VIGNAN'S
Foundation for Science, Technology & Research
(Deemed to be University)
Estd u/s 3 of UGC Act 1956

DEPARTMENT OF APPLIED ENGINEERING
Minutes of BoS Meeting
B.Tech Agriculture Engineering

Meeting Minutes of board of studies –BoS on 20-04-2019, with Minutes of Board of studies meeting in U-Block Ground floor at AGF 05, Total Eleven members were participated in the BoS meeting for R-19 Academic curriculum.

Meeting Minutes of board of studies- BoS on 20/04/19

1. According to ICAR the credit load should not be more than 23 credits per semester.
2. "Workshop Technology and Practices"course needs four practical hours per week.
3. For Student Ready delete the term "Registration only" and add "Evaluation".
4. Electives may be taken from either same stream or different stream.
5. Industry experts have to be invited for elective courses, if necessary.
6. As per ICAR more industry personnel need to be invited to make good understanding between industry and students.
7. For elective courses conduction of lab is needed.
8. For offering all elective courses laboratory facilitiesto be strengthened.
9. On campus learning in ELP units are to be implemented with profit oriented.
10. For Student Ready-I, Student has to undergone programme i.e. industry, NGO, and institute.
11. Remove technical seminar- 2 from 8th semester (Instead of that 1 credit to be added in Surveying and Levelling practical: (1+2))
12. All lab classes should be conducted and should be preserved as well to get accreditation.
13. Practical examination to be shown as last lab in all practical.
14. Expand all the units to accommodate lecture plans.
15. Surveying and levelling lab should be limited within 15 experiments otherwise it exceeds 60 hrs.
16. Engineering Drawing should be limited to 60 practical experiments.
17. Editing is needed in objective of Engineering Drawing Course
18. Engineering Mathematics should be finalized with course outcomes and programme outcomes
19. Practical should be removed from "Environmental Science and Disaster Management" as it is (2+0) course.
20. No of practicals should be added in "Principles of Agronomy".
21. Principles of Horticultural Crops and Plant Protection" should be copied from CAE, BAPATLA.
22. In Workshop Technology practical experiments to be increased upto 30 as it is (1+2) having 2 credits in practical (CNC lathe machines experiments can be added).
23. All Text Book and Reference Books name should be written in same format.
24. "Heat and Mass Transfer" and "Machine Design" has to be interchanged(Heat and Mass transfer: 3rd Sem) and (Machine Design: 4th Sem).
25. Design of Structure sub should be elaborated.
26. In "Theory of Machine" subject "balancing" topic to be deleted.

General suggestions (By Prof. K. P. Vidhu).

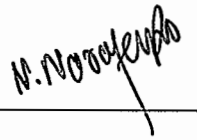
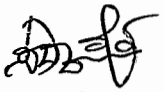
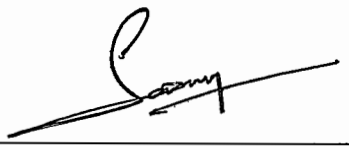
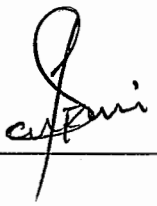
- The R19 B.Tech Agriculture Engineering Curriculum is revised in line with ICAR, while framing new curriculum and changes incorporated in proposed R19 Curriculum with the 51% of revision.
- The Curriculum follows Choice Based Credit System (CBCS) as shown in the Structure (Appendix-I)
- BoS recommends the implementation of syllabus in full agreement with ICAR pattern to go for ICAR accreditation.
- The Curriculum comprises of the courses that enable employability or entrepreneurship or skill development as shown in Appendix-II.
- Significant changes have taken place in the curriculum and the list is provided in Appendix-III

Dr. Vidhu Kamurath . P

Dr. B.V.S. Prasad

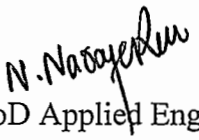
Mr. Sandeep Singh Rana

Internal Members:

