

Department of Sciences and Humanities

Minutes of the Meeting of the Board of Studies, held in the T&P facility on 01.04.2019, at VFSTR University, Vadlamudi.

Members Present:

- 1. Dr. D.S Kesava Rao (Subject Expert) Professor of English, NIT, Warangal, T.S.
- 2. Dr. Prakash Kona (Subject Expert) Professor, EFLU, Hyderabad, T.S.
- 3. **Dr. N. Srinivasu**, Chair Person, BOS for English and Head, Dept. of Sciences and Humanities, VFSTR University, Vadlamudi.
- 4. **Ms. A. Sharada**, Assoc. Professor, Dept. of Sciences and Humanities, VFSTR University, Vadlamudi.
- 5. **Dr. S.D. Sasi kiran,** Assoc. Professor, Dept. of Sciences and Humanities, VFSTR University, Vadlamudi.
- 6. **Mr. G. Nageswara Rao**, Asst. Professor, Dept. of Sciences and Humanities, VFSTR University, Vadlamudi.
- 7. Members of the faculty from Dept. of Sciences and Humanities (Ms. T. Swathi, Mr. V. Chandrasekhar Rao, Mr. U. Sri Ranganath, Ms. Sk. Shakila Bhanu and Dr. M. Ramana Raju) attended the meeting.

Agenda:

Review of three papers related to Teaching of English and Skills enhancement for employability being proposed for I, II and III B.Tech, as per R- 19.

- 1. Technical English Communication (TEC) for I. B. Tech
- 2. English Proficiency Course (EPC) for I. B. Tech
- 3. Professional Ethics, Values and Human Rights (PEVHR) for III B. Tech

Proceedings:

The members of Board of Studies accepted the syllabus proposed for the above mentioned courses and suggested the following modifications:

For TEC:

Even though R19 was a much improved version from R16, it still required many improvements:

- The experts suggested that we have to equally focus on all the four language skills.
- Two new units Energy and Space Trek were incorporated in R19 by replacing Engineering Ethics and Emerging Technology in R16. The reason being, the newly incorporated units with exercises focusing on language skills and thus students will get more opportunity to practice language skills.
- Topics on gender equality and sensitivity comprise a considerable portion in R19 which was not so well covered in R16.
- In R19, more emphasis was given on improving reading comprehension skills realizing the importance of academic reading for the budding engineers which as a miss though not completely but to a considerable level in R16.
- R19 also emphasized more on developing students' oral proficiency in addition to improving their academic writing skills.
- R19 was oriented towards including more assignment based learning which is a departure from R16 which by and large was classroom based learning.
- R19 was further shrunk from R16 to make it more manageable and devote more time on the language component for better and effective learning.
- R19 was designed in alignment with the POs.

For EPC:

The subject experts were satisfied with the proposed contents and recommended for its adoption without any changes. They advised that we should continue to conduct the assessment in the same pattern, i.e., activity based.

For PEVHR:

The experts suggested us to go with more case studies and news clippings to throw light on the subject. They also advised the internal members of the Board to plan for a textbook to customize to the needs of the students of the university.

Prof D S Kesaya Rao

s A Sharada Mr K V B Rayindra

or M Sreenivasult (Chairman)

Mr B Suresh Kumar



Division of Mathematics

<u>Department of Science and Humanities</u> Board of Studies-Mathematics Minutes of Meeting

Date: April 8,2019.

Members present

1. Dr.N.Srinivasu, HOD, Dept of Science & Humanities, VFSTR, Vadlamudi	Chairman
2. Dr.P.L.N. Varma, Head Division of mathematics, VFSTR, Vadlamudi	Member
3. Dr.V.Radha Krishna Murthy, Professor, VFSTR, Vadlamudi	Member
4. Dr.P.Sudam Shekar, Associate Professor, , VFSTR, Vadlamudi	Member
5. Mr.U.V.manoj Kumar, Asst. Professor, VFSTR, Vadlamudi	Member
6. Dr.Y.N.Reddy, Professor, NIT Warangal	Subject Expert
7. Dr.S.Sreenadh, Professor, SVU, Tirupathi	Subject Expert

The following member could not attend the meeting

1. Dr. P. Siva Prasad, Associate Professor, VFSTR, Vadlamudi Member

The Board of Studies met today and discussed the proposed syllabus for various Mathematics courses for B.Tech programme to be implemented from the academic year 2019(R19 Regulations).

After taking into consideration the requests received from various stake holders and also the suggestions of Dr.S.S.Sane, former professor@IIT,Bombay currently professor at CMI, Chennai. The members had detailed discussions on the proposed contents of various courses. The branch specific contents were introduced in the courses and with that substantial changes have taken place in all the courses. The focus will be on essential concepts of mathematics required for that particular branch. After thorough discussion the following courses were finalized as shown in the next page.

	BRANCHES	I YEAR I SEM	I YEAR II SEM	II YEAR I/II SEM
1	Bio tech Bio medical Bio informatics Food Technology	Engineering Mathematics-I(B)	Engineering Mathematics-II(B)	Probability & Statistics
2	EEE ECE	Engineering Mathematics-I(E)	Engineering Mathematics-II(E)	Transformations & Complex Variables
3	CSE IT	Engineering Mathematics-I(C)	Engineering Mathematics-II(E)	Probability & Statistics
4	MECH CIVIL AUTOMOBILE	Engineering Mathematics-I(F)	Engineering Mathematics-II(F)	Probability & Statistics
5	CHEMICAL PETROLIUM TEXTILE	Engineering Mathematics-I(D)	Engineering Mathematics-II(D)	Probability & Statistics
6	AGRICULTURE	Engineering Mathematics-I(A)	Engineering Mathematics-II(A)	Probability & Statistics

The syllabus was revised and strengthened by introducing topics such as Numerical methods, Fourier Series, some obsolete topics such as progressions, Binomial Theorem were removed.

