Minutes

7ᵗʰ Board of Governors Meeting

of

KLE Technological University,

Hubballi, Karnataka

September 20ᵗʰ, 2017

Venue: Sri. S. Nijalingappa College

Bengaluru

The following are the minutes of the Board of Governors Meeting of KLE Technological University, Hubballi which was held on 20th September 2017 at 11.30 am., in the office of the Principal, Sri S.Nijalingappa College of KLE Society at Bengaluru.

The following Members were Present.

SL	Name	Designation
1	Dr. Prabhakar B. Kore MP Chairman, Board of Management, KLE Society, Belagavi & Chancellor, KLE Technological University, Hubballi	Chancellor
2	Prof B. S. Sonde Former Vice Chancellor, Goa University & Former Professor, IISc Bangalore. Nominee of UGC.	Member
3	Dr. Sudha N. Murty Chairperson, Infosys Foundation, Bengaluru. Nominee of sponsoring body, KLE Society.	Member
4	Dr. Ashok S.Shettar Vice Chancellor KLE Technological University, Hubballi	Vice Chancellor
5	Dr. P.G.Tewari Dean Academic KLE Technological University, Hubballi	Member Secretary

The following members have sought leave of absence:

SL	Name	Designation
1	The Principal Secretary/Secretary, Higher Education, Government of Karnataka.	Member
2	The Principal Secretary/Secretary, Medical Education, Government of Karnataka.	Member
4	Prof. M.I. Savadatti Former Vice Chancellor,Mangalore University, Veerbhadra Kripa, Navodaya Nagar, Dharwad-580003	Member
2	Prof R. Natarajan Former Chairman, AICTE, & Former Director, IIT Madras. Nominee of sponsoring body, KLE Society.	Member
5	Prof. B.L.Desai Registrar KLE Technological University, Hubballi	Registrar

Agenda

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BOG 7.1	To confirm the minutes of the previous meeting held on 17th February 2017.
BOG 6.1:	To read & confirm the minutes of the previous meeting held on 27th October 2016. **Resolution 6.1: Resolved to confirm the minutes of the previous meeting held on 27th October 2016.**
BOG 6.2:	To confirm the action taken report on the minutes of the meeting of the Board of Governors held on 27th October 2016. **Resolution 6.2: Resolved to confirm the action taken report on the minutes of the meeting of the Board of Governors held on 27th October 2016.**

BOG 6.3:	To consider and approve the recommendations of the Executive Council held on 27th December 2016 on the resolutions of Finance Council of the University held on 22/12/2016.
	   - Audited Statements of the Financial Year 2015-16 - Budget proposal for the year 2017-18. - Issue of Fee Fixation for Government Quota, University Quota & Lateral Entry seats of the University. - Term loan of Rs. 5 crores during F.Y 2016-17 and Rs. 10 crores in F.Y. 2017-18 for major capital expenditures **Resolution 6.3: BOG considered the recommendations of the Executive Council and approved the following:**
	    1. Audited Statements of the Financial Year 2015-16
	    2. Budget proposal for the year 2017-18
	    3. Operation, maintenance and monitoring of the following funds:
	    Permanent Statutory Endowment Fund as per the provisions of the KLE Technological University Act – 2012. ***University Endowment Fund as per the provisions of the KLE Technological University Act – 2012.*** ***General Fund as per the provisions of the KLE Technological University Act – 2012.*** ***Development Fund as per the provisions of the KLE Technological University Act – 2012.*** **4. The fee structure of the University**
	    5. Term loan of Rs. 5 crores during F.Y 2016-17 and Rs. 10 crores in F.Y. 2017-18 for major capital expenditures
	    6. Opening of Saving /Fixed Deposit Account in the name of Registrar, KLE Technological University with AXIS bank, Vidyanagar branch, Hubballi.
	    7. Opening of Saving /Fixed Deposit Account in the name of Registrar, KLE Technological University with RBL Bank Ltd at Hubballi branch.

