



Bapatla Engineering College:: Bapatla (Autonomous)

ASSESSMENT AND EXAMINATION POLICY

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Introduction

The following assessment policy provides information on the principles and methods by which Bapatla Engineering College evaluates its students to determine the achievement level of learning outcomes. It also ensures uniformity in evaluation across all programs offered by the College.

Principles

There are number of reasons why student learning outcomes are assessed, such as to

- (1) improve students' motivation in learning and enhance better performance in achieving learning outcomes
- (2) provide confidence to stakeholders such as employers in our students' abilities; and
- (3) satisfy external accreditation requirements.

The College perceives that assessment should

- (1) be valid, reliable and fair; (2) be academically appropriate;
- (3) measure performance against the learning outcomes and
- (4) provide students with feedback on their learning;

Policy

All the students of various programs offered by the College shall be assessed for their achievement of learning outcomes in every course/subject. The assessment is divided into

- (i) continuous assessment through various assessment methods to test the achievement of different types of skills, and
- (ii) the final examination. The assessment methods and scheme should help students for year-on-year progression, of academic achievement and for demonstration of knowledge, skills, and attributes. The process of assessment must be fair, uniform, and be able to differentiate.

The continuous assessment should be limited to not more than 60 percent, whereas the remaining marks are assigned to the comprehensive final examination. The teacher is responsible for continuous assessment of the student as well as to develop the instruments for final examination. Teacher has a choice of selecting the set of assessment methods for continuous evaluation unless specified and the right balance should be maintained in assigning weightages to the methods.



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The assessments are verified by an internal member for continuous evaluation for the appropriateness of the instrument and by the internal and external member for the final examination instrument.

Selection of Assessment methods

While designing a scheme of assessment, three questions should typically be addressed if the assessment is to be effective:

- What is the purpose
- What is being assessed? And
- What method of assessment is most appropriate?

The choice of assessment method is typically based on a number of factors such as

- The suitability of the method for formative or summative feedback;
- subject and discipline standards if any; and
- The Learning Outcomes to be achieved

As the Program objectives, course objectives, and learning outcomes are pre-determined, it is necessary to utilize valid and reliable assessment methods that can measure level of achievement of students with regard to knowledge and skills garnered. A reliable assessment method would be expected to give the same results if repeated under the same conditions: for example, if two Assessors awarded the same grade for any one assignment of a student. Ultimately, the structure of the assessment scheme for any course must ensure that the LOs are assessed adequately.

Transparency of Assessment

There should be clear guidelines and assessment criteria, and students should be given sufficient notice of these criteria before submitting work. Therefore, it is expected that the course Plan should be distributed to students during the first class of each respective course. Ideally this document should also be available on the college website.

Another key feature of transparent assessment is that the criteria against which pieces of work are assessed through tests, quizzes, assignments, etc. should be clearly documented and be available to students concerned, the Internal Verifier(s), and to the External verifier, if any.

All marked student assessments (except the final examination) are returned promptly to the students in order to inform their performance in detail and to improve their learning, whereas the final examination scripts are shown to the students to verify the evaluation. In addition it is required that course instructors provide students with their total marks for course work (Continuous evaluation marks) prior to attending the final



Bapatla Engineering College:: Bapatla (Autonomous)

examination.

Students are encouraged to seek feedback from the course instructor, and it is expected that this feedback must relate to the assessment criteria as discussed above. If unavailing, students can challenge their final grade as per the College regulations.

ASSESSMENT RATIONALE

The intended learning outcomes are expected to upgrade per level in an incremental and cumulative effect, students are expected to reflect learning outcomes with normal distribution (Bell Curve), in which the mean μ indicates center of distribution, and standard deviation (σ) indicates the spread.

An expected a mean of 70-75%, and standard deviation of 5 percent of the population normal distribution is as follows:

A+	A	B+	B	C+	C	D	P	F
Max.		Max.		Max.		Max.	Max.	Max.
12%		22%		50%		22%	12%	2%

However, this can be implemented with a minimum class size of 25.

GRADING SYSTEM

BEC follows the grading system as follows:

A+	A	B+	B	C+	C	D	P	F
95-100	90-94	85-89	80-84	75-79	70-74	60-69	50-59	<50
10	9.5	9	8.5	8	7.5	7	6	2

The Semester Grade Point Average (SGPA) will be calculated according to the formula:

$$GPA = \frac{\sum C_i G_i}{\sum C_i}$$

Where C_i = number of credits for the course i ,

G_i = number of grade points for the course i .