(Dr. Y. N. Reddy)

S. Sremado (Dr. S. Sreenadh)

M. Swiningly (Dr. N. Srinivasu)

(Dr. V. Radhakrishna Murthy)

(Dr. P. Sudam Sekhar)

Dr. P. L. N. Varma)

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(U. V. Manoj Kumar)

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Department of Sciences & Humanities

Minutes of Board of Studies Meeting - Chemistry

BOS committee for chemistry is constituted with the following members. The board of studies meeting is conducted from 09.00 am onwards on 04-04-2019 at Registrar's Conference hall VFSTR University, Vadlamudi.

- 1. Prof. K. Laxma Reddy Prof in Department of Chemistry, NIT, Warangal.
- 2. Dr. S. Suresh, Scientist, Organic and Bio molecular division, IICT, Hyderabad.
- Dr. Vamsee Krishnan Muppidi, CEO, Crystal Morphix Technologies Pvt. Ltd Hyderabad.
- 4. Dr. N. Srinivasu (BOS, Chairman), VFSTR University.
- 5. Dr. M. Sireesha, Associate professor in chemistry, VFSTR University.
- 6. Dr. N. Satya Sree, Associate professor, VFSTR University.
- 7. Dr. D. Naga Raju, Associate professor in chemistry, VFSTR University
- 8. Dr. K. Prabhakara Rao, Associate professor in chemistry, VFSTR University.
- 9. Dr. Sk. Anwar, Associate professor in chemistry, VFSTR University.
- 10. Dr. Anandarup Goswami, Associate professor in chemistry, VFSTR University

Following are the outcomes of the BOS meeting:

- Based on the feedback received on R16 curriculum and to meet the requirements of different engineering branches, it is decided to propose branch specific chemistry courses with laboratory component in R19 curriculum instead of having one common Engineering Chemistry theory and Lab course for all branches of engineering.
- Major changes have taken place in the chemistry courses to introduce branch specific
 contents in the R19 curriculum and therefore, the newly proposed courses are highly
 useful to explore the essential chemistry knowledge among the engineering students in
 their field of specialization.

3. According to the decisions made, there are four different chemistry courses suggested by the internal members and most of the chemistry courses are integrated with laboratory sessions. The list of proposed courses is shown below.

S.No.	Name of the course	Branch
1	Engineering Chemistry (Theory)	For CSE & IT
2	Engineering Chemistry (Theory + Lab)	For ECE & EEE
3	Organic Chemistry (Theory + Lab)	For BT, BI, BME, CHEM & FT
4	Applied Chemistry (Theory + Lab)	For AME, MECH, CIVIL, TT & PE
5	Chemistry for Agriculture Engineering	For AG
	(Theory + Lab)	

Modifications proposed in individual courses:

1&2: Engineering Chemistry Theory:

- 1. Advanced chemical bonding concept is included in the Unit-I due to the significance of coordination compounds and other inorganic compounds in emerging engineering applications. In addition to chemical bonding, the Unit-I also consists water technology concept by giving more importance to the numerical problems on hardness, determination of hardness of water by using EDTA method and softening of water by most advanced technique called Ionexchange method.
- 2. In addition to existing concepts in electrochemistry "potentiometric titrations" is included to make Unit 2 as more application oriented.
- 3. Portable energy sources i.e., Batteries & Fuel cells concept is restructured by including Ni-Cd battery in addition to the existing examples such as Lead acid & Lithium ion batteries. The entire topic is now Unit 3: Batteries & Fuel cells.
- 4. Instrumental techniques for chemical analysis is now Unit 4 in R19 Engineering chemistry course and more importance given to the principles & instrumentation of UV-Visible & FT-IR spectroscopic techniques instead of focusing more on the "electromagnetic radiation".
- 5. "Nanomaterials" is introduced as Unit 5 in R19 Engineering Chemistry course, by considering the importance of electronic & memory-based applications of nanomaterials in emerging smart engineering devises.

2. Engineering Chemistry Lab component:

In order to gain practical knowledge on some of the theory concepts, Engineering chemistry lab component also introduced in R19 curriculum as integrated lab component particularly for ECE & EEE students. As per the new changes in R19 Engineering chemistry syllabus, the following new experiments are introduced.

- a) Simultaneous determination of Cr (VI) & Mn (VII) by UV-Visible spectrophotometry
- b) Synthesis of Iron oxide nanoparticles.
- c) Removal of hardness of water by ion exchange method.
- d) Chemistry of blue printing.

Minor Project: In R19 the following minor projects are recommended, which are related to theory and lab

- 1. Construction of batteries
- 2. Synthesis of nano particles
- 3. Preparation of conducting polymer- polyaniline
- 4. Water analysis and purification

3. Organic Chemistry Theory and Lab:

Organic Chemistry course is particularly introduced for Bio related engineering branches. In addition to Bio related branches, this courses also suitable for Chemical & Food Technology students. Based on the inputs from core department HOD's and BoS members suggestions the following modifications are made in the new organic chemistry course in R19 curriculum.

Insertion of new topics

- Unit 1 Advanced chemical bonding concept is introduced by including VBT,
 Valence bond & Molecular orbitals theory of organic molecules by keeping in mind
 that importance of structure–stability and structure–reactivity correlation of various
 organic molecules in different environment.
- 2. Stereochemistry concept is made as Unit 2, by introducing relevance of stereochemistry in biology e.g. Thalidomide, Resolution and Asymmetric synthesis as new concepts in stereochemistry along with the existing topics such as chirality, absolute configuration of stereoisomers and conformational analysis with suitable examples.
- 3. "Organic reactions, Synthesis of drug molecule and Organometallic chemistry" is introduced as Unit 3 in R19 Organic Chemistry course. The Unit 3 covers the different types of organic reactions and their involvement in design and synthesis of drug molecules. In addition to that, Unit 3 also deals with significance of organometallic compounds such as Grignard reagent in Organic & Bio-organic chemistry.
- 4. "Green Chemistry" is introduced as Unit 4 in R19 Organic Chemistry course. This unit covers the 12 principles of green chemistry, organo-catalysis and bio-catalysis.
- 5. "Structural Elucidation of Organic Compounds" is introduced as Unit 5 in R19 organic chemistry course. This unit includes different spectroscopic techniques such as IR (Principle, Identification of Functional Groups), NMR (Principle, Chemical Shift,

¹H-NMR- Ethyl Alcohol, Cis-Trans Isomers), Mass-Principle, Fragmentation (Nitrogen Rule), XRD techniques useful for identifying the structure of unknown organic compounds.

