



RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES

ANDHRA PRADESH

(Established through Act No.18 of 2008)

Head Office : RGUKT, Idupulapaya Campus, Vempalli, Kadapa District - 516330

Camp Office : RGUKT, Nuzvid Campus, Krishna District - 521202.

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Constituent Institutes at Idupulapaya-Kadapa Dist., Nuzvid-Krishna Dist., Etcherla-Srikakulam Dist., Ongole-Prakasam Dist.

Prof. K.C. Reddy
Chancellor

No. RGUKT-AP/Academic Council/2nd Meeting/Minutes/2021

Date: 20.03.2021

Learned Members of the Academic Council.

I am forwarding herewith a copy of the minutes of the 2nd meeting of the Academic Council, held at 11:30 AM on 13th march 2021, in the conference hall, RGUKT RK Valley campus, for your perusal and approval. I am also forwarding executive summary of the revised course structure and curriculum approved by the boards of studies of different subjects for PUC and B.Tech programs to be offered at RGUKT from 2020-21, for you review and approval.

I request you to communicate to me if there is any item of the minutes that you consider is not properly minuted. Your considered opinion may be sent within a week from the date of receipt of the minutes to enable the University to take further action on the items.

With personal regards

[Signature]
(K.C.REDDY)

To
All the Members of the Academic Council, RGUKT.
All the Special Invitees of the Academic Council, RGUKT.

Copy to:
PS to Chancellor/OOF



MINUTES OF THE SECOND MEETING OF THE ACADEMIC COUNCIL OF RGUKT HELD AT 11.30 A.M. ON 13TH MARCH 2021, IN THE CONFERENCE HALL, RGUKT R.K. VALLEY CAMPUS, IDUPULAPAYA, YSR KADAPA DISTRICT, ANDHRA PRADESH.

MEMBERS PRESENT:

1.	Prof. K.C. Reddy	Chancellor, RGUKT	: Chairman
2.	Prof. K. Hemachandra Reddy	Vice-Chancellor (FAC), RGUKT	: Member
3.	Dr. G. Bhanu Kiran	Dean, Academics (I/c), RGUKT Srikakulam campus	: Member
4.	Mrs. D. Sravani	Dean, Academics (I/c), RGUKT Nuzvid campus	: Member
5.	Dr. M.Anil Kumar Reddy	Dean, Academics (I/c), RGUKT Ongole campus	: Member
6.	Prof. G.V.R. Srinivasa Rao	Director, RGUKT Nuzvid campus	: Special Invitee
7.	Prof. K. Sandhya Rani	Director, RGUKT RK Valley campus	: Special Invitee
8.	Prof. B. Jayarami Reddy	Director, RGUKT Ongole campus	: Special Invitee
9.	Prof. P. Jagadeeswara Rao	Director, RGUKT Srikakulam campus	: Special Invitee
10.	Dr. K. Samrajyalakshmi	Finance Officer / Registrar (i/c), RGUKT	: Special Invitee
11.	Prof. S.S.S.V. Gopala Raju	Director, CETLS, RGUKT	: Convener

MEMBERS PRESENT ONLINE:

12.	Prof. Jayanthi Sivaswamy	Dean, Academics, IIIT, Hyderabad	: Member
13.	Prof. B.S. Murty	Director, IIT, Hyderabad	: Member
14.	Prof. Kavi Mahesh	Director, IIIT, Dharwad	: Member
15.	Dr. Vijaya Chandru	INAE Distinguished Technologies, Indian Institute of Science, Bengaluru	: Member
16.	Prof. P.J. Narayanan	Director, IIIT-Hyderabad	: Permanent Invitee
17.	Prof. N. Balakrishnan	Former Associate Director, Indian Institute of Science, Bengaluru	: Permanent Invitee
18.	Dr. Deepak Srinivas Madala	Founding President of IT Association of AP (THE-AP/ITAPP)	: Special Invitee (Industrial Engg.)

Leave of absence is granted to the following members who couldn't attend:

1.	Shri V. Rajanna	Vice President, Tata Consultancy Services	: Special Invitee (IT)
2.	Dr. T.V.L. Narasimha Rao	Vice President, Sundaram Clayton, TVS Motors, Chennai	: Special Invitee (Automobile Sector)
3.	Prof.K.N.Satyanarayana	Director, IIT Tirupati	: Permanent Invitee
4.	Dr. G. Ramesh	Dean, Academics(I/c), RGUKT RK Valley campus	: Member
5.	Prof. D. Harinarayana	Dean, Academics & Examinations, RGUKT	: Special Invitee



The Chairman after welcoming the members has noted that the quorum is present and called the meeting to order. The items were discussion are taken up.

