Minutes of the Meeting of
Second Board of Studies (BoS) Meeting of Vignan Institute of Agriculture and Technology (VIAT), Vignan's Foundation for Science, Technology and Research (Deemed to be University) 26th September 2022 (In Hybrid mode)

The Second Board of Studies Meeting of Vignan Institute of Agriculture and Technology (VIAT), VFSTR was conducted on 26.09.2022 between 10.30 am to 1.00 pm in hybrid Mode (online and offline) under the Chairmanship of Dr. T. Ramesh Babu, Dean, Vignan Institute of Agriculture and Technology (VIAT).

The following BoS Members were present

S.No.	Name	Internal/ External	Attended through
1	Prof. T. Ramesh Babu, Dean, Vignan Institute of Agriculture and Technology	Internal	Offline
2	Dr. K. P. Vidhu Joint Director (PHE) & Registrar (I/c) NIPHM, Hyd.	External	Online
3	Dr. T. Prameela Devi Professor (Principal Scientist) Plant Pathology, IARI, New Delhi	External	Online
4	Sri Prasad Karumanchi Chairman & M.D. Prasad Seeds, Hyderabad	External	Offline
5	Dr. Benjamin Raja, Founder and CEO, Farmagain Coimbatore	External	Online
6	Dr. Parimi Srinivas, Regional Resistance Management Lead – Asia Pacific, Bayer Crop Science, Singapore	External	Offline
7	Dr. K.P.C. Rao, Honorary Fellow, Innovation Systems for the Drylands (ISD), International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Hyderabad	External	Offline
8	Dr. Y. Ashoka Rani Former Professor & Head Dept. of Crop Physiology, ANGRAU	External	Online
9	Prof. D. Vijaya Ramu Dean Academics & Professor, Biotech.	Internal	Online
10	Dr. Y. Vara Prasad, Assistant Director, VIAT	Internal	Offline
11	Mr. N. Narayan Rao, Head, Applied Engineering	Internal	Offline

Dr. T. Ramesh Babu, Chairperson, BoS, welcomed the members.

Agenda Items

1 R 22 Regulations for 4 year B.Sc. (Hons.) Agriculture course

- **Modular mode of course content**
- **Assessment (Formative and Summative)**
- **Qualifying criteria**
- **Award of Class and grading information**
- **Honorary Entry and Honorary Exit during the course**

2 Minor Course for B.Tech. with Honours Specialization: XX
Specialization (Theme):

- ***Smart Farming: The Future of Agriculture***

Agenda Item 1 : *R 22 Regulations for 4 year B.Sc. (Hons.) Agriculture course*

R22 - Academic regulations, Curriculum and course contents, *is an articulation of the VFSTR* deemed to be University's commitment towards NEP-2020, with a view that it enables:

- Student(s) to maintain the spirit of continuous learning and continuous assessment to replace the normal tendency of preparing just before a test or an examination.
- The proposed framework accomplishes multi-disciplinary holistic education, continuous assessment along with multiple honorable exit** options if a student falls short to complete the requirements to earn the degree within the stipulated period including the permissible spill over period.
  **ICAR guidelines will be followed
- Multi-disciplinary holistic education at the undergraduate level that includes integrated and rigorous exposure to science, humanities, management, and professional domains, as well as sufficient flexibility in curricular structures that allow students to choose electives
- Such holistic and diverse education will assist the candidate in transforming into all-rounded persons
- In line with NEP-2020, more weight will be given to continuous / formative assessment, which is an Integrated learning model comprising
  Learning – Thinking – Understanding – Skilling – Applying – Creating
- Emphasis on continuous formative assessment with a creative summative assessment will facilitate the candidate to "Move away from high stake examinations – towards more continuous and comprehensive evaluation".

With the above background presented the following aspects for consideration for 4 year B.Sc. (Hons.) Agriculture course

- To earn 189 credits for the award of degree as specified in the Curriculum.
- A student may register for a maximum of 25 credits per semester
- Two regular Semesters (Odd and even: 20-22 weeks each) and one Summer Semester during May-June: 6 to 8 weeks, in a calendar year

- The students having 'R' (Repeat grade) courses may register for the course work during summer semester.
- However, during Summer semester, A student may register up to a maximum of 16 credits
- Electives: Three courses of 3 credits each
- A candidate has a choice to choose the elective courses.
- Pooled together Fourteen elective courses enabling a candidate to choose the electives from a pool so that he/she can focus to a specific theme.