4. Applied Chemistry Theory and Lab:

- 1. Chemical bonding concept (VB & MO theories) is included in the Unit 1 to familiarize the students towards the significance of coordination compounds and other inorganic compounds in emerging engineering applications. In addition to chemical bonding, the Unit-I also consists water technology. There are no significant changes in the water technology when compared to R16. Why because, water treatment methods are highly important to the students belongs to AME, MECH, CIVIL, TT & Petroleum engineering.
- 2. "Polymers topic is introduced as Unit 2 in R19 Applied Chemistry course. The R16 polymers syllabus was retained as such with no further modifications because it is highly important to the students.
- 3. Engineering materials is introduced as Unit 3. However, major changes have been made as per the need of specific branches and the types of materials that are more relevant to their particular branch. To give more precise knowledge, Specific properties of refractories, lubricants and abrasives are included. Instead of "Glass" concept "Nanomaterials" is introduced as new add on topic.
- 4. Both Batteries & Corrosion are introduced as Unit 4. Minor revisions have taken place in case of batteries and corrosion topics compared to R16 Engineering Chemistry syllabus.
- 5. Unit 5: Electronic Spectroscopy of organic molecules was suggested to make the topic simpler and more relatable.

Lab Experiments a nd Minor Project:

1. Expt. 6. Preparation of Nylon 6,6.

- 2. Expt. 7. Preparation of Nano material.
- 3. Expt. 9. Determination of viscosity of lubricating oil.
- 4. Expt. 12. Determination of strength of weak acid by conductometry are included. and Soil analysis was removed.

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5. Chemistry for Agriculture Engineering

During Internal BOS meetings, Division of Chemistry, the syllabus of chemistry for Agricultural engineering is framed under Applied Chemistry. But, as a mandate to follow ICAR Chemistry syllabus for Agricultural Engineering discipline, it is compiled separately, based on the syllabus prescribed by ICAR.

For theory component, the external experts have suggested the following modifications

- 1. UNIT-I: Sulphur system is removed under one component system.
- 2. UNIT-II: Electrodialysis is included under desalination along with Reverse Osmosis technique.
- 3. UNIT-III: Detailed properties of lubricants are included.
- 4. UNIT-IV: Biological significance of Lipids, Proteins, carbohydrates, and Vitamins is included.
- **5.** UNIT-V: Nuclear radiation detectors topic is topic is removed because only fundamental knowledge is essential for preservation of food materials.

For lab component, the suggested modifications are:

- a) Determination of temporary and permanent hardness of water is a single experiment.
- b) Qualitative tests for fats, lipids, carbohydrates together as one experiment instead of three separate experiments.
- c) Determination of BOD & COD is for wastewater sample instead of normal water.

Modifications made during meeting

S.NO	Topic Deleted	Topic Included	Theory/ Lab	Justification
1.	Sulphur System		Theory- Unit-1	One example is sufficient for one component system
2.		Electrodialysis	Theory- Unit-2	Electrodialysis is the advanced technique than RO
3.		All important characteristics of lubricants	Theory- Unit-3	Knowledge on properties of lubricants is very important while operating the modern machinery of farming and agriculture
4.	-	Biological Significance of biomolecules	Theory- Unit-4	Awareness about the purpose of bio molecules like fats, carbs, proteins, vitamins is important to identify proper crop as per the soil and to process the yield
5.	Nuclear radiation detectors		Theory- Unit-5	No need of nuclear materials for the agricultural discipline
6.		COD & BOD of waste ater	Laborat ory practice	Study of water quality parameters is very important as they show lot of impact on soil p ^H and microorganisms
7.	Battery construct ion		Laborat ory practice	It is not necessary as the theory component do not have electrochemistry and battery related things
8.		Food Analysis		Food is to be analyzed with respect to the food colours, Preservatives, and heavy metal traces
9.		Soft drinks analysis		To study the harmful components of soft drinks

1.Prof.K.Laxma Reddy
2. Dr.S.Suresh,
3.Dr.Vamsee Krishnan M

4.Dr.N.Srinivasu
5.Dr.M.Sireesha,
6.Dr.N.Satya Sree,

7.Dr.D.Naga Raju,
8. Dr.K.Prabhakara Rao,
9.Dr.Sk.Anwar,

4.Dr.Anandroop Goswami,



DEPARTMENT OF SCIENCE & HUMANITIES Division of Physics Minutes of Board of Studies Meeting

The Board of Studies (BoS) meeting to frame Physics syllabus for I.B.Tech. Students is held on 04-04-2019 at VFSTR University campus, Vadlamudi.

Members Present:

- 1. Dr. N. Srinivasu, BoS Chairman, Professor & HoD, Department of S&H, VFSTRU, Guntur
- 2. Dr. M. Sai Sankar Professor, Dept. of Physics, NIT, Warangal
- 3. Dr. Saketh Asthana, Associate Professor, Dept. of Physics, IIT, Hyderabad
- 4. Dr.M. Venkateswarlu, Scientist, Amar Raja Batteries, Thirupati.
- 5. Dr. M.Sreenivasulu, Professor, Dept. of S&H, VFSTR(deemed to be University), Guntur
- 6. Dr. K.V.Madhuri, Professor, Dept. of S&H, VFSTR(deemed to be University), Guntur
- Mr. J.N.Kiran, Associate Professor, Dept. of S&H, VFSTR (deemed to be University), Guntur.