ITEM FOR NOTING:

1. Item no. 1 (RGUKT-AP/AC/II/N/1/2021): Minutes of the first meeting of the Academic Council of RGUKT held at 03.30 P.M. on 20th September, 2020 in the Conference Hall, RGUKT RK Valley campus, Idupulapaya, YSR Kadapa District are submitted for confirmation.

Resolution:

The Academic Council resolved to confirm the minutes of the first meeting of the Academic Council of RGUKT held at 03.30 P.M. on 20th September, 2020 in the Conference Hall, RGUKT RK Valley campus, Idupulapaya, YSR Kadapa District.

2. Item no. 2 (RGUKT-AP/AC/II/N/2/2021): Action taken report on the resolutions of the 1st Academic Council meeting held at 03.30 P.M. on 20th September, 2020 in the Conference Hall, RGUKT RK Valley campus, Idupulapaya, YSR Kadapa District are submitted for confirmation.

Resolution:

The Academic Council resolved to note the Action Taken Report on the resolutions of the first meeting of the Academic Council held at 03.30 P.M. on 20th September, 2020.

ITEM FOR RATIFICATION:

1. Item no. 1 (RGUKT-AP/AC/II/R/1/2021): Ratify the modified question paper pattern for semester I of Academic Year 2020-21.

Resolution:

The Academic Council resolved to ratify the action taken by the University on the change of question paper pattern for semester-I examinations of the Academic Year 2020-21.



ITEMS FOR CONSIDERATION:

1. Considered item no. 1 (RGUKT-AP/AC/II/C/1/2021): Recommendations of Board of Studies in various subjects.

Resolution:

The Academic Council after reviewing the recommendations of Board of Studies in various subjects resolved to get the remarks of the learned members of the Academic Council for each subject within a month for further improvement before approval. It is further resolved to advise the University to circulate a brief note (executive summary) on recommendations of the Boards of Studies to the members. Members of the council suggested to the university to make biology as compulsory subject with a provision that those who secure a minimum of 40 percent will be given MBiPC certificate while others will be given MPC certificate w.e.f the A.Y 2021-22. The Academic Council after detailed discussion on the emerging multidisciplinary approach towards education at different levels including research resolved that one introductory course in biology for engineering be made a mandatory course with or without credits w.e.f the A.Y 2021-22. The telugu subject in PUC can be shown under Humanities / Social Sciences / Linguistics.

2. Considered item no. 2 (RGUKT-AP/AC/II/C/2/2021): Academic Regulations starting from the year 2020-21.

Resolution:

The Academic Council resolved to approve the new Academic Regulations in principle which will come into effect from the Academic Year 2020-21.

(Item 2.3 on Results Moderation is redrafted on the advice of members for better clarity and to avoid different interpretations of results moderation.)

The Moderation Committee will scrutinize the results and recommend moderation considering the following factors

- a) *General addition up to a maximum of 5 marks to the concerned subject if atleast one third of the questions are out of syllabus or if the percentage of pass in that paper or course is below 50% in that batch. Further, a candidate is eligible for general addition only in two subjects of examinations in a particular semester.*

- b) Addition of 1 (one) mark as grace through grafting from the total marks secured by the candidate to a paper for pass in a paper subject to a ceiling that a candidate is eligible for grace through grafting for a maximum of two subjects of examinations in a particular Semester-end examinations.*
- c) General addition, grace through grafting will be applicable for both theory and laboratory examinations.*
- d) These relaxations shall not change the ranking of the candidates in the final degree results.*

3. Considered item no. 3 (RGUKT-AP/AC/II/C/3/2021): Proposal of starting M.Tech programs from the Academic Year 2021-22.

Resolution:

While approving the proposal to start M.Tech programs from the Academic Year 2021-22 in principle, the Academic Council advised the University to have Ph.D qualified faculty to teach these programs. Considering this advise from the Council the university after identifying availability of atleast two regular faculty with Ph.D degrees resolved to start M.Tech program in the following four areas in the campuses mentioned against them from the academic year 2021-22.

S.No.	M.Tech Program	Program offering Department	Program offering Campus
1.	Computer Science & Engineering (Specialization in AI and ML)	Computer Science and Engineering	RK Valley Campus
2.	Advanced Materials and Manufacturing Technology	Metallurgy and Materials Engineering	RK Valley Campus
3.	Engineering Design and Analysis	Mechanical Engineering	Nuzvid Campus
4.	Transportation Engineering	Civil Engineering	Nuzvid Campus

4. Considered item no. 4 (RGUKT-AP/AC/II/C/4/2021): Modified Academic Calendar for 4th year Semster-2 of B.Tech for the year 2020-21.