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Plagiarism

BEC has a zero-tolerance policy towards plagiarism of students on all written take away assessments, such as Assignment, Project, and Case Study. However, it allows a similarity of 20% to accommodate permissible quotes, references, etc.

EXAMINATION AND EVALUATION

EVALUATION:

The performance of the students in each semester shall be assessed course wise. All assessments will be done on absolute mark basis. However, for the purpose of reporting the performance of a candidate, letter grades and grade points will be awarded. The performance of a student in each course is assessed with alternate assessment methods, term examinations on a continuous basis during the semester called Continuous Internal Evaluation (CIE) and a Semester End Examination (SEE) conducted at the end of the semester. For each theory, design and/or drawing course, there shall be a comprehensive Semester End Examination (SEE) of three hours duration at the end of each Semester, except where stated otherwise in the detailed Scheme of Instruction.

The distribution of marks between Continuous Internal Evaluation (CIE) and Semester End Examination (SEE) to be conducted at the end of the semester will be as follows:

Nature of the Course	CIE	SEE
Theory subjects	50	50
Drawing	50	50
Practical	50	50
Term Paper	50	50
Project work	75	75

1. Continuous Internal Evaluation (CIE) in Theory and Drawing subjects:

In each Semester there shall be two Term examinations and some ***Alternate Assessment Tools (AAT)*** like Home Assignment, Class Test, Problem Solving, Group Discussion, Quiz, Seminar and Field Study in every theory course. The Alternate Assessment Tools with



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detailed modality of evaluation for each course shall be finalized by the teacher concerned before beginning of the course. It will be reviewed and approved by the Department Committee.

The Term Examination is conducted in the regular mode according to a schedule which will be common for a particular year of study. The maximum weightage for Term Examinations, AATs and the calculation of marks for CIE in a theory course is given in the following table.

Particulars	Term Exams (Max. 20 marks)	AAT (Max. 30 marks)
Better Performed exam	75% of marks obtained	Continuous assessment by teacher as per the predetermined course delivery & assessment plan. (Min. two assessments)
Other exam	25% of marks obtained	

A minimum of 25 (50%) marks are to be secured exclusively in the Continuous Internal Evaluation (CIE) is to be secured in order to be declared as passed in that course and eligible to write the SEE of that course.

2. Semester End Examination (SEE) in Theory, Design and/or Drawing course:

- For each theory, design and/or drawing course, there shall be a comprehensive Semester End Examination (SEE) of three hours duration at the end of each Semester for 50 marks, except where stated otherwise in the detailed Scheme of Instruction. Question paper setting shall be set by the teacher or teachers together in a multi section courses and to be verified as described in policy document.
- A minimum of 25 (50%) marks are to be secured exclusively in the Semester End Examination (SEE) of theory, design and/or drawing course and a minimum total of 50 marks in SEE and CIE put together in a theory, design and/or drawing course is to be secured in order to be declared as passed in that course and for the award of the grade in the course.

3. Continuous Internal Evaluation (CIE) in laboratory courses:

The evaluation for Laboratory course is based on CIE and SEE. The CIE for 50 marks comprises of 20 marks for day to day laboratory work, 15 marks for record submission and 15 marks for a laboratory examination at the end of the semester.



Bapatla Engineering College:: Bapatla (Autonomous)

In any semester, a minimum of 90 percent of prescribed number of experiments / exercises specified in the syllabi for laboratory course shall be taken up by the students. They shall complete these experiments / exercises in all respects and get the record certified by the internal lab teacher concerned and the Head of the Department concerned to be eligible to appear for the Final Examination in that laboratory course.

A minimum of 25 (50%) marks are to be secured exclusively in the Continuous Internal Evaluation (CIE) is to be secured in order to be declared as passed in that lab course and eligible to write the SEE of that lab course.

4. Semester End Examination (SEE) in laboratory courses:

- a) For each laboratory course, the Semester End Examination (SEE) shall be conducted by one internal and one external examiner appointed by the Principal and the duration of the exam shall be for three hours. The SEE is for 50 marks which include 10 marks for write up, 20 marks for lab experiment/exercise and 20 marks for Viva-voce.
- b) A minimum of 25 (50%) marks shall be obtained in SEE and a minimum total of 50 marks in SEE and CIE put together in a laboratory course are to be secured in order to be declared as passed in the laboratory course and for the award of the grade in that laboratory course.