S no	Name	Signature
1	Mr. N. Narayan Rao Asst. Prof & Head-Applied Engineering, Vignan's Foundation for Science, Technology & Research (Deemed to be University), Vadlamudi.	
2	Dr. A. Rama Rao Asst. Prof , Applied Engineering Vignan's Foundation for Science, Technology & Research (Deemed to be University), Vadlamudi.	
3	Dr. Ayyanna DS Asst. Prof , VFSTR, Applied Engineering (Deemed to be University), Vadlamudi	
4	Mr. Aminul Islam Asst. Prof , VFSTR, Applied Engineering (Deemed to be University), Vadlamudi	
5	Mr. Samaresh Kumar Asst. Prof , Applied Engineering VFSTR, (Deemed to be University) Vadlamudi	
6	Mr. Bibek Bahadur Shrestha. Asst. Prof , Applied Engineering VFSTR, (Deemed to be University) Vadlamudi	
7	Mr. Madhusudan BS Asst. Prof , Applied Engineering VFSTR, (Deemed to be University) Vadlamudi	
8	Mr. Sapuni Sebastian Asst. Prof , Applied Engineering VFSTR, (Deemed to be University) Vadlamudi	

Thanking you Sir,

Yours Sincerely,



HoD Applied Engineering

BoS Chairman

Appendix-I

I year I semester

Course Title	L	T	P	C
Engineering Mathematics - I (A)	2	0	2	3
Engineering Physics (D)	2	0	2	3
Computer Programing and Data Structures	1	0	4	3
Principles of Agronomy	2	0	2	3
Surveying and Levelling	1	0	4	3
Engineering Mechanics	3	0	0	3
Engineering Drawing	0	0	4	2
Communication Skills and Personality Development	1	0	2	2
Physical Fitness, Sports & Games - I / NCC/NSS/Yoga	0	0	3	1*
Total	12	0	23	22

I year II semester

Course Title	L	T	P	C
Engineering Mathematics-II (A)	2	0	2	3
Environmental Science and Disaster Management	2	0	0	2
Principle of Soil Science	2	0	2	3
Fluid Mechanics and Open Channel Hydraulics	2	0	2	3
Strength of Materials	1	0	2	2
Workshop Technology and Practices	1	0	4	3
Engineering Chemistry (D)	2	0	2	3
Applied Electronics and Instrumentation	2	0	2	3
Physical Education, Sports & Games-I /NCC/NSS/Yoga	0	0	3	1*
Total	14	0	19	22

II year I semester

Course Title	L	T	P	C
Engineering Mathematics - III (A)	2	0	2	3
Principles of Horticultural Crops and Plant Protection	1	0	2	2
Heat and Mass Transfer	2	0	0	2
Soil Mechanics	1	0	2	2
Ground Water Wells and Pumps	2	0	2	3
Watershed Hydrology	1	0	2	2
Theory of Machines	2	0	0	2
Electrical Machines and Power Utilization	2	0	2	3
Entrepreneurship Development and Business Management	2	0	2	3
Human Values, Professional Ethics and Gender Equity	1	0	0	1
Total	16	0	14	**23**

II year II semester

Course Title	L	T	P	C
Tractor and Automotive Engines	2	0	2	3
Engineering Properties of Agricultural Produce	1	0	2	2
Irrigation Engineering	2	0	2	3
Soil and Water Conservation Engineering	2	0	2	3
Fundamentals of Renewable Energy Sources	2	0	2	3
Thermodynamics, Refrigeration and Air-Conditioning	2	0	2	3
Auto-CAD Applications	0	0	4	2
Machine Design	2	0	0	2
Total	13	0	16	**21**

III year I semester

Course Title	L	T	P	C
Tractor Systems and Controls	2	0	2	3
Farm Machinery and Equipment-I (Tillage and Sowing Operations)	2	0	2	3
Agricultural Structures and Environmental Control	2	0	0	2
Post-Harvest Engineering of Cereals, Pulses and Oil Seeds	2	0	2	3
Sprinkler and Micro Irrigation Systems	1	0	2	2
Watershed Planning and Management	1	0	2	2
Building Construction and Cost Estimation	2	0	0	2
Renewable Power Systems	1	0	2	2
Design of Structures	1	0	2	2
Skill Development Training-I (Student READY)	0	0	10	5
Total	14	0	24	**26**

