did his Ph.D. from I.I.T. Madras and got a total teaching experience of more than 31 years. He guided 12 candidates for their Ph.D. so far and 8 more students are pursuing their Ph.D. He worked previously as Head, Mechanical Engineering Department, Co-ordinator R&D, Principal, University College of Engineering Vizianagaram and Chairman Board of Studies for Mechanical Engineering. So far he published more than 85 papers in various national and International journals and conferences.



## 2.8 About the Director

Prof. G. Bhagavannarayana did his M.Sc. from Andhra University and Ph.D. from University of Delhi. He had been working as scientist at various levels (including the immediate former HOD of Sophisticated Analytical Instruments Division) over 32 years at CSIR-National Physical Laboratory (NPL), New Delhi. He retired from NPL as a Chief scientist & Professor, and Head Crystal Growth & X-ray Analysis activity. He published more than 300 research articles in high impact factor international SCI journals with total number of citations, h and i10 indices respectively, 5684, 34 and 161, which is an excellent achievement as a scientist. Two of his research articles have been selected in the





top 70 outstanding scientific articles out of 80,000 SCI articles published by CSIR in 70 years in all areas of research compiled on the auspicious occasion of its 70th year of inception on Sept. 26, 2012.

On 16-01-2016 he has been joined as Director for IIIT RK Valley of Rajiv Gandhi University of Knowledge Technologies with a strong desire to serve the rural talented youth of Andhra Pradesh. His main motive is with his vast experience as a researcher and academician and with a support of the staff of RGUKT, he wanted to impart the quality technical education for the students and also he would like to be an instrumental to get the high end jobs for each and every student of RGUKT. His aim is to fulfil RGUKT's novel task of "Catering to the educational needs of rural talented youth of AP".

He has good experience of working with various research funding organizations such as DST, DRDO, CSIR, BRNS etc. as an evaluator or an expert committee member of various R&D Projects and/or Collaborator. He established many formal collaborations with various R&D and academic institutes like Anna University, SSN College of Engg., Chennai, VIT University, Vellore, Annamalai University, Madurai Kamaraj University, Bharatidasan University, S.T Hindu College, Nagercoil, Loyola & Presidency Colleges, Chennai, Govt. College(A), Rajamundry, Delhi University, LASTEC, Delhi, RRCAT, Indoor etc. and helping many young researchers through his expertise in crystal growth and high resolution X-ray diffraction characterisation techniques by extending the HRXRD facility which he developed at NPL.