BOG 6.4:	To consider the Schemes and Syllabi as listed below of Undergraduate Minor Degree

	Programmes of 2017-18 batches and approve the same. These are as per the recommendations of the respective Board of studies and approvals by the Academic Council and the Executive Council:
	<ol type="I"> - Minor in Entrepreneurship - Minor in Computer Science & Engineering - Minor in Electronics - Minor in Innovation and Product Development - Minor in Robotics
	Resolution 6.4: **BOG considered the recommendations of the Executive Council and approved the schemes and syllabi of the following UG Minor Degree Programmes:** 1. **Minor in Entrepreneurship** 2. **Minor in Computer Science Engineering** 3. **Minor in Electronics** 4. **Minor in Innovation and Product Development** 5. **Minor in Robotics**
BOG 6.5:	To consider and approve Bachelor of Science (B.Sc) programs that are to be instituted by the University from the academic year 2017-18. These are as per the recommendations of the respective Board of studies and approvals by the Academic Council and the Executive Council: a. Scheme and Syllabi of B.Sc Programs b. Modifications in B.Sc regulations **Resolution 6.5:** **BOG considered the recommendations of the Executive Council and approved the 'Scheme and Syllabi' & 'Modifications in regulations' of the following Bachelor of Science (B.Sc) programs that are to be instituted by the University from the academic year 2017-18:** - **B.Sc (Computer Science – Industry Track)** - **B.Sc (Electronics – Industry Track)**
BOG 6.6:	To review and discuss the 'Strategic Plan' of the KLE Technological University **Resolution 6.6:** **BOG considered the recommendations of the Executive Council and approved the Strategic Plan of the University along with the vision and mission of the University written accordingly.**
BOG 6.7:	To discuss and approve the University Annual Report for the academic year 2015-16. **Resolution 6.7:** **BOG considered the recommendations of the Executive Council and approved the Annual report of the University for the academic year 2015-16.**

Action Requested: To confirm the minutes of the previous meeting held on 17th February 2017.

Discussion: Participating in the discussions Prof. B.S. Sonde, UGC nominee advised to include note while preparing the minutes and minutes should be circulated to all the members within 15 days and members should be given 15 days to send their comments. All the board members agreed to the suggestion and Registrar was asked to follow the process.

Resolution 7.1: The Board of Governors confirmed the minutes of its 6th meeting of the Board of Governors held on 17th February 2017 at senate hall of the University with incorporating following changes in resolution 6.5:

Titles of B.Sc programmes will be –

- **B.Sc (Computer Science)**
- **B.Sc (Electronics)**

BOG 7.2	To confirm the action taken report on the minutes of the previous meeting held on 17th February 2017.	
Item No.	**Description**	**Action Taken**
BOG 6.1:	To read & confirm the minutes of the previous meeting held on 27th October 2016. **Resolution 6.1: Resolved to confirm the minutes of the previous meeting held on 27th October 2016.**	Noted
BOG 6.2:	To confirm the action taken report on the minutes of the meeting of the Board of Governors held on 27th October 2016. **Resolution 6.2: Resolved to confirm the action taken report on the minutes of the meeting of the Board of Governors held on 27th October 2016.**	The BOG NOTED the actions taken on the minutes of the 6th BOG meeting held on 27th October 2016
BOG 6.3:	To consider and approve the recommendations of the Executive Council held on 27th December 2016 on the resolutions of Finance Council of the University held on 22/12/2016. • Audited Statements of the Financial Year 2015-16 • Budget proposal for the year 2017-18. • Issue of Fee Fixation for Government Quota, University Quota & Lateral Entry seats of the University. • Term loan of Rs. 5 crores during F.Y 2016-17 and Rs. 10 crores in F.Y. 2017-18 for major capital expenditures **Resolution 6.3: BOG considered the recommendations of the Executive Council and approved the following:** **1. Audited Statements of the Financial Year 2015-16** **2. Budget proposal for the year 2017-18** **3. Operation, maintenance and monitoring of the following funds:** • *Permanent Statutory Endowment Fund as per the provisions of the KLE Technological University Act – 2012.* • *University Endowment Fund as per the provisions of the KLE*	Following actions have been taken: • Investment in funds as per KLE Technological University Act – 2012 has been done. • Fee structure as recommended by the 'Fee fixation committee' of the Government of Karnataka is being followed. • Applied for term loan of Rs. 5.0 Crores and has been received. • Saving /Fixed Deposit Account in the name of Registrar, KLE Technological University in AXIS and RBL banks have been opened.

