

Assessment Marking Criteria as per syllabus

JYOTHI NAGAR, CHEMPERI – 670632, KANNUR, KERELA

Affiliated to APJ Abdul Kalam Technological University, Approved by AICTE ISO 9001: 2015 Certified | Accredited by Institution of Engineers (India), NBA, NAAC Ph: 0490 2212240, 2213399 Email: office@vjec.ac.in Website: www.vjec.ac.in

B.Tech Degree Program:

- Candidates in each semester shall be evaluated both by Continuous Internal Evaluation (CIE) and End Semester Examinations (ESE). The ratio of Continuous Internal Evaluation (CIE) to End Semester Examinations (ESE) shall be as below :
 - 1. Theory Courses: 1: 2
 - 2. Laboratory Courses: 1: 1
 - 3. Project: CIE only
 - 4. Seminar: CIE only

Continuous Internal Evaluation (CIE):

- The Continuous Internal Evaluation shall be on the basis of the day-to-day work, periodic tests (minimum two in a semester) and assignments (minimum two).
- The CIE marks for individual subjects shall be computed by giving weightage to the following parameters unless otherwise specified in the curriculum.

course	Attendance	Tests	Assignment/classwork/Project
Theory	20%	50%	30%
Drawing/Practical	20%	40%	40%

- There shall be a minimum two internal evaluation tests, each of 2 hrs duration.
- Retest shall be permitted to the students who could not appear for the internal tests due to genuine grounds.
- Evaluation of the theory course: Written-test, Assignment, Seminars, Viva



MARK DISTRIBUTION: THEORY COURSE

ſ	TOTAL MARKS	CIE	ESE	ESE DURATION
	150	50	100	3 HOURS

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Continuous internal Evaluation Pattern

Attendance	: 10 marks
Continuous Assessment Test	: 25 marks
Assignment/quiz/Course project	t: 15 marks

CONTROL SUSTEMS	CATEGORY	L	Т	P	CREDIT
CONTROL SYSTEMS	PCC	3	1	0	4
	CONTROL SYSTEMS CATEGORY L T P PCC 3 1 0				

Preamble: This course aims to develop the skills for mathematical modelling of various control systems and stability analysis using time domain and frequency domain approaches.

Prerequisite: EC202 Signals & Systems

Course Outcomes: After the completion of the course the student will be able to

co	01	Analyse electromechanical systems by mathematical modelling and derive thei	r

- transfer functions Determine Transient and Steady State behaviour of systems using standard test CO 2
- signals CO 3 Determine absolute stability and relative stability of a system
- Apply frequency domain techniques to assess the system performance and to design a control system with suitable compensation techniques
- CO 4
- CO 5 Analyse system Controllability and Observability using state space representation

Mapping of course outcomes with program outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12
CO 1	3	3	2		1	4			/			2
CO 2	3	3	2		1							2
CO 3	3	3	3		1	Esto						2
CO 4	3	3	3		1							2
CO 5	3	3	3		1							2

Assessment	Pattern

Bloom's Categ	ory	Continuous A Tests	ssessment	End Semester Examinati		
		1	2			
Remember	K1	10	10	10		
Understand	K2	20	20	20		
Apply	K3	20	20	70		
Analyse	K4					
Evaluate						
Create						

otal arks	CIE	ESE	ESE Duration
150	50	100	3 hours
ontinuous	Internal	Evaluation	Pattern:
ttendance ontinuous # ssignment/			: 10 1 umbers) : 25 1 : 15 1
ntain 10 q udents shou ident shou marks. ourse Leve	uestions v uld answe ld answer el Assessn	with 2 quest or all question on any one. E nent Quest	
			yse electromech: sfer functions
	ne given e	lectrical/ m	echanical system:
1. For th			
 For the contract of the contract		agram redu	ction techniques
2. Using system	n.	-	1
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 Using system Find to course Outoring stands Deriv ramp Deter 	n. the overal come 2 (C ard test si e an expr input.	l gain for th (O2): Deter gnals ession for t	ae given signal f rmine Transien

Course Outcome 3 (CO3): Determine absolute stability and relative stability of a system Using Ruth Hurwitz criterion, for the given control system determine the location of roots on S- plane and comment on the stability of the system.