5. Evaluation of Term Paper:

- a) A term paper is to be submitted by each student in the 7th semester which would be a precursor to the project work to be done in the 8th semester. The evaluation is based on CIE for 50 marks, which includes a minimum of two seminars/presentations for 20 marks and the report submitted at the end of the semester which is evaluated for 30 marks.
- b) The Semester End Examination (SEE) shall be conducted for 50 marks by one internal and one external examiner appointed by the Principal. The SEE contains Viva-voce and the demonstration of the model developed or work performed as a part of the term paper.
- c) A minimum of 25 (50%) marks shall be obtained in SEE and a minimum total of 50 marks in SEE and CIE put together in the term paper are to be secured in order to be declared as passed in the term paper and for the award of the grade in the term paper.



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6. Evaluation of the Project

- a) In case of the Project work, the evaluation shall be based on CIE and SEE. The CIE for 50 marks consists of a minimum of two Seminars / presentations for 20 marks and the Project Report submitted at the end of the semester which is evaluated for 30 marks.
- b) SEE shall be in the form of a Viva- voce and the demonstration of the thesis work for 100 marks. Viva-voce Examination in Project Work shall be conducted by one internal examiner and one external examiner to be appointed by the Principal. A minimum of 50 marks shall be obtained in SEE exclusively and a minimum total of 75 marks in SEE and CIE put together are to be secured in order to be declared as passed in the Project and for the award of the grade.

NOTE : A student who is absent for any Test / Exam / Seminar / Presentation as a part of Continuous Internal Evaluation (CIE), for any reason whatsoever, shall be deemed to have scored zero marks in the respective component and no provision for make-up shall be provided.

7. Course Repetition (Repeater course)

The students secured less than 50% in the Continuous Internal Evaluation (CIE) and Semester End Examinations (SEE) may register for the course repetition. The students have to apply to the Principal through the respective HOD by paying prescribed fees. A student can take up a maximum of two courses in a semester immediately after the semester end examinations of that particular semester in accordance with the guidelines recommended by the Academic Council.

The HODs concerned have to allot a teacher related to that course to conduct class work. The minimum number of periods to be conducted should not be less than 50% of the total prescribed periods for that course. The classes will be conducted in the vacation period or in the weekends or in the afternoons as decided by the HOD concerned. Teacher has to evaluate the student for his performance in CIE as per the autonomous norms and students should appear for a semester end examination. The pass criteria in both CIE & SEE should be as per autonomous norms.

The documents for monitoring the candidates registered for course repetition are as under.



Bapatla Engineering College:: Bapatla (Autonomous)

QUESTION PAPER SETTING:

For an effective testing of the students in a course, a good question paper needs to be used as the principal tool. This makes it necessary for the question papers used at CIE and SEE to:

To test all ILOs of the course;

Be unambiguous and free from any defects/errors;

Emphasize knowledge testing, problem solving & quantitative methods;

Contain adequate data / other information on the problems assigned; and,

Have clear and complete instructions to the candidates

These requirements make it necessary for a Question Paper to cover the entire syllabus, with a provision for the students to answer questions from the full syllabus. The teacher or teachers of a multi section courses together shall set the question paper and also the scheme of evaluation with model answers.

Typical Question Paper: The questions to be included in the Question Papers at CIE and SEE can be of two types as follows and the subject teachers as well as the external examiners shall have to be well trained to set them:

- i. Objective type questions, for testing of knowledge, comprehension, application and understanding of the students; However, Question Papers for CIE and SEE to include no more than 15-20% of the questions of this type.
- ii. Comprehensive Questions, having all questions of the regular type to be answered in detail; Such a Question Paper to be useful in the testing of overall achievement and maturity of the students in a subject, through long questions relating to theoretical / practical knowledge, derivations, problem solving, application, analysis, synthesis and quantitative evaluation.

SCHEME OF EVALUATION

- a) The scheme of evaluation is a guideline for examiners for evaluating the answer scripts.
- b) The detailed scheme with answers should be prepared by the teacher or teachers together in a multi section courses and to be verified as described in policy document.
- c) The scheme shall contain important and essential points (definition / methodology / procedure / formula / figures / drawing) for each question stepwise and allot marks for each step. The number of steps for each question (conventional) should be decided judiciously.
- d) Descriptions, methods and definitions in the scheme shall be clear and alternative valid answers may be accepted.