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	Technological University Act – 2012. • *General Fund as per the provisions of the KLE Technological University Act – 2012.* • *Development Fund as per the provisions of the KLE Technological University Act – 2012.* 4. **The fee structure of the University** 5. **Term loan of Rs. 5 crores during F.Y 2016-17 and Rs. 10 crores in F.Y. 2017-18 for major capital expenditures** 6. **Opening of Saving /Fixed Deposit Account in the name of Registrar, KLE Technological University with AXIS bank, Vidyanagar branch, Hubballi.** 7. **Opening of Saving /Fixed Deposit Account in the name of Registrar, KLE Technological University with RBL Bank Ltd at Hubballi branch.**	
BOG 6.4:	To consider the Schemes and Syllabi as listed below of Undergraduate Minor Degree Programmes of 2017-18 batches and approve the same. These are as per the recommendations of the respective Board of studies and approvals by the Academic Council and the Executive Council: I. Minor in Entrepreneurship II. Minor in Computer Science & Engineering III. Minor in Electronics IV. Minor in Innovation and Product Development V. Minor in Robotics **Resolution 6.4: BOG considered the recommendations of the Executive Council and approved the schemes and syllabi of the following UG Minor Degree Programmes:** 1. **Minor in Entrepreneurship** 2. **Minor in Computer Science Engineering** 3. **Minor in Electronics**	The approved Undergraduate Minor Degree Programmes have been offered to the students of 4th semester.

	4. **Minor in Innovation and Product Development** 5. **Minor in Robotics**	

BOG 6.5:	To consider and approve Bachelor of Science (B.Sc) programs that are to be instituted by the University from the academic year 2017-18. These are as per the recommendations of the respective Board of studies and approvals by the Academic Council and the Executive Council:
	     a. Scheme and Syllabi of B.Sc Programs
	     b. Modifications in B.Sc regulations
	
	 Resolution 6.5: **BOG considered the recommendations of the Executive Council and approved the 'Scheme and Syllabi' & 'Modifications in regulations' of the following Bachelor of Science (B.Sc) programs that are to be instituted by the University from the academic year 2017-18:**
	
	 • **B.Sc (Computer Science – Industry Track)**
	
	 • **B.Sc (Electronics – Industry Track)**
		The program is ready to offer and the preparations are on to implement Bachelor of Science program in B.Sc (Electronics – Industry Track).

BOG 6.6:	To review and discuss the 'Strategic Plan' of the KLE Technological University **Resolution 6.6:** **BOG considered the recommendations of the Executive Council and approved the Strategic Plan of the University along with the vision and mission of the University written accordingly.**	The approved strategic plan is ready for implementation.
BOG 6.7:	To discuss and approve the University Annual Report for the academic year 2015-16. **Resolution 6.7: BOG considered the recommendations of the Executive Council and approved the Annual report of the University for the academic year 2015-16.**	The approved 'Annual Report' has been uploaded on the University website.

Action Requested: The BOG is requested to confirm the action taken report on the minutes of the previous meeting held on 17th February 2017.

Discussion:

Item BOG 6.3

Dr. Prabhakar Kore, Chairman of BOG expressed that although the University is following the Fee structure as recommended by the 'Fee fixation committee' of the Government of Karnataka, there is a need to have 'Fee fixation Committee' of the University. Prof. Sonde also supported the opinion expressed by the Chairman. Dr. Ashok Shettar, Vice-Chancellor said he will do the needful.

Item BOG 6.3

With regards to the University strategic planning, Prof. B.S. Sonde, UGC nominee expressed the need for developing action plans for all the strategic initiatives with Key performance indicators to monitor the progress of implementation. Further SP progress should be an agenda item in every BOG meeting. He asked to prepare one or two page SP progress report for BOG meetings. The Board agreed with the suggestion.