III year II semester

Course Title	L	T	P	C
Web Designing and Internet Applications	1	0	2	2
Farm Machinery and Equipment-II	2	0	2	3
Post-Harvest Engineering of Horticultural Crops	1	0	2	2
Water Harvesting and Soil Conservation Structures	2	0	2	3
Drainage Engineering	1	0	2	2
Tractor and Farm Machinery Operation and Maintenance	0	0	4	2
Dairy and Food Engineering	2	0	2	3
Bio-energy Systems: Design and Applications	2	0	2	3
Total	11	0	18	**20**

IV year I semester

Course Title	L	T	P	C
Industrial Attachment / Internship (Student READY)	0	0	20	10
Experiential Learning On Campus (Student READY)	0	0	20	10
Skill Development Training - II (Student READY)	0	0	10	5
Educational Tour (2 - Weeks During January)	0	0	0	2
Technical Seminar - I	0	0	2	1
Total	0	0	52	28

IV year II semester

Course Title	L	T	P	C
Project Planning, Work and Report Writing (Student READY)	0	0	20	10
Elective Course - I	2	0	2	3
Elective Course - II	2	0	2	3
Elective Course - III	2	0	2	3
Total	6	0	26	19

DEPARTMENT ELECTIVES

ELECTIVE - I

Course Title	L	T	P	C
Mechanics of Tillage and Traction	2	0	2	3
Farm Machinery Design and Production	2	0	2	3
Human Engineering and Safety	2	0	2	3
Tractor Design and Testing	2	0	2	3
Hydraulic Drives and Controls	2	0	2	3
IoT Applications in Agriculture	3	0	0	3
Photovoltaic Technology and Systems	2	0	2	3
Mechatronics	2	0	2	3
Precision Farming Techniques for Protected Cultivation	2	0	2	3

ELECTIVE -II

Course Title	L	T	P	C
Floods and Control Measures	2	0	2	3
Wasteland Development	2	0	2	3
Information Technology for Land and Water Management	2	0	2	3
Remote Sensing and GIS Applications	2	0	2	3
Management of Canal Irrigation System	2	0	2	3
Minor Irrigation and Command Area Development	2	0	2	3
Water Quality and Management Measures	2	0	2	3
Artificial Intelligence	3	0	0	3
Climate Change and Use of Geoinformatics	2	0	2	3

Elective -III

Course Title	L	T	P	C
Food Quality and Safety	2	0	2	3
Food Plant Design and Management	2	0	2	3
Food Packaging Technology	2	0	2	3
Development of Processed Products	2	0	2	3
Process Equipment Design	2	0	2	3
Processing of Fish and Marine Products	2	0	2	3
Processing of Spices and Plantation Crops	2	0	2	3
Waste and By-Products Utilization	2	0	2	3

"The courses that are highlighted denote implementation of Choice Based Credit System (CBCS)"

N. Nayeem

Chairman – BoS

Appendix-II

List of Courses that enable employability or entrepreneurship or Skill development in the R19 B.Tech- Agriculture Engineering

Year	Course Name	Course Nature
I	Engineering Mathematics - I (A)	Employability
I	Engineering Physics (D)	Skill development
I	Computer Programing and Data Structures	Employability
I	Principles of Agronomy	Skill development
I	Surveying and Levelling	Skill development
I	Engineering Mechanics	Employability
I	Engineering Drawing	Employability
I	Communication Skills and Personality Development	Skill development
I	Physical Fitness, Sports & Games - I / NCC/NSS/Yoga	Skill development
I	Engineering Mathematics-II (A)	Skill development
I	Environmental Science and Disaster Management	Entrepreneurship
I	Principle of Soil Science	Skill development
I	Fluid Mechanics and Open Channel Hydraulics	Employability
I	Strength of Materials	Employability
I	Workshop Technology and Practices	Employability
I	Engineering Chemistry (D)	Skill development
I	Applied Electronics and Instrumentation	Skill development
I	Physical Education, Sports & Games-I /NCC/NSS/Yoga	Employability
II	Engineering Mathematics - III (A)	Employability
II	Principles of Horticultural Crops and Plant Protection	Employability
II	Heat and Mass Transfer	Employability
II	Soil Mechanics	Employability
II	Ground Water Wells and Pumps	Employability
II	Watershed Hydrology	Employability
II	Theory of Machines	Skill development
II	Electrical Machines and Power Utilization	Skill development
II	Entrepreneurship Development and Business Management	Entrepreneurship
II	Human Values, Professional Ethics and Gender Equity	Employability
II	Tractor and Automotive Engines	Employability
II	Engineering Properties of Agricultural Produce	Skill development
II	Irrigation Engineering	Employability
II	Soil and Water Conservation Engineering	Employability
II	Fundamentals of Renewable Energy Sources	Employability
II	Thermodynamics, Refrigeration and Air-Conditioning	Employability
II	Auto-CAD Applications	Skill development
II	Machine Design	Employability
III	Tractor Systems and Controls	Skill development
III	Farm Machinery and Equipment-I (Tillage and Sowing Operations)	Skill development
III	Agricultural Structures and Environmental Control	Skill development
III	Post-Harvest Engineering of Cereals, Pulses and Oil Seeds	Skill development
III	Sprinkler and Micro Irrigation Systems	Skill development
III	Watershed Planning and Management	Entrepreneurship
III	Building Construction and Cost Estimation	Skill development
III	Renewable Power Systems	Employability