Resolution:

The Academic Council resolved to approve the modified Academic Calendar proposed by the University for E4 second semester only for the Academic year 2020-21.

5. Considered item no. 5 (RGUKT-AP/AC/II/C/5/2021): Starting MS programme in Public Policy w.e.f. Academic Year 2021-22.

Resolution:

The Academic Council approved the proposal to start Masters program in Public Policy from 2022 in a satellite campus. Further, the Council advised the university to come up with a detailed plan of action including the course structure and other modalities.

6. Considered item no. 6 (RGUKT-AP/AC/II/C/6/2021): Modularization of integrated B.Tech programme w.e.f. Academic Year 2021-22.

Resolution:

The Academic Council approved the proposal of modularization of integrated B.Tech program from the Academic Year 2021-22 in principle. Further the University is advised to work out modalities of exit option at various stages of the program and awarding diploma / B.Sc engineering to the students based on the credits acquired by them. It is advised to design and integrate these programs in a more effective way to meet the requirement of students with focus on employment.

7. Considered item no. 7 (RGUKT-AP/AC/II/C/7/2021): Request of the students who have discontinued their studies and have taken transfer certificates for readmission.

Resolution:

The Academic Council resolved to recommend to the University to consider the requests of the following students who have taken transfer certificates/ discontinued due to medical grounds and to permit them for readmission as per their eligibility.

S.No	Campus	Student Name	ID number	Branch
1.	Nuzvid	R. Nagaraju Naik	N120813	Civil
2.	Nuzvid	J. Sai Vahneetha	R141973	Mechanical
3.	Nuzvid	S Tanuja	N180665	PUC completed



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4.	Nuzvid	P. Vennela Rachel	RN201091	PUC-1
5.	Srikakulam	A. Jagadeesh	S171124	PUC-1

Further resolved to authorize the Vice-Chancellor/Chancellor to dispose of all such cases depending on their merits and report to the Academic Council/Sub Committee of the Academic Council.

8. Considered item no. 8 (RGUKT-AP/AC/II/C/8/2021): Guidelines for credit transfer of proctored MOOCs against Professional Elective Courses (PEC) and Open Elective Courses (OEC).

Resolution:

The Academic Council resolved to approve the proposal of transfer of credits for MOOCs registered by the students as Professional Elective Courses (PEC) and Open Elective Courses (OEC). Further resolved that in cases where courses like those offered by NPTEL do not award credits, university will translate the points/remarks into credits before awarding them to the students.

9. Considered item no. 9(RGUKT-AP/AC/II/C/9/2021): constitution of Standing Committee to the Academic Council.

Resolution:

The Academic Council resolved to authorize the Chancellor to constitute Standing Committee (Sub Committee) to the Academic Council with internal and external members to attend urgent and important academic matters of the University. The decisions of the Standing Committee will be reported to the Academic Council.

The meeting ended with thanks to the Chair and the members.


(K.C.REDDY)

Chancellor and Chairman of the Academic Council, RGUKT

CHANCELLOR

RGUKT

Andhra Pradesh.



EXECUTIVE SUMMARY OF THE REVISED COURSE STRUCTURE AND CURRICULUM APPROVED BY THE BOARDS OF STUDIES OF DIFFERENT SUBJECTS FOR PUC AND B.TECH PROGRAMS TO BE OFFERED AT RGUKT FROM 2020-21.

In the light of recent advancements in science and technology, RGUKT has re-constituted Boards of Studies along with external members from premier institutes like IITs, NITs apart from industry representatives. The meetings of the re-constituted Boards of Studies were held for different subjects during 28th - 31st December 2020 to review and recommend revision in course structure and detailed syllabi for each course. The key points in the BoS recommended curriculum for PUC and B.Tech are given here under for your quick review:

A. Pre University Course (PUC)

- I. To prepare students learning ready in RGUKT Environment and to make students' comfortable in the campus, a compulsory three week orientation program is introduced for the newly admitted PUC Students with effect from 2020-21. The program consists of four components (i) Bridge courses in Mathematics, Physics, Chemistry and English; (ii) Digital Literacy; (iii) Campus Academic Life; and (iv) Extra Curricular Activities such as sports and games, fine arts, yoga, painting etc. During orientation program a proficiency test will be conducted in Mathematics, Physics, Chemistry and English to identify and accordingly address the learning gaps among the students, if any.
- II. To impart more practical knowledge, labs for physics, chemistry, IT and, biology subjects are included in all the four semesters of PUC program and lab exams will be held along with theory at the end of all the four semesters.
- III. To help the students to enhance subject comprehension, create confidence, and strengthen learning skills tutorial sessions are not only incorporated in mathematics, physics, chemistry, and English curriculum but their number have been increased.