Resolution 7.2: Resolved to confirm the action taken report on the minutes of the previous meeting held on 17th February 2017 with incorporating following changes in resolution 6.5:

Titles of B.Sc programmes will be –

- **B.Sc (Computer Science)**
- **B.Sc (Electronics)**

BOG 7.3	To consider and approve the recommendations of the Finance Council of the University held on 16/09/2017. • **Audited Statements of the Financial Year 2016-17.** • **Budget proposal for the year 2018-19.**
	The 3rd Finance council meeting was held on 16th September 2017 and the recommendations were placed before the Executive Council on 20th September 2017 for review. The recommendations of the EC are placed before the Board for consideration and approval. The details of the minutes of the finance council meeting are as below.
	Agenda Point 3.1 — To consider and approve the Audited Statements of the Financial Year 2016-17.
	Note — The 3rd meeting of the Finance Council (FC) was held on Saturday September 16, 2017 at Board Room of the University. During the 3rd FC meeting, the audited statements of the year 2016-17 were considered for approval.
	Decision requested — The Finance Council is requested to consider and approve the audited statements of the year 2016-17 as presented by the Member Secretary of the FC.
	Resolution 3.1 — ***The audited statements of the year 2016-17 were approved. The same are recommended for consideration and approval by the Executive Council.***
	Agenda Point 3.2 — To consider and approve the Budget proposal for the year 2018-19.
	Decision requested — The Finance Council is requested to consider and approve the budget for the year 2018-19.
	Resolution 3.2 — ***The budget for the year 2018-19 is approved. The same is recommended for consideration and approval by the Executive Council.***
	Views of Executive Council on the recommendations of the Finance Council will be presented during the meeting as EC meeting is also scheduled on 20th September.

Action Requested: BOG is requested to consider and approve the recommendations of the Executive Council.

Discussion:

Resolution 7.3: Resolved to approve the audited statements of the financial year 2016-17 and budget for the year 2018-19 as recommended by the 3rd Finance Council, which was held on 16th September 2017.

BOG 7.4	To consider and approve the recommendations of Admission Committee of the University held on 18th September 2017.

The Admission Committee meeting was held on 18th September 2017 and the recommendations are placed before the Executive Council for consideration and approval. The details of the minutes of the finance council meeting are as below.

Agenda Point 1   To read and confirm the minutes of the last meeting held on 21st March, 2016.

Resolution 1   *Resolved to confirm the minutes of the last meeting held on 21st March 2016. Admission Committee also noted the seat allocation under different quotas, which is as follows:*

Sl. No.	Programs	Govt. Quota CET	Management Quota	
			Comed K	Management
1.	B.E. Programs (Aided) Civil Engg, Mechanical Engg., Electrical & Electronics Engg., Electronics and Communication Engg.	95%	00%	05%
2.	B.E. Programs (Un-Aided) Civil , Mechanical, Electrical & Electronics, Electronics and Communication, Computer Science, Bio Technology and Automation & Robotics	45%	30%	25%
3.	B. Architecture (Un-Aided)	45%	30%	25%

Sl. No.	Programs	Govt. Quota PGCET	Management Quota
1.	M.Tech. Programs (Aided), Structural Engineering, Energy Systems Engg., Production Management	100%	0%
2.	M.Tech. Programs (Un-Aided), Computer Science, VLSI, Digital Electronics and Machine Design	40%	60%
3.	MBA Program	40%	60%
4.	MCA Program	40%	60%

Agenda Point 2   To ratify notification for admissions to UG and Research programs and approve notification for admissions to PG programs for the academic year 2017-18.

Resolution 2   *Resolved to ratify the actions taken for admissions to first year BE/BArch, PG and PhD programs for the academic year 2017-18.*

1) Seat allocation under different quotas:

Sl. No.	Programs	Govt. Quota CET	Management Quota	
			Comed K	Management
1.	B.E. Programs (Aided) Civil Engg, Mechanical Engg., Electrical & Electronics Engg., Electronics and Communication Engg.	95%	00%	05%
2.	B.E. Programs (Un-Aided) Civil , Mechanical, Electrical & Electronics, Electronics and Communication, Computer Science, Bio Technology and Automation & Robotics	45%	30%	25%
3.	B. Architecture (Un-Aided)	45%	30%	25%

Sl. No.	Programs	Govt. Quota PGCET	Management Quota
1.	M.Tech. Programs (Aided), Structural Engineering, Energy Systems Engg., Production Management	100%	0%
2.	M.Tech. Programs (Un-Aided), Computer Science, VLSI, Digital Electronics and Machine Design	40%	60%
3.	MBA Program	40%	60%
4.	MCA Program	40%	60%

i. *Advertisement for admissions given for UG and PG programs on 23.06.2017 in Kannada Prabha, Hosa-Diganta, Sanje-Darpana newspapers and PhD advertisement given in Deccan Herald and Vijaya Karnataka newspapers on 28.06.2017.*

ii. *Admission to UG programs through KEA (CET), ComedK and Management quota.*

Agenda Point 3 To review the actions taken by Sub-Committee for the conduct of the Research Entrance Test (RET).