2. Sketch the Root Locus for the given control system.

Sample Syllabus of Theory Course

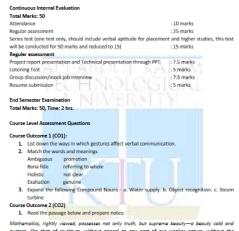




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102		PR	DFESSIO	NAL CO	MMUNI	ICATION		CATE	GORY	L	T	P	CREDIT
								MNC		2	0	2	
nform profes course compr neces:	nation-d sional d e is to d	riven w cannot b equip st and suc sh to be	orld giv out mas udents cessfully	en its ter the with the convey	interdep key ele e neces y any id	oendend ments o sary ski lea, tech	ies and of such Ils to li nnical o	commu sten, re	ess con nication ad, writ	necti . The e, ar	vity. e obj nd sj	Any jectiv peak	n today's aspiring e of this so as to them the
	· .		er the o	ompletic	on of the	e course	the stu	dent wil	be able	to			
01	Deve	lon voca	bulary a	and lang	uare ski	ils relev	ant to e	ngineeri	ngasar	orofe	ssion	n	
CO 2								ty of text				-	
CO 3		te effect										-	
CO 4		iss a j ralizatio			/non-te	chnical	topic	in a g	roup s	ettin	g a	nd a	arrive at
CO 5	Ident	tify draw	backs in	listenin	g patter	ms and a	apply lis	tening to	chniqu	es fo	r spe	dific	needs
CO 6	Creat	te profe	ssional	and te	chnical	docume					Ibari		
						outunit	ents the	at are o	iear an	a ac	men	ng ti	o all the
	nece	ssary co	nventio	15		uocum	ents the	at ane o	iear an	a ac	Intern	ng ti	o all the
Мерр	ing of co	ssary co						PO 8	PO 9	PO		PO	PO
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	ing of co	ssary co	tcomes	with pro	ogram o	utcome	5		y.	PO 10 3		PO	PO 12 2
CO 1 CO 2	ing of co	ssary co	tcomes	with pro	ogram o	PO 6	5		y.	P0		PO	P0 12
C01 C02 C03	ing of co	ssary co	tcomes	with pro	ogram o	PO 6	5		PO 9	PO 10 3		PO	PO 12 2
CO1 CO2 CO3 CO4	ing of co	ssary co	tcomes	with pro	ogram o	PO 6	5		PO 9	PO 10 3 1 3		PO	PO 12 2 3
CO1 CO2 CO3 CO4 CO5	ing of co	ssary co purse ou PO 2	tcomes	with pro	ogram o	PO 6	5		PO 9	PO 10 3 1 3 3		PO	PO 12 2 3
CO1 CO2 CO3 CO4 CO5 CO6	PO 1	PO 2	tcomes	with pro	ogram o	PO 6	5		PO 9	PO 10 3 1 3 3 3		PO	PO 12 2 3
CO 1 CO 2 CO 3 CO 4 CO 5 CO 6	PO 1	PO 2	tcomes	PO 4	ogram o	PO 6	5		PO 9	PO 10 3 1 3 3 3		PO	PO 12 2 3



1. Read the passage below and prepare notes: Mathematics, rightly viewed, possasses not only truth, but supreme beouty—a beouty cold and outsere. like that of sculpture, without apped to any part of our vecker nature, without the gargeous trappings of pointing or music, yet sublimity pure, and capable of a sterm perfections to the second of delight, the validation, the sense of being more than mon, which is the touchstone of the highest excellence, it to be found in mathematics as surely as in peers. What is best in mathematics desarres not merely to be learnts as a task, but to be assimilated as a part of daily thought, and brought egain and again before the mind with vernewed encoursement. Real fig: it, to max time, a long second-beat, a persetual compromise between the ideal and the possible; but the world of pure reason knows no compromise, no service of the highly comedoing in guidadil adfass the passionate sepiration ofter the parfect from which all great work springs. Remate from human passions, remote even from the philping tand, and when our stacks of an orbider do camas, the generations have gradually created an ordered coamas, there pure thought can divide and used.