III	Design of Structures	Skill development
III	Skill Development Training-I (Student READY)	Skill development
III	Web Designing and Internet Applications	Employability
III	Farm Machinery and Equipment-II	Employability
III	Post-Harvest Engineering of Horticultural Crops	Skill development
III	Water Harvesting and Soil Conservation Structures	Skill development
III	Drainage Engineering	Skill development
III	Tractor and Farm Machinery Operation and Maintenance	Skill development
III	Dairy and Food Engineering	Skill development
III	Bio-energy Systems: Design and Applications	Employability
IV	Industrial Attachment / Internship (Student READY)	Employability
IV	Experiential Learning On Campus (Student READY)	Employability
IV	Skill Development Training - II (Student READY)	Skill development
IV	Educational Tour (2 -Weeks During January)	Skill development
IV	Technical Seminar - I	Employability
IV	Project Planning, Work and Report Writing (Student READY)	Employability
E	Mechanics of Tillage and Traction	Employability
E	Farm Machinery Design and Production	Employability
E	Human Engineering and Safety	Employability
E	Tractor Design and Testing	Employability
E	Hydraulic Drives and Controls	Employability
E	IoT Applications in Agriculture	Skill development
E	Photovoltaic Technology and Systems	Skill development
E	Mechatronics	Employability
E	Precision Farming Techniques for Protected Cultivation	Employability
E	Floods and Control Measures	Employability
E	Wasteland Development	Skill development
E	Information Technology for Land and Water Management	Entrepreneurship
E	Remote Sensing and GIS Applications	Employability
E	Management of Canal Irrigation System	Employability
E	Minor Irrigation and Command Area Development	Employability
E	Water Quality and Management Measures	Entrepreneurship
E	Artificial Intelligence	Employability
E	Climate Change and Use of Geoinformatics	Skill development
E	Food Quality and Safety	Skill development
E	Food Plant Design and Management	Entrepreneurship
E	Food Packaging Technology	Skill development
E	Development of Processed Products	Skill development
E	Process Equipment Design	Employability
E	Processing of Fish and Marine Products	Skill development
E	Processing of Spices and Plantation Crops	Employability
E	Waste and By-Products Utilization	Skill development