The following are the suggestions made,

- 1. The committee is greeted by Dr. M. Sreenivasulu, Professor of Physics and a brief appraisal of the proposed syllabus is presented to the committee.
- As for the guidelines received from hierarchy and the inputs received from various engineering departments it intended to develop branch specific syllabus in R-19 regulations. Introducing project based learning.
- 3. As per the above understanding three courses namely Engineering Physics- A, B and C taken up for discussion.
- Unit wise discussion as per the proposed syllabus has been taken up and necessary modifications are incorporated. Considering the suggestions received from the subject experts.
- 5. The committee has decided to take up the Engineering Physics-A, Engineering Physics-B and Engineering Physics-C which are branch specific.
- Prof. M.Sai Shankar Suggested to include Crystal defects (Point defects) in Unit-1 as they
 play vital role in giving electrical properties of materials and other members also felt the
 same.

- Dr.Saketh Asthana has recommended to Include Introduction to Quantum mechanics rather than mentioning it as Wave and particle duality of radiation.
- Prof. M.Sai Shankar and Dr.Saketh Asthana have recommended to bring the topics right from classical and quantum theory of free electronics into a separate chapter in Unit-2 and also suggested include Fermi Dirac distribution.
- The Committee recommend to incorporate Introduction to Semiconductors instead of starting with classification of semiconductors in Unit-3.
- 10. Committee felt that rearrangement of topics need to be done to have sequential presentation of topics as per a standard text book in Unit-3.
- 11. In unit-4, first part of the proposed syllabus is worth removable since it is more relevant to dielectrics and the other part is revised as suggested by external members.
- 12. Dr. Saketh Asthana has suggested to remove the topic Electroluminescence in Optoelectronics of Unit-5.
- 13. Prof.M.Sai Shanker has recommended to delete the topics Thermionic emission and Richardson's equation from free electron theory in Unit-4 of Engineering Physics-B and the entire contents of the syllabus were accepted as it is by the other members.
- 14. In Engineering Physics-C, both the external members were suggested to include Michelson Interferometer in Interference of Physical Optics.
- 15. The committee felt that the inclusion of Fiber Optic sensors and bio applications in Unit-2 as they are more relevant to Bio Tech. Students.
- 16. Dr. Asthana has suggested to add applications of XRD in Unit-3 of Crystal Physics and to remove Piezo electric method & to add applications in medicine in Ultrasonics of Unit-4.
- 17. Both the external members of the committee suggested to revise the title of Unit -5 as Elements of Nanomaterial's and to include characterization techniques.
- 18. The committee has extended the discussion on laboratory experiments, approved a list of experiments and given liberty to choose the experiments to be offered for various branches depending on the contents of theory, since the courses are integrated with lab including minor project.
- 19. The committee finalised the branches to which the above three courses are to be offered and the details are as follows:

Engineering Physics-A (ECE, EEE, CSE and IT)

Engineering Physics-B (Mech, Automobile, Civil, Textile and Petroleum)

Engineering Physics-C (Bio-Tech, Bio-Informatics, Bio-Medical, Chemical and FT)

20. The committee made nearly 50%, 30% and 45% changes to the courses Engineering Physics-A, B and C respectively in comparison with previous R-16 syllabus, to be with more skill orientation.

1. Dr. N. Srinivasu, Chairman, BoS
(Dept, of S&H, VFSTR (deemed to be University), Guntur)
2. Dr. M. Sai Shankar W. Sal Samkar (Professor, NIT Warangal)
3. Dr. SakethAsthana Sales Associate Professor Dont of Physics HTM I. 1. 1.
(Associate Professor, Dept. of Physics, IIT Hyderabad)
4. Dr. M. Venkateswarlu
(Scientist, Amara Raja Batteries, Tirupathi)
5. Dr. M. Sreenivasulu Survivas (Professor, Dept, of S&H, VFSTR (deemed to be University), Guntur)
6. Dr. K. V. Madhuri
(Professor, Dept, of S&H, VFSTR (deemed to be University), Guntur)
7. Dr. J. N. Kiran
(Associate Professor, Dept, of S&H, VFSTR (deemed to be University), Guntur)
B. Dr. B. Naveen Reddy Gran

(Assistant Professor, Dept, of S&H, VFSTR (deemed to be University), Guntur)

Minutes of BoS meeting of Humanities Cell

The Board of Studies Meeting of the Department of S&H (Humanities cell) is held on 17th April 2019 in the office of the Department of S&H at 02:30 PM. The Chairman of the BoS welcomed all the members and briefed them about the progress of the Department of Science and Humanities (Humanities Division). The BoS members expressed their high appreciation and satisfaction about the courses and activities of the Department.

Following were present:

Name	Designation	Signature
Dr. N. Srinivasu Head of the Department	Chairman	N.S.mivoly
Mr K Lakshman Rao Rtd Assoc. professor at Hindu College, Guntur	External Member	K.S. Lakshu
Mr A Sridhar Babu I.A.S Secretary, Tobacco Board, Guntur	External Member	303www
Dr. A Sharada Head of Humanities Division	Member	Thou
Mr C Raghava Rao Head of Training Cell	Member	11 -18.4.19
Mr J Naresh Asst Professor	Member	24/4/19
Mr B Wiggins Asst Professor	Member	Jak A
Mr S Suresh Babu Asst Professor,Dept of IT	Member	AA.

BoS discussed and resolved the following items:

Item No. 1: Approval of Syllabus of Constitution of India

The BOS discussed the item and suggested following changes

- a) Increase the lecture hours from 1 to 2.
- b) Combine the topics 13, 14 and 15 with topic 4 as all the topics are related to fundamental rights.