Distribution of 189 credits over 8 semesters

	R 22	
Semester	Credits	Hours
I	24 (15+9)	15+0+18=33
II	25 (13+12)	13+0+20=33
III	25 (15+10)	15+0+20=35
IV	25 (15+10)	15+0+20=35
V	25 (14+11)	14+0+22= 36
VI	25 (14+11)	14+0+22= 36
VII	20 (0+20)	0+6+40= 46
VIII	20 (0+20)	0+4+40= 44
Total	189	298

Total Credits for 4 years (8 Semesters) :: 189 which includes ICAR 183 Credits + 6 Credits (3 additional courses of VFSTR in IoT).

Course Curriculum

- The course curriculum structure for entire 189 credits over 8 semesters was presented

Organization of course contents

- Course offered in the program is composed of two modules covering all the course contents required for a candidate to obtain knowledge and skill.
- Content in each module is further distributed among two units;
- wherein Unit -1 contains 'Fundamentals and Broad perceptive' of the module.
- Unit-2 comprises of the extension / advanced topics of Unit-1 as well as necessary practice models for validation / applying the knowledge gained during L/T sessions.

- The modular period is about 8 weeks.
- The first unit in a module may be covered in 2 to 3 weeks and the second unit of the module maybe of 5 to 6 weeks
- By the end of each module a candidate must be in a position to translate his/ her L-based knowledge into P-based skill as prescribed in the curriculum.
- Individual formative assessment shall be in place for each module and a single semester- end summative assessment for the course composed of both the modules.

Attendance

- VFSTR expects 100% attendance.
- The attendance *in each course shall not be less than 75 %* of the aggregate of all L, T, P sessions *conducted in that course*

  (Earlier regulation R 21: aggregate attendance obtained for each and every semester shall not be less than 80 %)

✓ Attendance calculations will be periodically reviewed at the end of every 4 weeks
✓ The final status of attendance will be reported at the end of 15th week
✓ The student shortage of attendance was not condoned shall be considered as 'Repeat' category courses and will be under 'R' grade
✓ 'R' grade students will not be allowed to take up the summative assessment in that semester
✓ The shortage of attendance may be condoned up to 10% on the ground of ill-health, social obligations, participating / representing in sports/cultural events, placement activities etc.
✓ Documentary evidence like medical reports and certificates issued by concerned bodies is to be produced on time as support for the attendance shortage due to ill-health
✓ These cases are subjected to the scrutiny of a committee constituted for this purpose by the Vice-Chancellor. The decision of the committee shall be final

Qualifying criteria

✓ Attendance compliance should be 75% or within condonable range; else the candidate is put into 'R' grade
✓ In formative assessment, a candidate should secure a minimum of 35% i.e. 17.5 marks out of 50; else the candidate is put into 'R' grade
✓ In summative assessment, a candidate should secure a minimum of 50% i.e.25 marks out of 50 (as per ICAR) else the candidate is put into 'I' (Incomplete) grade.
✓ The proportion is 60:40 for B. Tech courses (as per ICAR 50:50), No indication of minimum marks for Mid by ICAR, hence 35 % is considered for Formative Assessment
✓ Collectively the candidate should secure a min. grade of 5.0 (as per ICAR) in a scale of 10 after relative grading; else the candidate has to choose either 'R' or 'I' grade
✓ A candidate who has secured grade <6 in a course may be permitted (optional) to volunteer to improve his/ her grade by opting suitably 'R' or 'I' grade in that course.
✓ The candidates with 'R' grade should re-register for 'R' courses either in Summer semester or in a regular semester as and when the courses are offered.
✓ The candidates in 'I' grade are allowed to appear for supplementary summative assessment whenever the semester-end assessments are conducted.

Marks distribution

- Each course, the maximum sum of formative and summative assessment marks put together is 100, in the ratio of 50:50, respectively

Modular Questions Bank

The formative assessment and the importance of Modular Question bank was discussed in detail and presented few Modular Questions from various courses for better understanding.