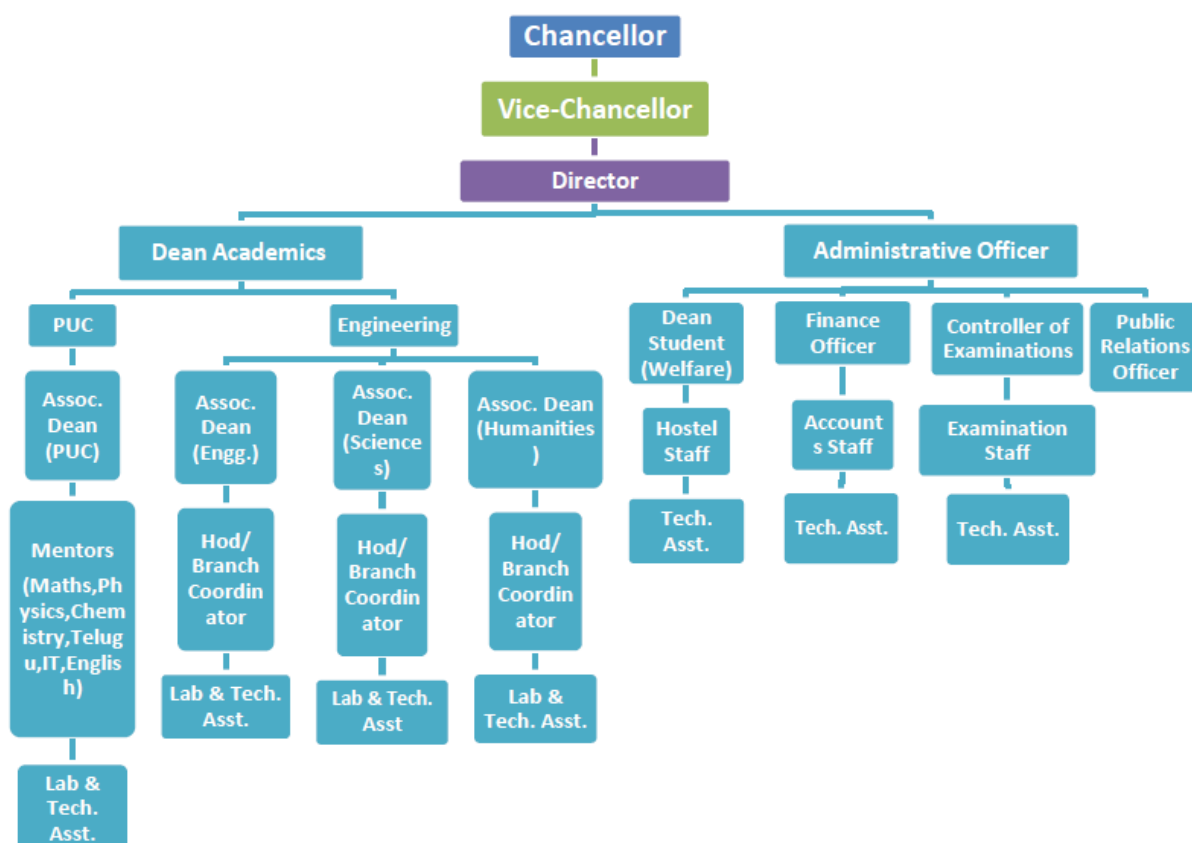
## 2.9 Administration at IIIT RK Valley

The Institute administration is well structured to maintain an adequate mix of centralized and decentralized decision making with powers and responsibilities distributed at different levels of Institute hierarchy. The prime officers of the Institute comprise of:

| Name                             | Designation            |
|----------------------------------|------------------------|
| <b>Prof. Raj Reddy</b>           | Chancellor             |
| <b>Prof. V. Ramachandra Raju</b> | Vice-Chancellor        |
| <b>Prof. G. Bhagavannarayana</b> | Director               |
| <b>Dr. S. Amarendra Kumar</b>    | Administrative Officer |
| <b>Dr. B. Konda Reddy</b>        | Dean (Academics)       |
| <b>Dr. G. Bhanu Kiran</b>        | Finance Officer        |

|                                 |  |
|---------------------------------|--|
| <b>Mrs. Ch. Ratna Kumari</b>    | Dean (Student Welfare)                 |
| <b>Dr. S. Chandrasekhar</b>     | Controller of Examinations             |
| <b>Mr. Abdul Aziz Md.</b>       | Associate Dean (Academics-Engineering) |
| <b>Dr. P. Nagaratna Kishore</b> | Associate Dean (Academics-Sciences)    |
| <b>Ms. A. Anjili</b>            | Associate Dean (Academics-Humanities)  |
| <b>Dr. A. J. Roger Binny</b>    | Academic Coordinator (PUC)             |
| <b>Ms. DSVJP Koteshwari M</b>   | Associate Dean (Student Welfare)       |
| <b>Mr. J. Chandra Reddy</b>     | Asst. Controller of Examinations       |
| <b>Mr. Y. Dinesh Reddy</b>      | Asst. Controller of Examinations       |
| <b>Dr. G. Thirupathi Reddy</b>  | Examinations Coordinator (PUC)         |
| <b>Dr. P. Justin</b>            | Public Relations Officer               |
| <b>Dr. G. Ramesh</b>            | Stores and Purchase Coordinator        |
| <b>Mr. K. R. Sekhar Reddy</b>   | Security Officer                       |
| <b>Mr. M. Bhaskaraiah</b>       | NSS Coordinator                        |

## 2.10 Organization of RGUKT



### **3. Statutory Bodies**

### 3.1 Governing Council

The Governing Council headed by the Hon'ble Chancellor of RGUKT-AP plays an important role in making all key policies for strategic development of the University. All the decisions are discussed in the Governing Council meeting and are binding to its constituent institutes.