So little, however, have mathematicians aimed at beauty, that hardly anything in their work has had this conscious purpose. Much, owing to irrepressible instincts, which were better than avowed

Sample -Professional Communication Syllabus

Evaluation of the Practical course: Lab involvement, Records, Written test

TOTAL MARKS	CIE	ESE	ESE DURATION
150	75	75	3 HOURS

Continuous internal Evaluation Pattern

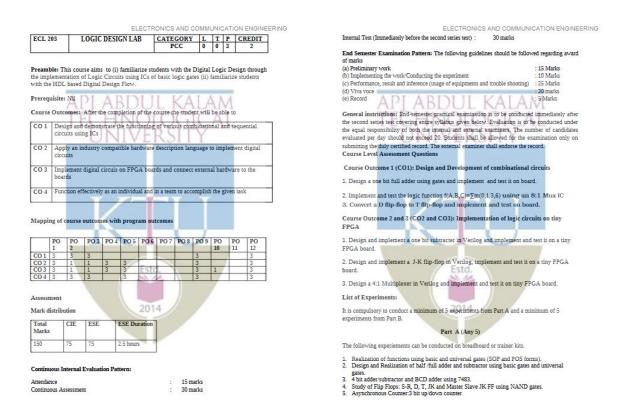
Attendance	: 15 marks
Continuous Assessment	: 30 marks
Internal Test	: 30 marks





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Sample Syllabus of Practical Course

Project work

a. Work assessed by the project guide - 30%

b. Three member Continuous Internal Evaluation Committee – 40% (Guide shall be one member in the CIE committee)

c. Final Evaluation by a three member Committee composed of the department project coordinator, guide and an external expert. The external expert shall be an academician or from industry. The industry expert is preferred : 30%

d. One third of the project credit shall be completed in VII semester and two third in VIII semester.

e. Phase 1 total 100 marks and phase 2 total 150 marks



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Criterion: 2.5.1

ECD415	PROJECT PHASE I	CATEGORY	L	Т	Р	CREDIT
ECD415	PROJECT PHASE I	PWS	0	0	6	2
Preamble	The course 'Project Work' is mainly in	ntended to evoke the	inno	vatio	n ar	nd invention
chille in a	student. The source will provide an own	stunits to comthesize	and a			Imamladaa

and analytical skills learned, to be developed as a prototype or simulation. The project extends to 2 semesters and will be evaluated in the 7th and 5th semester separately, based on the achieved objectives. One third of the project credits shall be completed in 7th semester and two third in 5th semester. It is recommended that the projects may be finalized in the thrust areas of the respective engineering stream or as interdisciplinary projects. Importance should be given to address societal problems and developing indigenous technologies.

Course Objectives

- > To apply engineering knowledge in practical problem solving.
- > To foster innovation in design of products, processes or systems.
- > To develop creative thinking in finding viable solutions to engineering problems.

Course Outcomes [COs] : After successful completion of the course, the students will be able to:

COI Model and solve real world problems by applying knowledge across domains (Coppiting Inpublication local Across)
 COI
 Nuccei and solve real world processin by appying knowledge across domains (Cognitive knowledge level: Apply).

 CO2
 Develop products, processes or technologies for sustainable and socially relevant applications (Cognitive knowledge level: Apply).

 CO3
 Function effectively as an individual and as a leader in diverse teams and to comprehend and execute designated tasks (Cognitive knowledge level: Apply).

 CO4
 Plan and execute tasks utilizing available resources within timelines, following which apply and and execute tasks utilizing available resources within timelines, following the source apply and the source for the source of the source of the source apply.

- ethical and professional norms (Cognitive knowledge level: **Apply**). Identify technology/research gaps and propose innovative/creative solutions
- CO5
- (Cognitive knowledge level: Analyze).
- Conganize and computing the temperature of the second seco

Mapping of course outcomes with program outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	POS	PO9	PO10	PO11	PO12
CO1	2	2	2	1	2	2	2	1	1	1	1	2
CO2	2	2	2		1	3	3	1	1		1	1
CO3									3	2	2	1
CO4					2			3	2	2	3	2
C05	2	3	3	1	2							1
CO6					2			2	2	3	1	1

Abstract POs defined by National Board of Accreditation								
PO#	Broad PO	PO#	Broad PO					
PO1	Engineering Knowledge	PO7	Environment and Sustainability					
PO2	Problem Analysis	PO8	Ethics					
PO3	Design/Development of solutions	PO9	Individual and team work					
PO4	Conduct investigations of complex problems	PO10	Communication					
PO5	Modern tool usage	PO11	Project Management and Finance					
PO6	The Engineer and Society	PO12	Lifelong learning					

PROJECT PHASE I Phase 1 Target

- > Literature study/survey of published literature on the assigned topic
- Formulation of objectives
- > Formulation of hypothesis/ design/methodology
- Formulation of work plan and task allocation.
- Block level design documentation
- > Seeking project funds from various agencies
- > Preliminary Analysis/Modeling/Simulation/Experiment/Design/Feasibility study
- > Preparation of Phase 1 report

Evaluation Guidelines & Rubrics

Total: 100 marks (Minimum required to pass: 50 marks).