- To monitor the progress of students, continuous assessment comprising of five targets (T1, T2, T3, T4 and T5) is advocated in each module for a max./of 50 marks
- For a class (or section) of 60 to 70 students, formative assessment commences by the announcement of module bank containing 10 problems for each module in a course
- The purpose of creating module bank of 10 problems is to assign one problem each to 2 batches of 3 - 4 members
- The batches are composed of randomly picked up candidates. These batches remain same for all courses and also for the P-sessions in the courses in that semester and are created in the beginning of that semester.
- The purpose of assigning one problem to two batches is to create a healthy competitive spirit between the two batches

L-based courses integrated with P/T

- Continuous assessment comprising of five targets T1 -10 Marks, T2-10 Marks, T3-10 Marks, T4 -10 Marks, T5-20 Marks is advocated in each module for a maximum of 60 marks. Both the Modules : 60+60=120: Downscaled to 50 (as per ICAR). An unscheduled manner like Surprise Tests also may be conducted.

T1: Target 1

- During 5th or 6th week of each module a classroom test shall be conducted.
- T1 consists of two parts: A and B.
- Part A consists of one random problem from the module bank and vary from batch to batch.

  (All the questions in the module bank shall be distributed among students and students shall know the question to be answered only on the day of test in the examination hall)
- Part B consists of one common problem at fairly application / advanced level (not at all prior notified) for all the students from outside the module bank.
- T1 - test for a period of 60 min (maximum) - shall be assessed for 30 marks and downscaled to 10 marks.

T2 : **Target 2**

- Is primarily an extension of problem received in T1 for carrying out validation study:
- Case studies / Simulations / Experimentation
- Each batch shall interact with the course instructor to finalize the nature of validation and expected to complete the exercise within 10 to 15 days after T1

T3: Target 3

- Shall be conducted during the last week of each module
- Student batches are expected to submit a report, clearly documenting the work executed during T2
- The report should be in a voice in-built PPT should be prepared and submitted.

T4: Target 4

- Is a comprehensive module test, conducted for 30 minutes comprising of 20 multiple choice questions (MCQs) covering the holistic content of module
- Shall be evaluated for a maximum of 10 marks @ ½ mark for each question
- Will be conducted in ON-LINE mode
- There shall be two tests in each course in a day and the best performance of the tests shall be considered for awarding the marks

T5: Target 5

- Assessment is based on Practice or Tutorial assignments
- Implementation, report presentation and discussion shall happen in a continuous mode throughout the module period
- At least 4 such continuous lab practice assessments (CLPA)/ assignments per module shall be conducted by course instructor
- The marks will be @ 5 marks per assignment totaling up to 20 per module.

The marks scored in Module-1 for a maximum of 60 should be entered/ submitted latest by 9th week and of Module-2 latest by 17th week of the semester. Consolidated score for a max. of 120 suitably mapped down to a max. of 50 marks (as per ICAR) should be submitted latest by 18th week of semester enabling the declaration of 'R'- grade before the commencement of summative assessment. A candidate put under 'R' will not be permitted to take up the summative assessment.

Summative assessment

An instructor may choose one of the two formats for conducting summative assessment for L-based courses integrated with T/P.

- 15 + 25 marks format or 20 + 20 marks format (following b, c, d below).
- 40 marks format (following c, d below).

b) If summative assessment is in two parts format:

- Part-I will be the assessment of capstone project which is pre-assigned during the module-2 period or will be the exploratory review assessment of all lab practice assignments.
- Part-II will be based on a written examination for a max. marks of 80, as in c & d below, which is *suitably mapped down to 25 or 20 based on the selected pattern of format.*

- A candidate should attend both the parts of summative assessments; else he will be put into "I" grade.

c)

- For each L-based course integrated with T/P, the summative assessment shall be conducted by the Institute for a duration of 150 min. and for a maximum of 80 marks.
- Contents for summative assessment shall cover the breadth and depth of the complete syllabus that is mentioned in the two modules of a course.

d)

- The question paper for end-semester theory examination consists of two parts as given below

Theory Examination Question Paper Pattern.

Part	No. of Questions	Marks /each Question	Marks	Choice
A	4	10	40	No
B	2	20	40	No
Total Marks			80	

e)

- The questions will be comprehensive covering the entire course syllabus and any single question should not necessarily be limited to any particular unit / module.

f)

- The marks scored out of 80 is *suitably mapped down into a score out of 50.*

g)

- Total marks of summative assessment will be for a max. of 50 irrespective of format of evaluation.

h)

- The award of 'I' grade is solely based on marks scored in summative assessment out of 50, if he/she does not score a min. 25.0 out of 50 (50%).