| S No | Name  | Designation |
|------|---|-------------|
| 1    | <b>Prof. D. Raj Reddy</b> , Chancellor, RGUKT AP  | Chairman    |
| 2    | <b>Prof. V. Ramachandra Raju</b> , Vice-Chancellor, RGUKT AP  | Convener    |
| 3    | <b>Prof. S. Vijaya Raju</b> , Chairman, APSCHE  | Member      |
| 4    | <b>Sri Vijayanand (IAS)</b> , Principal Secretary to Govt., IT&C Department, Govt. of AP                  | Member      |
| 5    | <b>Sri Aditya Nath Das (IAS)</b> , Principal Secretary to Govt., Higher Education Department, Govt. of AP | Member      |
| 6    | <b>Prof. B. Uday Desai</b> , Director, IIT Hyderabad  | Member      |
| 7    | <b>Prof. P. J. Narayan</b> , Director, IIIT Hyderabad   | Member      |
| 8    | <b>Prof. M. Venkateswarlu</b> , Director & Head, CETLS, IIIT Hyderabad                                    | Member      |
| 9    | <b>Prof. R. Govindarajulu</b> , Registrar, IIIT Hyderabad   | Member      |
| 10   | <b>Prof. V. Venkaiah</b> , Director & Head, CETLS, RGUKT  | Member      |
| 11   | <b>Prof. Venkat Dasu</b> , Director, RGUKT-IIIT Nuzvid  | Member      |
| 12   | <b>Prof. G. Bhagavannarayana</b> , Director, RGUKT-IIIT RK Valley   | Member      |
| 13   | <b>Prof. E. Viswanath Reddy</b> , Director <sub>(i/c)</sub> , RGUKT-IIIT Ongole                           | Member      |
| 14   | <b>Prof. P. Appala Naidu</b> , Director <sub>(i/c)</sub> , RGUKT-IIIT Srikakulam                          | Member      |

### 3.2 Executive Committee

The Executive Committee (EC) is established at each Institute level which takes regular administrative decisions with regards to each Institute. The EC for R K Valley Institute is composed of eminent Academicians and people from Administration who effectively supervise and lead the Institute.

| S. No. | Name  | Designation |
|--------|---|-------------|
| 1      | Prof. V. Ramachandra Raju, Vice- Chancellor, RGUKT AP                         | Chairman    |
| 2      | Prof. M. Venkateswarlu, Professor, IIIT Hyderabad                             | Member      |
| 3      | Prof. V. Venkaiah, Director, CETLS.   | Member      |
| 4      | Prof. R. Govindarajulu, Registrar, IIIT Hyderabad                             | Member      |
| 5      | Prof. K. Lal Kishore, Former Vice Chancellor, JNTU Anantapur                  | Member      |
| 6      | Prof. Ibrahim Khan, Former Director, RGUKT-IIIT Nuzvid                        | Member      |
| 7      | Prof. G. Bhagavannarayana, Director, RGUKT-IIIT RK Valley                     | Member      |
| 8      | Dr. B. Sundar, I.F.S, Director (ESD) & CEO, APITA                             | Member      |
| 9      | Dr. Amarendra Kumar Sandra, Administrative Officer (i/c) RGUKT-IIIT RK Valley | Convener    |

### 3.3 Board of Studies

Board of studies (BoS) plays a key role to impart the best curricula as per the current educational needs. The third meeting of Institute BoS committee of IIIT R K Valley met on 1<sup>st</sup> May 2017 at IIIT R K Valley Campus to review the modified course structure as per cooperative education model. The following are the members of Institute BOS committee.

| S.No | Name  | Designation |
|------|---|-------------|
| 1    | <b>Prof. V. Ramachandra Raju</b> , Vice Chancellor, RGUKT                                     | Chairman    |
| 2    | <b>Prof. M. Venkateshwarlu</b> , Advisor, RGUKT   | Member      |
| 3    | <b>Prof. V. Venkaiah</b> , Director CETLS, RGUKT  | Member      |
| 4    | <b>Prof. G. Bhagavannarayana</b> , Director, IIIT R K Valley                                  | Member      |
| 5    | <b>Prof. S. V. Satyanarayana</b> , Prof. in Dept. of ChE, JNTUACE Anantapuramu                | Member      |
| 6    | <b>Prof. B. Jaya Rami Reddy</b> , Prof. in Dept. of CE, Yogi Vemana University                | Member      |
| 7    | <b>Prof. Y. K. Sundara Krishna</b> , Prof. in Dept. of CSE, Krishna University, Machilipatnam | Member      |
| 8    | <b>Prof. M. N. Giri Prasad</b> , Prof. in Dept. of ECE, JNTUACE Anantapuramu                  | Member      |
| 9    | <b>Prof. G. Jaya Chandra Reddy</b> , Prof. in Dept. of ME, Yogi Vemana University             | Member      |
| 10   | <b>Prof. G. V. S. Nageswar Rao</b> , Prof. in Dept. of MME, NIT Warangal                      | Member      |
| 11   | <b>Mr. K. R. Ramesh Kumar</b> , Scientist F, DRDL, Hyderabad                                  | Member      |
| 12   | <b>Mr. P. Dilli Babu</b> , Technical Lead, ebay, Bangalore                                    | Member      |
| 13   | <b>Dr. B. Konda Reddy</b> , Dean Academics, IIIT RK Valley                                    | Convener    |