Bapatla Engineering College:: Bapatla (Autonomous)

- e) The scheme should be hand written/typed matter on a A4 paper but shall not be a scanned copy/ Xerox copy (Some complicated figures/sketches may be scanned or Xeroxed).
- f) The final scheme should be checked by the HOD of the department along with other faculty who taught the subject and then the scheme duly signed by HOD and subject expert shall be sent to the Controller of Examinations.
- g) At the time of spot valuation, other examiners and subject expert (who prepared the scheme) sit together and verify the scheme. If there is any discrepancy in the scheme, the scheme shall be modified with the consent of both subject expert and other examiners.
- h) If satisfied with the scheme of evaluation, subject expert and other examiners shall sign the same before starting the evaluation process.

EXAMINERS:

- a) The Internal examiner (instructor of the course or instructors in a multi-section course) should submit the soft and hard copies of the detailed scheme of evaluation as per the guidelines of the Controller of Examinations.
- b) The Internal examiner(s) should evaluate the scripts
- c) They should ensure the following while evaluating:
 - I. All the answers (including choice) should be evaluated and the marks are to be awarded in the left margin for all the evaluated answers.
 - II. Where ever appropriate, they should mark the answers (✓/×) with any comments needed.
 - III. The marks awarded inside should be properly transferred to the consolidated marks table on the cover page.
 - IV. The marks posted for the least scored choice answer is to be circled out and exempted from the total marks.
 - V. The correct total is to be posted in the box meant for posting the total marks along with the signature.
 - VI. The consolidated award list with all the details for the corrected bundle is to be submitted along with the bundle of scripts.
- d) Any sympathetic appeals/emotional requests for award of marks to pass in the examination by the student in the answer scripts should be brought to the notice of the Spot Coordinator.
- e) They should ensure that the allocated time of 3 hours is effectively utilized for meticulous correction/evaluation of the bundle of 25 scripts.



Bapatla Engineering College:: Bapatla (Autonomous)

- f) A maximum of 50 scripts per day will be allocated for evaluation.

Approval and publication of examination results

All final grades of courses are to be approved by the HODs Committee and the Academic Council after Course teachers have discussed final grades with students. The results are displayed in College/Department notice boards and the website of the College.

Internal Verification of assessment

Traditionally internal moderation of final examinations is conducted by the Head of the Department to (1) ensure that the distribution of final grades for each is near normal (for classes >20 students); (2) to discuss borderlines pass-fail cases with the Instructor. If necessary, changes may be made to the final grade for the entire class or individual students, prior to approval; this change must be justified and approved by both the course instructor and the HOD.

Internal Verification

1. All course syllabi and final examinations for a respective course shall be subject to verification
2. The role of verification is to determine:
 - a. Validity of the assessment methods about the objectives and learning outcomes for each course
 - b. Whether or not the assessment scheme for each course is fair and effective
 - c. Validity of the final examination vis-à-vis the course learning outcomes
3. Internal verification is to be undertaken by a minimum of one faculty member (the 'verifier'), who is not a teacher of the course but who teaches in, or is well acquainted with, the subject area.
4. The Course teacher should provide the verifier with:
 - a. Instruments or question papers of all summative assignments
 - b. Final examination script and model answers (or marking scheme or rubric)
5. After verification, the subject teacher modifies the questions, if necessary before administering the assessment.
6. HOD monitors the process and confirms whether the changes are made or not before the examination for the summative supervised examinations



Bapatla Engineering College:: Bapatla (Autonomous)

Process of Internal verification

1. The Head of the Department nominates a verifier for each course at the beginning of the semester. It is at the discretion of each Department/College to decide how many verifiers are required for all the courses in the degree programme concerned.
2. The teacher or the Coordinator of multi-section course meets the verifier and hands-over the instrument/question paper to her/him as early as possible, and no later than one week before the commencement of the semester before administering the assessment.
3. The Verifier verifies completes the form: *Internal Verification of the respective assessment*. Thereafter the Verifier discusses this feedback with the Instructor concerned and any changes are made accordingly.
4. The completed form and the revised version of the instrument are forwarded to the HOD for record keeping, and for completion of the form: *Internal Verification and Moderation Summary Report* which should then be forwarded to the Principal for reviewing the process and to provide critical feedback to HODs, if any.