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IV. Semester wise credit distribution for each subject of PUC is given in table below:

Subject	PUC-I		PUC-II		Total Credits
	Sem I Credits (L-T-P)	Sem II Credits (L-T-P)	Sem I Credits (L-T-P)	Sem II Credits (L-T-P)	
Mathematics	5 (5-2-0)	5 (5-2-0)	5 (5-2-0)	5 (5-2-0)	20
Physics	4 (4-2-0)	4 (4-2-0)	4 (4-2-0)	4 (4-2-0)	16
Physics Lab	1 (0-0-2)	1 (0-0-2)	1 (0-0-2)	1 (0-0-2)	04
Chemistry	4 (4-2-0)	4 (4-2-0)	4 (4-2-0)	4 (4-2-0)	16
Chemistry Lab	1 (0-0-2)	1 (0-0-2)	1 (0-0-2)	1 (0-0-2)	04
English	3 (3-2-0)	3 (3-2-0)	3 (3-2-0)	3 (3-2-0)	12
Telugu	3 (3-0-0)	3 (3-0-0)	3 (3-0-0)	3 (3-0-0)	12
IT	2 (2-0-0)	2 (2-0-0)	2 (2-0-0)	2 (2-0-0)	08
IT Lab	1 (0-0-2)	1 (0-0-2)	1 (0-0-2)	1 (0-0-2)	04
Total Credits	24 (21-8-6)	24 (21-8-6)	24 (21-8-6)	24 (21-8-6)	96
OPTIONAL					
Biology	3 (3-0-0)	3 (3-0-0)	3 (3-0-0)	3 (3-0-0)	12
Biology Lab	1 (0-0-2)	1 (0-0-2)	1 (0-0-2)	1 (0-0-2)	04

B. B.Tech Program:

RGUKT offers B.Tech program in six engineering disciplines namely Computer Science and Engineering (CSE), Chemical Engineering, Civil Engineering (CE), Electronics & Communications Engineering (ECE), Mechanical Engineering (ME), and Metallurgical & Materials Engineering (MME). Electrical & Electronics Engineering (EEE) is added from the academic year 2020-21. Key aspects which are added and common to all the branches are provided below:

- A three week induction program is included for engineering programme in the curriculum before starting Semester I to refresh students on human values and orient them to different branches of engineering being offered at RGUKT.



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- ii) Curriculum is designed for 160/ 162 Credits with Choice Based Credit System (CBCS) allowing students to choose interdisciplinary and intra-disciplinary courses according to their learning needs, interests, and aptitude.
- iii) Range of courses in each branch of engineering includes Basic Science courses (BSC), Engineering Science Courses (ESC), Humanities and Social Science Courses including Management (HSC), which are categorized as Professional Core Courses (PCC), Professional Elective Courses (PEC), Open Elective Courses (OEC), and Mandatory Courses (MC). Internship in Industry and Project work are part of the curriculum.
- iv) Mandatory non-credit courses such as Indian Constitution, Environmental Science, Aptitude and Reasoning, human values, gender sensitization etc. are also included in the curriculum.
- v) Minor project is introduced at third year level apart from regular project in final year.
- vi) 8 (eight) week summer internship is made mandatory after third year of engineering to expose students to practical understanding and training on industry practices.
- vii) All the fundamental and branch specific core courses will be completed by the end of third year of engineering. In the final year of engineering only few elective subjects are included to provide opportunity for Long-term internship with maximum duration of an year.
- viii) As per the directives of Govt. of Andhra Pradesh, Community services course with two credits is made integral part of the curriculum for all the disciplines in the final year.
- ix) Break up of credits for different categories of courses is given below:



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S. No	Category	Break up of credits						
		CE	CSE	Chem. Engg.	ECE	EEE	ME	MME
1	BSC	17	17.5	22.5	16.5		23.5	20
2	ESC	15.5	18.0	27	29.5		22.5	16
3	HSC	10.5	13.5	10.5	8.5		10.5	12
4	PCC	81	68.0	61.0	63.0		66.0	77
5	PEC	9	15.0	15.0	15.0		12.0	12
6	OEC	6	12.0	9.0	12.0		12.0	12
7	Project work and internship	12	18.0	15.0	15.5		13.5	11
Total credits		160	162	160	160		160	160

- x) For advanced learners, minor degree programs with 20 credits are introduced in performing arts, humanities, and in few of the disruptive technologies. Newly proposed and revised Minor degree programs are given below:

S.No.	Minor Degree Program	Department offering	Remarks
Performing Arts			
1.	Mrudangam	Fine arts	Revised
2.	Kuchipudi Dance		
3.	Vocal		
Sciences & Humanities			
4.	Physics	Physics	Newly Introduced
5.	Chemistry	Chemistry	
6.	Mathematics	Mathematics	
7.	Biology for Engineering	Biology	
8.	Business Management and Engineering	Management	Revised
9.	Basic Economics for Engineers	Economics	Newly introduced
10.	Basics of Public Policy for Engineer	Humanity Governance	Newly introduced
Engineering			
11.	Machine learning	ECE	Newly Introduced
12.	Material Science for Additive Manufacturing	MME	
13.	Material Testing	MME	
14.	Materials Processing	MME	
15.	Manufacturing and Advanced Materials Technology	MME	
16.	Renewable Energy sources	ME	



Apart from the above, modification/revision in the syllabus of the existing courses, introduction of new courses and minors specific to each subject are given below:

A. Civil Engineering:

- i) Modified syllabus for core courses namely 'Concrete technology', 'Soil Mechanics', 'Transportation Engineering-I', 'Foundation Engineering'.
- ii) Modified syllabus for professional elective course on 'Advanced Concrete Technology'.
- iii) Introduction of new professional elective courses with syllabus namely 'Environmental Geotechnics', 'Sustainable Building Materials', 'Functional Efficiency of Buildings', 'Decision making methods in Civil Engineering' and 'Construction Safety Management'.
- iv) Combining two open elective courses - 'Integrated Waste management for urban areas' and 'Electronic waste management' into one open elective course titled 'Solid and Hazardous Waste Management' with course code along with syllabus.

B. Chemical Engineering:

- i) Revised syllabus of courses - 'Introduction to Chemical Engineering', 'Chemical Process Calculations', 'Heat Transfer', 'Mass Transfer Operations-II', 'Process Equipment Design' and 'Transport Phenomena'.
- ii) Introduction of new electives in emerging technologies along with syllabus in the following courses - 'Pharmaceuticals and Fine Chemicals', 'Fuel cells and Flow Batteries', 'Fertilizer Technology', 'Green Technology', 'CO₂ capture and Utilization', 'Sustainable Process Engineering', 'Process Intensification' and 'Solid Waste Management'.

C. Computer Science & Engineering:

- i) Introduction of new core courses - 'Mathematical Foundations for Data sciences' and 'Data Science with python'
- ii) 'Machine Learning' and 'Artificial Intelligence' are mandatory core courses.



- iii) Introduction of new electives – ‘Cloud computing’, ‘Big data Analytics’, Deep Learning’, ‘Block Chain Technology’ and ‘Internet of Things’.

D. Electronics and Communications Engineering:

- i) Introduction of two electives – ‘Adaptive Signal Processing’ and ‘Introduction to Deep Learning’ with syllabus under signal processing stream.
- ii) Introduction of new Minor program in Machine learning.

E. Mechanical Engineering:

- i) Modification/Revision in the courses relating to ‘Engineering Mechanics’, ‘Mechanics of Solids’, ‘Dynamics of Machinery’, ‘Design of Machine Elements’, ‘Heat Transfer Lab’, ‘Applied Thermo dynamics Lab’, ‘Manufacturing Processes’, ‘Metrology and Mechanical Measurements’, ‘Additive Manufacturing’ and ‘Engineering and Solid Mechanics (offered to Chemical Engineering)’.
- ii) Introduction of program Elective ‘Refrigeration and Air-conditioning’ under Thermal Stream of electives.
- iii) Introduction of new minor degree programs in ‘Robotics and Drone Technology’ and ‘Renewable Energy Resources’.

F. Metallurgical and Materials Engineering:

- i) Modification/Revision in the courses relating to ‘Physical Metallurgy’, ‘Physical Metallurgy and Metallography Lab’, ‘Mechanical Behavior of Materials’, ‘Mechanical Behavior of Materials Lab’, ‘Phase transformations and Heat Treatment’, ‘Corrosion Engineering’, ‘Metal Forming’ and ‘Metal Forming Lab’.
- ii) Introduction of new course ‘Computational approach in Materials Engineering’
- iii) Introduction of new electives ‘Soft Materials’ and ‘Additive Manufacturing’
- iv) Introduction of new mandatory Non-Credit Course ‘Gender Sensitization’
- v) Introduction of New Minor Degree programs (a) Material Science for Additive Manufacturing, (b) Material Testing, (c) Materials Processing and (c) Manufacturing and Advanced Materials Technology