P-based Courses

- The detailed information consisting of experiments, batch formations, experiment schedules, etc., will be displayed/informed to the student in the first week of the semester
- Copies of the lab manual will be made available to the students along with the schedule.
- The lab manual will consist of the list of equipments, detailed procedure to conduct the experiment, format for record writing, outcomes for each experiment and possible set of short questions to help students gain critical understanding.

Formative Assessment (P-Based)

- During laboratory sessions, a brief viva-voce is conducted for each student on the experiment he/she is carrying out on that day.
- The set of parameters may slightly differ from one laboratory to the other, and will be announced before the commencement of the lab session.
- These parameters are assessed for each laboratory session.

Suggested parameters for Continuous Lab Assessment (CLA)

S.No.	Component	Marks
1	Report of about 1 page on proposed experimental layout and background theory before the start of lab session	4
2	Viva and interaction to evaluate understanding of concepts	4
3	Experimentation and data collection	4
4	Analysis of experimental data and interpretation	4
5	Finalized report submitted in the next week	4
Total		20

This assessment is carried out for each practical session and the total marks of all practical sessions will be suitably mapped down to a max. of 50.

Summative Assessment (P Based)

- End semester examination for each practical course is conducted jointly by two examiners.
- The examiners are appointed by Dean, AAA from the panel of examiners suggested by the respective HoDs.
- In some cases, one of the examiner may be from outside the institution and will be identified as an external examiner. The scheme of assessment may vary depending on the nature of laboratory, which shall be shared with student by the laboratory in-charge. The summative assessment will be conducted for a max. marks of 50.

Suggested end-semester summative assessment pattern for P-based courses

Component	Marks		
	Examiner 1	Examiner 2	Total
Objective & Procedure write up including outcomes	5	5	10
Experimentation and data collection	5	5	10
Computation of results	5	5	10
Analysis of results and Interpretation	5	5	10
Viva Voce	0	10	10
Total Marks	20	30	50

The hierarchy of Qualifying criteria

- To be declared successful in a course, a student must secure at least a grade 5.0 (as per ICAR) in a scale of 10 based on the total maximum marks which is inclusive of formative and summative assessment.
- The students should also get 35% from the maximum marks allotted for formative and 50% for summative (as per ICAR) assessments individually.

***The hierarchy* is as follows:**

i. Attendance compliance should be 75% or within condonable range; else the candidate is put into 'R' grade.
ii. In formative assessment, a candidate should secure a minimum of 35% *i.e. 17.5 out of 50 (as per ICAR) ; else the candidate is put into 'R' grade.*
iii. In summative assessment, a candidate should secure a minimum of 50% *i.e. 25 (as per ICAR) marks out of 50 (as per ICAR); else the candidate is put into 'I' (Incomplete) grade.*
iv. Collectively the candidate should secure a min. grade of 5.0 in a scale of 10 (as per ICAR) after relative grading ; else the candidate has to choose either 'R' or 'I' grade duly being counselled.
v. A candidate who secured grade < 6 in a course may be permitted (optional) to volunteer to improve his/her grade by opting 'R' or 'I' grade in that course.

- The candidates with 'R' grade should re-register for 'R' courses either in Summer semester or in a regular semester as and when the courses are offered. The candidates in 'I' grade are allowed to appear for supplementary summative assessment whenever the semester-end assessments are conducted.

Computation of Grading

- Formative assessment decides the list of 'R'- candidates.
- Therefore, these candidates will not be considered for grading computation.
- Summative assessments decide the list of 'I' candidates.
- Therefore, these candidates will not be considered for grading computation
- The candidates who have successfully completed both formative and summative assessments will be considered for computation of relative grading.
- Threshold value (Th) for relative grading in each course is arrived after studying the marks distribution in that course by a committee constituted by office of Dean AAA.
- The threshold value is decided by the upper bound marks of the major chunk of the class keeping the top outlier scores away from consideration (the least upper bound).
- The threshold value will be slightly greater than upper bound marks or may be equal to the upper bound marks.