- c) Combine topics 9 and 10 as both are related to constitutional amendments.
- d) Combine topic 11 with topic 8.
- e) Suggested reference book- Telugu Akademi-Civics of Intermediate 2nd year;2019

Item No. 2: Revised Syllabus of Polity and Governance in India

The BOS discussed the item and approved the revised syllabus of Polity and Governance in India.

Item No.3: Revised Syllabus of History of Modern India and Indian Culture and suggested following changes

The BOS discussed the item and suggested to incorporate detailed list of topics for Unit III and Unit IV.

Item No 4: Revised Syllabus of Economic and Social Development of India and suggested following changes

The BOS discussed the item and suggested to trim the topics from Unit II, Unit III and Unit V.

Item No 5: Revised Syllabus of Geography of World and India and suggested following changes.

The BOS discussed the item and suggested to change the title of the paper to Geography of India.

Item No 6: Approval of Syllabus of Employability Skills –I (Aptitude)

The BOS discussed the item and approved the syllabus Employability Skills -I (Aptitude)

Item No7: Approval of Syllabus of Employability Skills -II (Technical)

The BOS discussed the item and approved the syllabus Employability Skills -II (Technical)

Dr. N. Srinivasu

Mr K Lakshman Rao

Mr A Sridhar Babu I.A.S

Mr B Wiggins

K.S. Lakshur

Dr. A Sharada

Mr J Naresh

Mr C Raghava Rao

Wil C Ragilava Rao

Mr S Suresh Babu

Constitution of India

L	Т	Р	С
2	-	-	1

Course Objectives:

- To provide to students a basic understanding of Indian Polity and Constitution.
- To make students understand the functioning of government at the centre and state level besides local self government.
- Equip the students with knowledge on fundamental rights and duties of a citizen under a democracy

Course Outcomes:

The students will

- have an understanding of the major articles and provisions of Indian constitution.
- have an appreciation for the constitution and safeguarding individual rights.
- be able to understand functioning of organs of the State in a democracy.

Unit I

- 1. Meaning of the constitution law and constitutionalism;
- 2. Historical perspective of the Constitution of India;
- 3. Salient features and characteristics of the Constitution of India;
- Scheme of the fundamental rights; ; Scheme of the Fundamental Right to Equality; Scheme of the Fundamental Right to certain Freedom under Article 19; Scope of the Right to Life and Personal Liberty under Article 21
- 5. The scheme of the Fundamental Duties and its legal status;
- 6. The Directive Principles of State Policy Its importance and implementation

Dr. N. Srinivasu

Dr. A Sharada

M. Suminos

Mr K Lakshman Rao

K. S. Lakehurin

Mr C Raghava Rao

/

Mr B Wiggin

Mr A Sridhar Babu LA.S

Unit II

- 7. Federal structure and distribution of legislative and financial powers between the Union and the States;
- 8. Parliamentary Form of Government in India The constitution powers and status of the President of India; Emergency Provisions: National Emergency, President Rule, Financial Emergency;
- 9. Amendment of the Constitutional Powers and Procedure ;The historical perspectives of the constitutional amendments in India ;
- 10. Local Self Government Constitutional Scheme in India

Text Books:

1. Civics, Intermediate 2nd Year Telugu Akademi,2019

Dr. N. Srinivasu

Pr. A Sharada

KI C Same

Mr K Lakshman Rao

K. S. Laks hurrer

Mr C Raghava Rao

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Mr. A Sridhar Babu J.A.S

Mr B Wiggins

19HS219 Modern Indian History and Indian Culture

L	Т	Р	С
4	-	-	2

Course Objectives:

- To provide to students a basic understanding of Modern Indian history and Indian culture.
- To make students understand the process of colonization and imperialism
- To make students understand the British administration in India and their effects on India.
- To provide students, the survey of socio-religious reform movements in India and their impact on India.
- To present to the students the various phases of the Indian national movement.

Course Outcomes:

The student will:

- have a critical understanding of the Modern Indian history and culture.
- analyze critically the effects of colonization on India
- have a critical appreciation of values which inspired Indian National Movement.
- appreciate the rich cultural heritage of our country.

Unit- I Advent of Europeans in India and Consolidation of British Power in India

The Early European Settlements; the Portuguese and the Dutch; the English and the French East India Companies

British-French struggle for supremacy; Carnatic Wars

Bengal -The conflict between the English and the Nawabs of Bengal; Siraj and the English; The Battle of Plassey; Significance of Plassey, Bengal – Mir Jafar and Mir Kasim; The Battle of Buxar

Dr. N. Srinivasu

Mr K Lakshman Rao

K.S.Lakshur

Mr A Sridhar Babu I.A.S

Dr. A Sharada

Mr C Raghava Rao

Mr B Wiggin

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Mysore; Anglo-Mysore Wars; The Marathas; The three Anglo-Maratha Wars; The Punjab; Anglo-Sikh Wars

Administrative Policies; Policy of Ring-fence, Subsidiary alliance, Doctrine of lapse

Unit -II British Administration Social Reforms and 1857 Revolt

Administrative Policies: Charter Acts and Council Acts

Economic policies of British Colonial Rule: Land revenue settlements, Commercialization of agriculture, Drain of wealth, Deindustrialization

Social and educational reform measures; Abolition of sati, Measures against Human sacrifice and slavery, attempts to end religious and caste discrimination, Education policy

Socio-cultural awakening in India: Causes and Impact; Major reform movements, significance and limitations of reform movements

Major resistance movements and the revolt of 1857;

Unit III-Indian National Movement

Early Indian nationalism: Politics of association before 1885 and significance, Indian National Congress, Safety Valve Theory

Moderate Phase (1885-1905) and Extremist Phase (1905-1909);

Swadeshi and Boycott Movement: Reasons, Spread of the Movement, People's Response and Government Response, Partition of Bengal; Evaluation of Swadeshi Movement;

The Surat Split; Morley Minto Reforms.