- > Project progress evaluation by guide: 30 Marks.
- > Interim evaluation by the Evaluation Committee: 20 Marks.
- > Final Evaluation by the Evaluation Committee: 30 Marks.
- > Project Phase I Report (By Evaluation Committee): 20 Marks

(The evaluation committee comprises HoD or a senior faculty member, Project coordinator and projectsupervisor).

Project Phase 1 Syllabus



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Criterion: 2.5.1

ECD4	16 PROJECT PHASE II	PWS	0	0	12	4
kills i ind an seme objecti emest espect	able: The course 'Project Work' is mainly in a student. The course will provide an oppo alytical skills learned, to be developed as a g esters and will be evaluated in the 7th and 8 ves. One third of the project credits shall be ter. It is recommended that the projects us tive engineering stream or as interdisciplin societal problems and developing indigeno	rtunity to synthesize prototype or simulatic th semester separatel completed in 7th sem may be finalized in ary projects. Import	and a n. Th ly, ba ester the	apply ne pr sed and thru	the oject on th two st ar	knowledge extends to a achieved third in 8th eas of the
Cours	e Objectives					
>	To apply engineering knowledge in practic:	al problem solving.				
	To foster innovation in design of products,					
~						
>	To develop creative thinking in finding via	ble solutions to engin				
>	To develop creative thinking in finding vial e Outcomes [CO3]: After successful comple Model and solve real world problems	ble solutions to engin tion of the course, th	e stud	lents	will	be able to:
> Cours	To develop creative thinking in finding via e Outcomes [COs]: After successful comple	ble solutions to engin ation of the course, th by applying knowl gies for sustainable	e stud ledge	lents acr	will oss	be able to: domains
> Cours CO1	To develop creative thinking in finding vial e Outcomes [COs]: After successful complet Model and solve real world problems (Cognitive knowledge level: Apply). Develop products, processes or technolo	ble solutions to engin tion of the course, th by applying know! gies for sustainable (pply). nd as a leader in	e stud ledge and diver	acr soci	will oss ally eams	be able to: domains relevant and to
> Cours CO1 CO2	To develop creative thinking in finding vial e Outcomes [CO3]: After successful complet Model and solve real world problems (Cognitive knowledge level: Apply). Develop producti, processes or technolo applications (Cognitive knowledge level: A Function effectively as an individual at	ble solutions to engin ettion of the course, th by applying knowl gies for sustainable 	e stud ledge and diver e leve	lents acr soci se ti l: Aj	will oss ally eams	be able to: domains relevant and to
> Cours CO1 CO2 CO3	To develop creative thinking in finding vial e Outcomes [CO3]: After successful complet [Cognitive knowledge level: Apply]. Develop products, processes or technolo applications (Cognitive knowledge level: A Function effectively as an individual an comprehend and execute designated task). Film and execute tasks utilizing available r	ble solutions to engin ation of the course, th by applying knowl gies for sustainable upply). ad as a leader in Cognitive knowledge esources within time dge level: Apply). d propose innovat	e stud ledge and diver e leve lines,	acr soci se to l: Aj foll	will oss ally eams pply] owin	be able to: domains relevant and to b. g ethical

CATEGORY L T P CREDIT

			_									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C01	2	2	2	1	2	2	2	1	1	1	1	2
CO2	2	2	2		1	3	3	1	1		1	1
CO3									3	2	2	1
CO4					2			3	2	2	3	2
C05	2	3	3	1	2							1
CO6					2			2	2	3	1	1

	Abstract POs defined by National Board of Accreditation									
PO #	Broad PO	PO#	Broad PO							
PO1	Engineering Knowledge	PO7	Environment and Sustainability							
PO2	Problem Analysis	PO8	Ethics							
PO3	Design/Development of solutions	PO9	Individual and team work							
PO4	Conduct investigations of complex problems	PO0	Communication							
PO5	Modern tool usage	PO11	Project Management and Finance							
PO6	The Engineer and Society	PO12	Lifelong learning							