Verification of Answer Scripts:

1. After completion of the evaluation of answer scripts of an assessment, the internal verifier verifies a sample of answer scripts (about 10%) including the answer scripts of highest and lowest marks. He / She should give his report in the following Template with specific omissions, if any and suggestions for review.
2. The report is forwarded to the HOD by the verifier.
3. The teacher or the assessor should review the marks allotted to the students based on the remarks/suggestions given by the internal verifier.
4. HOD verifies the modifications made.

External Verification

In order to assure and uphold the quality of evaluations, a third party verification of final examination is necessary. Therefore, External verification by a senior faculty member other reputed institution should be carried out.

1. All course syllabi for final examination and the instrument (Question paper, etc.) for a respective course shall be subject to verification



Bapatla Engineering College:: Bapatla (Autonomous)

2. The role of verification is to determine:
 - a. Validity of the instrument as regard to the objectives and learning outcomes for each course
 - b. Appropriateness of the marks allocated to the final examination.
3. External verifier should verify Question papers of all courses of a program in the semester
4. After verification, the subject teacher modifies the questions, if necessary before administering the assessment.
5. HOD monitors the process and confirms whether the changes are made or not before the examination for the summative supervised examinations

External Verification of Answer Scripts

1. After completion of the evaluation of answer scripts of final examination of all courses, the HOD invites the external verifier to verify the answer scripts of all courses of the program in that semester.
2. The External verifier verifies a sample of answer scripts (about 10%) including the answer scripts of highest and lowest marks. He / She should give his report in the following Template with specific omissions, if any and suggestions for review.
3. The report is forwarded to the HOD by the verifier.
4. The teacher or the assessor should review the marks allotted to the students based on the remarks/suggestions given by the internal verifier.
5. HOD verifies the modifications made.

Moderation of marks:

After both the internal and external verification, the HOD, if necessary forward a request for the moderation in the courses needed.

HODs Committee takes final decision regarding the moderation in any course of any Department.



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Internal Verification of assessments

College		Department	
Course Code		Course Title	
Number of sections		Academic Year	
Name of Coordinator or Course Instructor (as appropriate)		Semester (Please Tick ✓)	
			First

Verification	Yes	Changes to be made/ Remarks
1. Is the Instrument clearly written and free from typographical errors?		
2. Is the Instrument or Are the questions/practical tasks unambiguous in their meaning?		
3. Is the Instrument or Are the question(s)/practical tasks suitable for the type of assessment and for the difficulty of the course?		
4. Is the Instrument or Are the task/question(s)/practical task and their content suitable for the level of the programme?		
5. Are the choices of question(s)/practical tasks suitable for the course/topic LOs?		
6. Will the Instrument allow students with differing abilities to demonstrate their capabilities		
7. Are the instructions on the front page adequate and clearly expressed?		
8. Is there a marking rubric/scheme of evaluation?		
9. Is the allocation of marks transparent and are the marks appropriately apportioned?		
10. Does the mix of questions conform to the College guidelines for assessment methods?		
11. Is the final exam comprehensive (i.e. does it cover the majority LOs)		

The suggested changes are made					
Name of Verifier		Signature		Date	
Head of the Department					



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External Verification of Final Examination Instrument

Department				
Course Code		Course Title		
Number of sections		Academic Year		
Name of Coordinator or Course Instructor (as appropriate)	Semester (Please Tick ✓)			
		First		Second

Verification	Yes	Changes to be made/ Remarks
12. Is the Instrument clearly written and free from typographical errors?		
13. Is the Instrument or Are the questions/practical tasks unambiguous in their meaning?		
14. Is the Instrument or Are the question(s)/practical tasks suitable for the type of assessment and for the difficulty of the course?		
15. Is the Instrument or Are the task/question(s)/practical task and their content suitable for the level of the programme?		
16. Are the choices of question(s)/practical tasks suitable for the course/topic LOs?		
17. Will the Instrument allow students with differing abilities to demonstrate their capabilities		
18. Are the instructions on the front page adequate and clearly expressed?		
19. Is there a marking rubric/scheme of evaluation?		
20. Is the allocation of marks transparent and are the marks appropriately apportioned?		
21. Does the mix of questions conform to the College guidelines for assessment methods?		
22. Is the final exam comprehensive (i.e. does it cover the majority LOs)		

The suggested changes are made				
Name of External Verifier		Signature	Date	
Head of the Department				



Bapatla Engineering College:: Bapatla (Autonomous)