First World War and Indian Response; Home Rule League; Lucknow Session of INC

Other strands of national movements; revolutionary and left movements

Montagu-Chelmford Reforms and Government of India Act 1919.

Dr. N. Srinivasu

Dr. A Sharada

Mr K Lakshman Rao

Mr C Raghava Rao

Mr B Wiggins

In A Şridhar Babu I.A.S

Unit - IV Emergence of Gandhi, Towards partition and independence

Emergence of Gandhi: Philosophy and ideas of Gandhi, Early Activism, Rowlatt Act.

Non-Cooperation Movement: Reasons, Spread of the Movement, People's Response and Government Reponses, Evaluation

Swarajists and Socialist Ideas; Simon Commission and Nehru Report

Run-up to Civil Disobedience Movement; Civil Disobedience and Salt Satyagraha; Reasons, Spread of the Movement, People's Response Government Response and Evaluation.

Karachi Session Round Table Conferences; 2nd Phase of CDM; Communal Award and Poona Pact

Towards Freedom and partition: Tripuri Session; Gandhi-Bose Ideological differences;

Nationalist Response to War- August Offer, Individual Satyagrahas; Cripps Mission;

Quit India Movement: Reasons, Spread of Movement, Peoples Response and Government Response.

Rajgopalachari Formula, Wavell-plan, Cabinet Mission, Atlee's Statement and Mountbatten Plan, India Independence Act.

Communalism and two nation theory, Partition; consequences and rehabilitation after partition;

Unit - V Indian Heritage and Culture

Culture: Meaning, Components, Difference between Culture and Civilization: Characteristics of Indian Culture; Visual Arts- Art, Sculpture and Architecture (UNESCO Heritage Sites); Performing Arts: Music and Dance and Literature;

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Text Books

- 1. India's Struggle for Independence, Bipin Chandra, Penguin , Reprint Edition 2016
- 2. From Plassey to Partition and After: A History of Modern India, Sekhar Bandyopadhyay Orient Blackswan Private Limited Reprint Edition 2014
- 3. Themes in Indian History-III, NCERT, Reprint Edition 2019
- 4. An Introduction to Indian Art part-1 NCERT, Reprint Edition 2019

References Books

- 1. Modern India1885-1947, Sumit Sarkar, Pearson Education India; 1st Edition 2014
- 2. A Cultural History of India, A.L Basham (ed) Oxford, New Edition 1983.

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19HS224 Polity and Governance in India

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Course Objectives:

- To provide to students a basic understanding of Indian Polity and Constitution.
- To make students understand the functioning of government at the centre and state level besides local self government.
- Equip the students with knowledge on fundamental rights and duties of a citizen under a democracy

Course Outcomes:

The students will

- have an understanding of the major articles and provisions of Indian constitution.
- have an appreciation for the constitution and safeguarding individual rights.
- be able to analyze functioning of executive, legislative and Judiciary in a democracy.
- have a comparative picture of Indian Constitution vis-a-vis constitution of the other democracies of the world.

Unit I: Making of the Indian Constitution and important provisions:

Historical inheritance and institutional legacies; Making of India's Constitution: Major features of the Constitution; Philosophy of Indian Constitution: Preamble, Fundamental Rights, Directive Principles of State Policies, and Fundamental Duties; Emergency and Constitution Amendment Procedure and Basic Structure.

Unit II: System of Government

Legislature: Structure, Functions, Power and Processes of Parliament and State Legislature. And Parliamentary Committees; Decline of legislature- decline of legislature – Delegated Legislation – Legislative and Judicial control over the delegated

Executive: President: Election, Powers and Functions; Prime Minister and Council of Ministers: Relationship between executive and legislature: accountability, collective responsibility; Growing importance of the Cabinet;

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Governor: Appointment, Powers and Functions; Chief Ministers; Relationship between governor and chief minister.

Federalism: Major issues; Centre-State relations: Legislative, Executive and Financial

Judiciary: Structure, Functions, Powers of Indian Judiciary (Supreme Court, High Court and Subordinate courts) Judicial independence and review; Judicial activism and overreach

Unit III: Elections and Party System in India

Election Commission of India: Structure, Functions and Powers; Representation of Peoples Act; National and regional parties; Transformation of the party system: Coalition governments and coalition politics at the national and state level

Unit IV: Institutions of Governance

Comptroller and Auditor General; Finance Commission; UPSC,Inter-State Council; National Human Rights Commission; Central Information Commission, Central Vigilance Commission; CBI, Lok Pal and Lokayukta

Local Governance: 73rd and 74th Constitutional Amendment Acts

UNIT V: Good Governance and Welfare Mechanism

Good Governance: Transparency, Accountability and Responsibility; e-governance-application; citizens charters; Role of civil services in a democracy.

Welfare Mechanism in India: Provisions for scheduled castes, Tribes and Minorities; Reservations for SC, ST and Backward classes; Prevention of SC and ST Atrocities Act; Nationaland State SC and ST Commission; Women's Commission.

Text Books:

- 1. Civics, Intermediate 2nd Year Telugu Akademi,2019
- 2. New Horizons of Public Administration, Mohit Bhattacharya, Jawahar Publishers and Distributors, 7th Edition 2008.
- 3. Democratic Politcs I and II, NCERT, 2019.
- 4. Political Theory, NCERT, 2019.
- 5. Indian Constitution at Work, NCERT, 2019

Reference Books:

- 1. Our Constitution by Subhash Kashyap, National Book Trust, India, 2nd Edition 2011.
- 2. Our Parliament by Subhash Kashyap, National Book Trust, India, 1st Edition 2011.

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19HS307 Economic and Social Development of India

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Course Objectives:

- To provide to students a basic understanding of Indian economy.
- To make students to understand the various sectors of an economy.
- To make students understand the role of government in managing economy.