PROJECT PHASE II

Phase 2 Targets

- In depth study of the topic assigned in the light of the report prepared under Phase I;
 Review and finalization of the approach to the problem relating to the assigned topic.
 Preparing a detailed action plan for conducting the investigation, including teamwork.
 Detailed Analysis/ Modeling / Simulation/ Design/ Problem Solving/Experiment as needed.
 Final development of product/ process, testing, results, conclusions and future dimensional direction
- unrections. P Preparing a paper for Conference Presentation/ Publication in Journals, if possible. P resenting projects in Project Expos conducted by the University at the cluster level and/ or statel level as well as others conducted in India and abroad. Filing Intellectual Property Rights (IPR) if applicable.
- Frequing a report in the standard format for being evaluated by the Department Assessment Board.
 Final project presentation and viva voce by the assessment board including the external expert.

Evaluation Guidelines & Rubrics

- Total: 150 marks (Minimum required to pass: 75 marks)
- Project progress evaluation by guide: 30 Marks.
- > Two interim evaluations by the Evaluation Committee: 50 Marks (25 marks for each evaluation)
- Final evaluation by the Final Evaluation committee: 40 Marks Quality of the report evaluated by the evaluation committee: 30 Marks

(The evaluation committee comprises HoD or a senior faculty member, Project coordinator and project supervisor. The final evaluation committee comprises of Project coordinator, expert from Industry/research/academic Institute and a senior faculty from a sister department).

Project phase 2 Syllabus

Seminar

- The report and the presentation shall be evaluated by a team of internal members comprising • three senior faculty members based on the style of presentation, technical content, adequacy of reference, depth of knowledge and overall quality of the report.
 - a) Attendance: 10%
 - b) Guide: 20%
 - c) technical content: 30%
 - d) Presentation: 40%
- Seminar total marks is 100



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COMPUTER SCIENCE AND ENGINEERING

Evaluation pattern

Total marks: 100, only CIE, minimum required to pass 50

Seminar Guide: 20 marks (Background Knowledge -10 (The guide shall give deserving marks for a candidate based on the candidate's background knowledge about the topic selected), Relevance of the paper/topic selected -10).

Seminar Coordinator: 20 marks (Seminar Diary -10 (Each student shall maintain a seminar diary and the guide shall monitor the progress of the seminar work on a weekly basis and shall approve the entries in the seminar diary during the weekly meeting with the student), Attendance -10).

Presentation: 40 marks to be awarded by the IEC (Clarity of presentation -10, Interactions -10 (to be based on the candidate's ability to answer questions during the interactive session of her/his presentation), Overall participation -10 (to be given based on her/his involvement during interactive sessions of presentations by other students), Quality of the slides -10).

Report: 20 marks to be awarded by the IEC (check for technical content, overall quality, templates followed, adequacy of references etc.).

Seminar Syllabus copy



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Criterion: 2.5.1

Grading

Grades	Grade Point					
	(GP)	course				
S	10	90% and above				
A+	9.0	85% and above but less than 90%				
Α	8.5	80% and above but less than 85%				
B+	8.0	75% and above but less than 80%				
В	7.5	70% and above but less than 75%				
C +	7.0	65% and above but less than 70%				
C	6.5	60% and above but less than 65%				
D	6.0	55% and above but less than 60% 50% and above but less than 55%				
P (Pass)	5.5					
		Below 50% (CIE + ESE) or				
F (Fail)	0	Below 40 % for ESE				
FE	0	Failed due to lack of eligibility criteria (R6.6)				
L.	U					
		Could not appear for the end semester examination but fulfills the eligibility				
I	0					
		criteria.				
Classification of	First Class with Dis	stinction CGPA 8.0 and above				
B. Tech Degree.	First Class	CGPA 6.5 and above				

EXTERNAL EXAMINATION SYSTEM

- The external examination is conducted by APJ Abdul Kalam Technological University.
- The question paper setting, Valuation of answer scripts, and time-bounded declaration of results is effectively done by the University.
- The teachers of the college are assigned to perform invigilation duties in a teacher-student ratio of 1:30.
- The chief superintendent (Principal) and additional chief superintendent (a senior faculty of the College) supervise the entire examination process.
- The University deputes an examination inspection squad for restricting malpractice during examinations.
- In case of any malpractices, they should be reported to the university in the prescribed format.
- The teachers attend the centralized valuation camps at various centres.
- The results were declared through the university portal. The students are given opportunities for revaluation, scrutiny of answer scripts and issuing photocopy of answer scripts in case of any grievance.