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Appendix –III

List of New Courses in the R-19 B.Tech Agriculture Engineering

S.No	Semester (Year)	Course Name
1	I Year I Semester	Engineering Mathematics - I (A)
2	I Year I Semester	Engineering Physics (D)
3	I Year I Semester	Computer Programing and Data Structures
4	I Year I Semester	Principles of Agronomy
5	I Year I Semester	Surveying and Levelling
6	I Year I Semester	Engineering Mechanics
7	I Year I Semester	Engineering Drawing
8	I Year I Semester	Communication Skills and Personality Development
9	I Year I Semester	Physical Fitness, Sports & Games - I / NCC/NSS/Yoga
10	I Year II Semester	Engineering Mathematics-II (A)
11	I Year II Semester	Environmental Science and Disaster Management
12	I Year II Semester	Principle of Soil Science
13	I Year II Semester	Fluid Mechanics and Open Channel Hydraulics
14	I Year II Semester	Strength of Materials
15	I Year II Semester	Workshop Technology and Practices
16	I Year II Semester	Engineering Chemistry (D)
17	I Year II Semester	Applied Electronics and Instrumentation
18	I Year II Semester	Physical Education, Sports & Games-I /NCC/NSS/Yoga
19	II Year I Semester	Engineering Mathematics - III (A)
20	II Year I Semester	Principles of Horticultural Crops and Plant Protection
21	II Year I Semester	Heat and Mass Transfer
22	II Year I Semester	Soil Mechanics
23	II Year I Semester	Ground Water Wells and Pumps
24	II Year I Semester	Watershed Hydrology
25	II Year I Semester	Theory of Machines
26	II Year I Semester	Electrical Machines and Power Utilization
27	II Year I Semester	Entrepreneurship Development and Business Management
28	II Year I Semester	Human Values, Professional Ethics and Gender Equity
29	II Year II Semester	Tractor and Automotive Engines
30	II Year II Semester	Engineering Properties of Agricultural Produce
31	II Year II Semester	Irrigation Engineering
32	II Year II Semester	Soil and Water Conservation Engineering
33	II Year II Semester	Fundamentals of Renewable Energy Sources
34	II Year II Semester	Thermodynamics, Refrigeration and Air-Conditioning
35	II Year II Semester	Auto-CAD Applications
36	II Year II Semester	Machine Design
37	III Year I Semester	Tractor Systems and Controls
38	III Year I Semester	Farm Machinery and Equipment-I (Tillage and Sowing Operations)

39	III Year I Semester	Agricultural Structures and Environmental Control
40	III Year I Semester	Post-Harvest Engineering of Cereals, Pulses and Oil Seeds
41	III Year I Semester	Sprinkler and Micro Irrigation Systems
42	III Year I Semester	Watershed Planning and Management
43	III Year I Semester	Building Construction and Cost Estimation
44	III Year I Semester	Renewable Power Systems
45	III Year I Semester	Design of Structures
46	III Year I Semester	Skill Development Training-I (Student READY)
47	III Year II Semester	Web Designing and Internet Applications
48	III Year II Semester	Farm Machinery and Equipment-II
49	III Year II Semester	Post-Harvest Engineering of Horticultural Crops
50	III Year II Semester	Water Harvesting and Soil Conservation Structures
51	III Year II Semester	Drainage Engineering
52	III Year II Semester	Tractor and Farm Machinery Operation and Maintenance
53	III Year II Semester	Dairy and Food Engineering
54	III Year II Semester	Bio-energy Systems: Design and Applications
55	IV Year I Semester	Industrial Attachment / Internship (Student READY)
56	IV Year I Semester	Experiential Learning On Campus (Student READY)
57	IV Year I Semester	Skill Development Training - II (Student READY)
58	Department Elective	Mechanics of Tillage and Traction
59	Department Elective	Farm Machinery Design and Production
60	Department Elective	Human Engineering and Safety
61	Department Elective	Tractor Design and Testing
62	Department Elective	Hydraulic Drives and Controls
63	Department Elective	IoT Applications in Agriculture
64	Department Elective	Photovoltaic Technology and Systems
65	Department Elective	Mechatronics
66	Department Elective	Precision Farming Techniques for Protected Cultivation
67	Department Elective	Floods and Control Measures
68	Department Elective	Wasteland Development
69	Department Elective	Information Technology for Land and Water Management
70	Department Elective	Remote Sensing and GIS Applications
71	Department Elective	Management of Canal Irrigation System
72	Department Elective	Minor Irrigation and Command Area Development
73	Department Elective	Water Quality and Management Measures
74	Department Elective	Artificial Intelligence
75	Department Elective	Climate Change and Use of Geoinformatics
76	Department Elective	Food Quality and Safety

77	Department Elective	Food Plant Design and Management
78	Department Elective	Food Packaging Technology
79	Department Elective	Development of Processed Products
80	Department Elective	Process Equipment Design
81	Department Elective	Processing of Fish and Marine Products
82	Department Elective	Processing of Spices and Plantation Crops
83	Department Elective	Waste and By-Products Utilization

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