Course Outcomes:

The student will be able to analyze and understand critically:

- the evolution of Indian Economy.
- the economic planning and functions of the organizations involved in planning.
- the structure of Indian economy and occupation structure of India and the economic reform strategy.
- · the impact of external sector on Indian economy.

Unit 1

Indian Economy on the eve of independence; India as developing Economy: Meaning, Characteristics and major issues; Occupational structure and Sectors of economy; Economic Development vs. Economic growth.

Economic Planning: Origin types, Planning in India: Background Objectives, Inclusive Growth, Investment Models, Resource Mobilization; Planning Commission, NDC, Multi level planning, Decentralized planning, NITI Aayog, Central Sector Schemes and Centrally Sponsored Schemes. Employment and Unemployment

Economic Reforms: Washington Consensus, Market Economy, Economic Reforms in India: LPG, Generations of Economic Reforms

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Unit II

Agriculture and Rural Development: Strategies Including Those Relating To Technologies And Institutions: Land Relations And Land Reforms,

Rural Credit: NABARD, Modern Farm Inputs And Marketing - Price Policy And Subsidies; NFSA, DFI

Unit III

Industry And Service Sector: Strategy of industrial development - Industrial Policy Reform; Reservation Policy relating to small scale industries. Sources of industrial finances - bank, share market, insurance companies, pension funds, non-banking sources. Competition Commission of India; Public Sector Units: Types, Reforms Privatisation and Disinvestment.

Service Sector – Importance, composition and growth with special reference to transport and communication, tourism and information technology.

Unit IV

Foreign trade: Salient features of India's foreign trade - composition, direction and organization of trade: recent changes in trade policy; Balance Of Payments, SEZ, WTO and foreign direct investment; role of foreign capital for direct investment and portfolio investment

Unit V

Fiscal Policy Budgeting and Fiscal Policy: Tax, expenditure, budgetary deficits, debt and fiscal reforms. Black money and Parallel economy in India - definition, estimates, genesis, consequences and remedies; Inflation and Types

TEXT BOOKS:

1. "Indian Enconomy", by Dutt and Sundaram: S. Chand & Co 2014

K.S. Caks

2. "Indian Economy", Misra & Puri: Himalaya Publications. 2014

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REFERENCE BOOKS:

- 1, Economic Survey of India, Oxford, Ministry of Finance GoI.
- 2. Indian Economy: Performance and Policies, Uma Kapila, 2018

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19HS403 Geography of India

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Course Objectives:

- To provide the students a basic understanding of concepts of physical geography.
- To make students understand the physical setting of India.
- To provide the students a survey of natural resources and their contribution in development of India
- To give the students a board understanding of industrial location in India and their reasons.
- To make students understand the population geography.

Course Outcomes:

The students will:

- comprehend the physical setting of the earth in space with its terrestrial and structural peculiarities
- understand the geo-/spatial and physical features of India
- know India's potential in various natural resources and prowess for economic growth and development
- have fair knowledge about the demography of India.

Unit I: Basic concepts

Solar System And Origin Of The Earth: Theories, Shape And Size Of The Earth; Lithosphere: Interior And Structure Of The Earth; Rocks; Landforms; Plate-Tectonics; Volcanoes And Earthquakes; Atmosphere: Structure And Importance; Heat Budget; Factors Controlling Temperature; Atmospheric Pressure; And Winds, Clouds And Precipitation; Hydrosphere: Oceanic Relief; Temperature; Salinity And Currents

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Unit II: Physical settings of India

Size, Location, Extent And Boundaries Of India; Physiographic Division Of India; Mountains, Plains, Plateaus, Coastal Plains And Islands; Drainage System: Introduction, Classification, The Himalayan River System And The Peninsular River System; Climate Of India: Introduction, Climatic Variations, Factors Influencing The Climate, Concept And Mechanism Of Monsoon, Cycle Of Seasons

Unit III: Natural Resources and their development in India

Introduction; Meaning, Significance And Classification Of Natural Resources; Land (Availability, Use, Problems And Solutions) Soil(Types, Erosion And Conservation) And Vegetation(Types And Forest Policy); Water Resources: Surface And Underground Water, Utility (Domestic, Industry And Irrigation); Development Of Mineral And Energy Resources; Importance, Types And Spatial Distribution

Unit IV: Economic Activities and infrastructural development in India

Introduction; Economic Activities And Infrastructure And Their Significance; Land Use(Net Sown Area, Forest, Fallow And Pasture Lands) Agriculture(Types, Major Crops, Pattern, Issues In Agricultural Development, Cattle Rearing And Fishing); Industrial Development: Industrial Location: Meaning And Factors, Modern Industry, Classification; Agro-Based Industries (Cotton, Textile And Sugar) And Mineral Based Industries (Iron, Steel, Petro-Chem Etc.);

Infrastructure: Road, Railways, Airways, Waterways and Ports

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Unit V: Human Resource Development in India

Population; Density, Distribution and growth; Population Composition; Rural-Urban, Sex Ratio, Age Composition, Linguistic And Religious Composition, Schedules Caste And Scheduled Tribes ;Composition And Distribution; Human Development; Meaning, HDI And Its Significance; Urbanization And Migration; Settlements

TEXT BOOKS:

- 1. Certificate Physical and Human Geography Goh Cheng Leong:, OUP, New Edition
- 2. India a Comprehensive Geography, D. R Khullar, Kalyani Publication 2018

REFERENCE BOOKS:

- 1. NCERT: 6th to 12th Books for Geography
- 2. Physical Geography Savindra Singh; 1998

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EMPLOYABILITY SKILLS (APTITUDE) - I

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Course Objective:

- Students will be introduced to various Arithmetic and Reasoning Problems.
- The students will have acquaintance with various problems like Time & distance, Percentages, Profit and Loss etc. besides solving puzzles and Critical Reasoning.