- The total marks M = marks scored in the formative assessment + marks scored in the summative assessment is transformed into relative grade expressed accurate to two decimal places as follows:

  Relative grade point (P) = (M/Th) X 10 [and limited to 10]

Grading information for B.Sc. (Hons.) Agriculture (as per ICAR)

Percentage of marks obtained	Category	Grade (G)	Points
100	Outstanding	O	10
90 to < 100	Excellent	S	9 to <10
80 to <90	Very good	A	8 to <9
70 to <80	Good	B	7 to <8
60 to <70	Fair	C	6 to <7
50 to <60	Average	D	5 to <6
<50 (Fail)	fail	F	<5
Eg. 85.75	Very good	A	8.575
40.23	Fail	F	4.023

Class/ Division information B.Sc.(Hons.) Agriculture (as per ICAR)

S.No.	CGPA	Class / Division
1	8.00 and above	First class with Distinction
2	7.00 to 7.99	First class
3	6.00 to 6.99	Second class
4	5.00 to 5.99	Pass class

Honorary Entry and Honorary Exit during the course

- Honorable exit with B.Sc. or Engineering Diploma
- An optional exit : who has earned a min. of 120 credits and completed six semesters.
- B.Sc. degree / Engineering Diploma will be awarded in respective branches of specialization.
- In case fails to earn 120 credits, a suitable certification will be awarded during his / her exit from B.Tech. degree.
- Such a candidate who has exited can seek re-entry to complete B.Tech. by surrendering the B.Sc. Degree / Engineering Diploma.

Will be followed as per ICAR 6th Deans committee report is awaited

Agenda 2

Specialization (Theme): Smart Farming: The Future of Agriculture (for B. Tech. with Honors Specialization: XX)

Basket of Minor Courses
Specialization (Theme): Smart Farming: The Future of Agriculture

S. No.	Semester	Course No.	Course Title	L	T	P	C
1.	2.2 (4th)	22SF 205	Basics of crop production and precision farming	2	0	4	4
2.	3.1 (5th)	22SF 343	Hi-tech Horticulture	2	0	4	4
3.	3.2 (6th)	22SF 382	Agribusiness Management	2	0	4	4
4.	4.1 (7th)	22SF 481	Soilless Farming	2	0	4	4
5.	4.2 (8th)	22SF 491	Digital Agriculture or Mini Project	2 or 0	0 or 1	4 or 3	4 or 4
			Total	10	0	20	20

Course content of Minor Courses in Modular Form was presented for the information of members.

At the end called for the remarks from the Members and their impressions are:

- ✓ Sri K. Prasad garu, Chairman and MD, Prasad seeds, appreciated the efforts made for framing a course like Smart farming as Minor to other Departments. He added that he may take some time to go through the Presentation to make suggestions.
- ✓ Dr. K. P. Vidhu also appreciated and required some time to make suggestions on R22 Regulations. He raised a concern on the Honorable exit whether the student must surrender the diploma if he/she again seeks for entry to continue the course. I replied that he/she shall surrender the diploma.
- ✓ Sri Benjamin Raja requested for the presentation for a through reading and making valid points. I requested him to go through the Smart Farming course content as he is the precision farming expert in India.
- ✓ Dr. Y. Ashoka Rani asked some time to go through the presentations to suggest necessary remarks.
- ✓ Dr. K. P. C. Rao expressed that he needed some clarity regarding assessment of R22 for which he barrowed some time. In case of summative assessment of P – Based courses he suggested to consider equal weightage of marks i.e., 20+20 instead of 25+15.
- ✓ Dr. N. Narayana Rao has explained the importance of R22 emphasizing that the students will become more creative and cognitive with this type of assessment.

- ✓ Dr. Parmi Srinivas commented that the R22 regulations were well structured and encourages the cognitive thinking of Teachers also.

Dr. T.Ramesh Babu, Chairperson, BoS, while thanking all the BoS Members in his closing remarks, stated that the ppt will be shared to all the BoS members to go through thoroughly. The suggestions of the members of BoS, if any, will be incorporated appropriately in R22 regulations.

Dr. Y. Vara Prasad, Assistant Director, VIAT proposed formal vote of thanks

Dr. T. Ramesh Babu
Dean, VIAT &
Chairperson, BoS