The following resolutions were taken in the Institute BOS meeting

1. Ratified the modified course structure and syllabus of R11, R12, R13, R14 batches.
2. Approved the newly updated course structure and syllabus for R15 batch onwards.

3. Approved the Mathematics courses and English labs for the initial two years of B. Tech. program
4. Approved the guidelines for Minor degree and identified disciplines such as Mathematics, Physics, Chemistry, Statistics, Management, English, Telugu, Fine Arts (Vocal, Mridangam & Kuchipudi), Humanities & Social Sciences and Computer Science & Engineering for Minor degree.
5. Approved the guidelines for Long term Internship.
6. Approved the guideline for Community Service.
7. Approved to consider P2 Summer Semester courses in PUC marks memo.
8. Approved to consider E1, E2 Summer Semester courses in B. Tech. marks memo.
9. Approved to offer Management and Environmental courses, respectively, in E3 and E4.

## **4.    Academics**



## **4.1 The Education System**

The system of education at RGUKT RK Valley ensures student's participation, emphasizes self-learning with the following features:

- ICT based education
- Instrumented and Interconnected model
- Pedagogy emphasizes self learning & learning by doing
- Laptop for every student
- 120 ICT enabled semi-virtual class rooms in campus
- Three semester system
- The curricula of IIIT RK Valley is most modern and at par with those present at premier institutions in the world.
- RGUKT offers 6 years integrated B. Tech program with one Major in any one of ChE/ CE/ CSE/ ECE/ ME/ MME branches with a scope to complete a Minor degree in Engineering or Science or Humanities.

## **4.2 Courses at RGUKT**

The curricula and education system is common to all constituent institutes of RGUKT including IIIT RK Valley. Our university offers a six year Integrated B. Tech program. The first part of the six-years course is a two-years Pre University Course and second part is a four years Engineering Course.

### **4.2.1 Pre University Course**

The Pre University Course (PUC) is equivalent to Intermediate course offered by the Board of Intermediate Education, AP. The program provides a qualitative education and lays a stronger foundation for the technical and professional courses ahead in Engineering. At present, the pre-university part of education offers premature specialization in tracks such as Mathematics, Physics and Chemistry (equivalent to MPC). In addition, there is a foundation course in IT, preparing students to make full use of the Information Technology and Communication resources provided by RGUKT in its novel model of IT based learning. By bringing students in to the University at an earlier stage, the idea is to impart a broad based

education including humanities. There is a permitted exit after Pre-University if the student chooses to go for a career in other professional programs.

#### **4.2.2 B. Tech Program**

After the successful completion of PUC program students are allowed to choose any one of the following branches of engineering based on their performance in PUC and following the rules of reservation. The engineering disciplines are

- Chemical Engineering
- Civil Engineering
- Computer Science and Engineering
- Electronics & Communication Engineering
- Mechanical Engineering
- Metallurgical & Materials Engineering

Further, the interested student has the opportunity to earn a minor degree by completing 8 courses in Management, Fine Arts, Telugu, English, Mathematics, Physics, Chemistry, statistics and Computers Science & Engineering offered at RGUKT.