Course Outcomes:

The students will

- Meet the demands of current job market besides equipping them higher studies like GRE, GMAT, and CAT etc...
- Solves Arithmetic and Reasoning Problems within shortest possible time without paper work.
- · Exhibits better analytical and aptitude skills.
- · Develop skills to interpret data.

Unit - I

Number system, LCM & HCF of numbers, Percentage, Partnership & shares.

Unit - II

Ratio and proportion, Profit, loss and discount, Average & Mixtures, Simple, Compound interest.

Unit - III

Time and work, Time and distance, Data interpretation, Data sufficiency.

Unit - IV

Number series, Letter series, Analogy, Coding and decoding, Syllogisms, and Puzzle test.

Unit - V

Blood relations, Direction sense test, Permutation and Combination, Probability.

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TEXT BOOKS:

- 1. Quantitative Aptitude for Competitive Examinations by R. S. Aggarwal (2013)
- 2. The Pearson Guide to Quantitative Aptitude for Competitive Examinations by Dinesh Khattar (2013)

REFERENCE BOOKS:

- 1. Quantitative Aptitude for Competitive Examinations by Trishna Knowledge Systems (2013)
- 2. A Modern Approach to Verbal & Non-Verbal Reasoning by R. S. Aggarwal (2010)

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EMPLOYABILITY SKILLS (TECHNICAL) - II

L T P C

Course Objective:

- To up skill the students in logic development, Critical thinking, Problem solving and Programming.
- Practicing important programming concepts like operators, structures, pointers, functions, arrays, strings and control statements etc...

Course Outcomes:

- Student will have complete knowledge in various programming concepts.
- Able to solve the coding challenges and problems.
- Student can meet the demands of current job market in programming.

Unit I:

Introduction to Logic Building and Understanding Machines, Operators, Branching Problems, Coding Convention, Programs on looping statements, Pattern programs, Computation of Time complexity, Memory impact, Binary conversion.

Unit II:

Functional programming, Functions in header files, Command line arguments, Structures and Unions.

Unit III:

Introduction to Arrays, Programs on Order Statistics, Rearranging, Segregation, Searching and sorting techniques.

Unit IV:

Introduction to Strings, Programs on Strings like Searching, Rearranging, Encryption and Decryption.

Unit V:

Recursion - Understanding through reverse learning approach - Identifying intention, Writing recurrences, and understanding backtracking.

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TEXT BOOKS:

- 1. Programming with C by Brian W. Kernighan and Dennis Ritchie
- 2. C in Depth by Deepali Srivastava and S. K. Srivastava

REFERENCE BOOKS:

- 1. C: The Complete Reference Fourth edition by Herbert Schildt
- 2. Test Your C Skills by Yashavant P. Kanetkar

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Mr S Suresh Babu





Department of Sciences and Humanities

Minutes of the Meeting of the Board of Studies, held in the T&P facility on 01.04.2019, at VFSTR University, Vadlamudi.

Members Present:

- 1. Dr. D.S Kesava Rao (Subject Expert) Professor of English, NIT, Warangal, T.S.
- 2. Dr. Prakash Kona (Subject Expert) Professor, EFLU, Hyderabad, T.S.
- 3. **Dr. N. Srinivasu**, Chair Person, BOS for English and Head, Dept. of Sciences and Humanities, VFSTR University, Vadlamudi.
- 4. Ms. A. Sharada, Assoc. Professor, Dept. of Sciences and Humanities, VFSTR University. Vadlamudi.
- 5. Dr. S.D. Sasi kiran, Assoc. Professor, Dept. of Sciences and Humanities, VFSTR University, Vadlamudi.
- 6. Mr. G. Nageswara Rao. Asst. Professor, Dept. of Sciences and Humanities, VFSTR University, Vadlamudi.
- 7. Members of the faculty from Dept. of Sciences and Humanities (Ms. T. Swathi, Mr. V. Chandrasekhar Rao, Mr. U. Sri Ranganath, Ms. Sk. Shakila Bhanu and Dr. M. Ramana Raju) attended the meeting.

Agenda:

Review of three papers related to Teaching of English and Skills enhancement for employability being proposed for I, II and III B.Tech, as per R- 19.

- 1. Technical English Communication (TEC) for I. B. Tech
- 2. English Proficiency Course (EPC) for I. B. Tech
- 3. Professional Ethics, Values and Human Rights (PEVHR) for III B.Tech

Proceedings:

The members of Board of Studies accepted the syllabus proposed for the above mentioned courses and suggested the following modifications:

For TEC:

Even though R19 was a much improved version from R16, it still required many improvements:

- The experts suggested that we have to equally focus on all the four language skills.
- Two new units Energy and Space Trek were incorporated in R19 by replacing
 Engineering Ethics and Emerging Technology in R16. The reason being, the newly
 incorporated units with exercises focusing on language skills and thus students will get
 more opportunity to practice language skills.
- Topics on gender equality and sensitivity comprise a considerable portion in R19 which was not so well covered in R16.
- In R19, more emphasis was given on improving reading comprehension skills realizing the importance of academic reading for the budding engineers which as a miss though not completely but to a considerable level in R16.
- R19 also emphasized more on developing students' oral proficiency in addition to improving their academic writing skills.
- R19 was oriented towards including more assignment based learning which is a departure from R16 which by and large was classroom based learning.
- R19 was further shrunk from R16 to make it more manageable and devote more time on the language component for better and effective learning.
- R19 was designed in alignment with the POs.

For EPC:

The subject experts were satisfied with the proposed contents and recommended for its adoption without any changes. They advised that we should continue to conduct the assessment in the same pattern, i.e., activity based.

For PEVHR:

The experts suggested us to go with more case studies and news clippings to throw light on the subject. They also advised the internal members of the Board to plan for a textbook to customize to the needs of the students of the university.

Prof. D.S. Kesava Rao

Mr. S.D. Sasi Kiran

Dr. Prakash Kona

Mr. G.Naseswara Rao