### **4.3 Academic Calendar for AY 2016-17**

#### **Semester-I**

|  |                           |
|--|---------------------------|
| Academic Year Starts, SEM 1 Registration | August 1                  |
| Instruction starts                       | August 2                  |
| MID-1                                    | September 9 – 10          |
| MID-2                                    | October 7 – 8             |
| MID-3                                    | November 11-12            |
| Closing of Instruction                   | November 21               |
| SEM 1 EST (Practical)                    | November 22 – November 24 |
| SEM 1 EST (Theory)                       | November 28 – December 3  |
| SEM 1 Results Announcement               | December 7                |
| Semester 1 Ends                          | December 7                |
| SEM 1 Remedial Examinations              | December 10- 14           |
| SEM 1 Remedial Results Announcement      | December 17               |

**Total No. of days for Semester-I**

| Academic activities                        | No of Days |
|--|------------|
| Semester Registration                      | 1          |
| No. of days for Instruction                | 80         |
| No. of days for conducting monthly tests   | 6          |
| No. of days for conducting Practical exams | 3          |
| No. of days for conducting Theory exams    | 6          |
| No. of days for EST paper correction       | 5          |
| <b>Total</b>                               | <b>101</b> |

**Total No. of Holidays for Semester-I**

| Holidays                       | No of days |
|--------------------------------|------------|
| Sundays                        | 18         |
| Other public holidays          | 4          |
| Holidays for Dussehra vacation | 6          |
| <b>Total</b>                   | <b>28</b>  |

**Semester-II**

|  |                      |
|--|----------------------|
| SEM 2 Registration                                   | 19-12-16             |
| Instruction starts                                   | 20-12-16             |
| Convocation  | 11-01-17             |
| MID-1 for P1 to E4 (E4 of In campus students)        | 9-02-17 to 11-02-17  |
|  |                      |
| MID-2 for P1 to E4 (E4 of In campus students)        | 09-03-17 to 11-03-17 |
|  |                      |
| Abhiyanth & Annual Day                               | 17-03-17 to 18-03-17 |
| MID-3 Exams  | 13-04-17 to 17-04-17 |
| Closing of Instruction                               | 12-04-17             |
| MID-1, 2 & 3 for Long term Internship Students of E4 | 18-04-17 to 20-04-17 |
|  |                      |
| SEM 2 EST (Practical)                                | 18-04-17 to 22-04-17 |
| SEM 2 EST (Theory)                                   | 24-04-17 to 29-04-17 |

|                            |                      |
|----------------------------|----------------------|
| Semester ends              | 29-04-17             |
| SEM 2 Results Announcement | 06-05-17             |
| Summer Vacation            | 01-05-17 to 31-05-17 |

#### **Total No. of days for Semester-II**

| <b>Academic activities</b>                 | <b>No of Days</b> |
|--|-------------------|
| Semester Registration                      | 1                 |
| No. of days for Instruction                | 80                |
| No. of days for conducting monthly tests   | 9                 |
| No. of days for conducting Practical exams | 5                 |
| No. of days for conducting Theory exams    | 6                 |
| No. of days for EST paper correction       | 5                 |
| Abhiyanth & Annual Day                     | 3                 |
| <b>Total</b>                               | <b>103</b>        |

#### **Total No. of Holidays for Semester-II**

| <b>Holidays</b>                 | <b>No of days</b> |
|---------------------------------|-------------------|
| Sundays                         | 19                |
| Other public holidays           | 7                 |
| Holidays for Sankranti vacation | 9                 |
| <b>Total</b>                    | <b>35</b>         |

## Summer Semester

|   |              |
|---|--------------|
| Summer Semester starts & Instruction Starts             | June 1       |
| SEM 2 Remedial Examinations Except E3                   | June 5 – 7   |
| SEM 2 Remedial Examinations Results                     | June 10      |
| MID-1   | June 12      |
| Grand Remedial Examinations Registration for PUC 2 & E4 | June 12 – 13 |
| Grand Remedial Examinations for PUC 2 & E4              | June 16 – 20 |
| Grand Remedial Results Announcement                     | June 23      |
| MID-2   | June 24      |
| Branch Allocation Preferences                           | July 5 – 7   |
| MID-3   | July 15      |
| Instruction Ends  | July 20      |
| Summer Semester EST                                     | July 21-22   |
| Display of Branch Allocation                            | July 24      |
| Summer Semester EST Results Announcement                | July 25      |
| Summer Semester Remedial Examinations                   | July 27      |
| Summer Semester Remedial Results Announcement           | July 29      |
| Summer Semester Ends                                    | July 29      |

### Total No. of days for Summer Semester- 45

| Academic activities                      | No of Days |
|--|------------|
| No. of days for Instruction              | 39         |
| No. of days for conducting monthly tests | 03         |
| No. of days for conducting Theory exams  | 02         |
| No. of days for EST paper correction     | 01         |
| <b>Total</b>                             | <b>45</b>  |

### Holidays

| Holidays              | No of days |
|-----------------------|------------|
| Sundays               | 08         |
| Other public holidays | 1          |
| <b>Total</b>          | <b>09</b>  |

#### **4.4 Introduction of new courses and updating syllabi**

As per 3<sup>rd</sup> meeting of Institute BOS which was held on 1<sup>st</sup> May 2017 at R K Valley campus, the course structure and syllabus have been updated.

#### **4.5 MoUs with National/International institutions**

Preliminary discussions happened with JNTU Anantapur and NIT Warangal to fix MoUs with IIIT R K Valley.

#### **4.6 Best practices in teaching and research**

RGUKT always works in dynamic equilibrium and tries to implement modern education models. In the year 2015, Hon'ble Chancellor proposed cooperative education model and it was approved in Academic Council, with the aim to reach 100% employability for RGUKT students. Cooperative education model is the blended education model offering both the academic studies and industrial internships during an academic programme.

This model helps the RGUKT students to get an opportunity to go for internships in industries for a period of up to 2 years, which can be done at a stretch with a company or in two one-year stretches with different companies, or in multiple six-month periods in different companies related to their branch along with pursuing courses as electives through online education mode. The project work shall be based on the work done during their internship. RGUKT offers 6 years integrated B. Tech program, the first two years called PUC and the last four years called Engineering in any six branches (CHE, CE, CSE, ECE, ME and MME). The duration of integrated B. Tech programme will help to implement cooperative education model easily. The students will complete fundamental courses required for Engineering in 2 years of PUC. The basic core courses of Engineering will be completed in the first 2 years of Engineering and last 2 years of Engineering will be used to go for industrial internships along with pursuing advanced courses as electives through online education mode.

In the year 2016, Hon'ble Chancellor proposed changes in the pedagogy of the ICT based education model in the teaching methodology with Flipped class room model and it was approved in 2nd BOS meeting. In this model, students will go through the video lectures & reading materials (MOOCs: NPTEL, Khan Academy, EdX, MIT Open Courseware, Coursera, Udacity) which are available in our institute

servers one day before the actual scheduled class period in the next day. On the next day, during the instruction period (1.5 hours), the class teacher will present the video lecture (which are already gone through by students in the previous day) to the students (of the order of 300) in the big class room and followed by tutorial and problem solving session (1.5 hours) to the students (of the order of 15 to 30) in the small class rooms with the help of Academic Assistants and Teaching Assistants. For a typical 4 credit course, the instruction will be 2 periods per week and tutorial & problem solving will be 2 periods per week, in total for a typical 4 credit course will consume 4 periods (6 hours) per week and 2 periods of assignments per week have to be worked by students in Dorms/Hostels. These flipped classes will be conducted for all regular courses offering from P1 to E2. E3 and E4 students may be in internships so they go through online education mode.

In academics, we have brought in a revised syllabus for advanced courses for the students taking into account the current industry needs and we have introduced the flexibility of pursuing up to two years long internships in the 6 year integrated B. Tech. program. It moves activities, including those that may have traditionally been considered homework, into the classroom. In a flipped classroom, students watch online lectures, collaborate in online discussions, engage in concepts in the classroom with the guidance of a mentor. We have also accommodated 1000 students of IIIT Ongole and providing all amenities.

Five MOOC Lecture Halls in Central Library and two in Lab Complex have been established with modern Audio-Video systems with capacity of around 300 to 400 students by making sound proof partitions are being arranged.

#### **4.7 Departments in IIIT R. K. Valley**

- ❖ Bio-Sciences
- ❖ Chemical Engineering
- ❖ Chemistry
- ❖ Civil Engineering
- ❖ Computer Science and Engineering
- ❖ Electronics and Communication Engineering
- ❖ Humanities and Social Sciences
- ❖ English
- ❖ Fine Arts
- ❖ Information Technology
- ❖ Management
- ❖ Mathematics
- ❖ Mechanical Engineering
- ❖ Metallurgical & Materials Engineering
- ❖ Physics
- ❖ Telugu