Resolution 3 *Admission Committee reviewed the actions taken by the sub-committee and resolved to confirm the actions taken by the Sub-committee for the conduct of Research Entrance Test (RET) and approved the list of candidates shortlisted for interview for PhD program of June 2017.*

Agenda Point 4 Any other item with the permission of the Chair.

NIL

Views of Executive Council on the recommendations of the Admission Committee will be presented during the meeting as EC meeting is also scheduled on 20th September.

Action Requested: The BOG is requested to consider and approve the recommendations of the Admission Committee of the University held on 18th September 2017.

Discussion:

Dr. Prabhakar Kore, Chairman of BOG suggested that after the admissions the University prepare the document that enumerates the demography of the admitted students w.r.t different parameters such as rural/urban; N-K region/ other; gender etc.

Resolution 7.4: BOG reviewed the recommendations of the Admission Committee held on 18th September and approved the percentage of seats allotted for CET, COMEDK and Management quota; and action taken by the sub-committee for the conduct of 'Research Entrance Test'.

BOG 7.5	To discuss the proposed changes in Rules and Regulations governing UG & PG programs and approve the same.
	Relative Grading belongs to an academic environment that has a dynamic system where content and treatment of the subject keep changing, depending upon the instructor and on the changes taking place in the fields of engineering and technology. Absolute Grading depends upon the syllabus, the question paper and the leniency in awarding marks, all of which may vary from one institute to another. Relative grading counters these inconsistencies by evaluating a student vis-à-vis his/her own class. On knowing the quality of the institute to which the student belongs, a fairly accurate judgement of his/her calibre can be made on the basis of (relative) grades. Relative grading has the further advantage of removing the fine edge of cut-throat competition for marks among students.
	In view of this it was decided to adapt 'Relative Grading System' for theory courses which have both ISA and ESA. Relative Grading allows for screening students according to their performance relative to their peers.
	Proposed changes are presented in annexures:
	Annexure 1: Relative Grading
	Annexure 2: MBA
	Annexure 3: PhD

Action Requested: The BOG is requested to discuss the proposed changes in section 46 and 63 of Regulations Governing Undergraduate and Postgraduate Programmes of KLE Technological University 2015 and approve the same.

Discussion: Dr. Ashok Shettar, Vice-Chancellor briefed the need for relative grading in today's competitive world as students will get the grades based upon their performance relative to their peers, which will help placing students in comparable categories regardless of their relative achievements in different subjects.

Commenting on the need for trimester system he said, most of the top B-Schools have adopted this system, it leads to focus learning by the students as students get more time for self-learning and the University program could be aligned with the calendars of top B-schools.

Mandatory stay on-campus by part-time research scholars is required in-order to ensure steady progress of research work and interaction between the guide and the research scholars only after the course work completion.

Resolution 7.5: BOG discussed about proposed changes in regulations regarding adaptation of: relative grading system for both UG and PG programmes; trimester system for MBA programme; and compulsory on-campus stay rule for part-time research scholars.

BOG resolved to approve the adaptation of relative grading system for UG & PG programmes, trimester system for MBA programme and mandatory stay rule for part-time research scholars.

BOG 7.6	To discuss the University progress report for the academic year 2016-17 (Information agenda)
	Progress report of the University will be presented during the meeting.

Discussion: Dr. Ashok Shettar, Vice-Chancellor presented the progress report of the University. Salient points covered by him in his presentation are:

- Students intake and admission
- Incoming student quality index
- Student-faculty ratio and cadre ratio
- Placement growth over the years
- PhD admissions
- University research promotion schemes
- Research projects of worth Rs. 162.5 lakhs sanctioned by the University during the year 2017-18
- Major grants and projects of worth 20 crores received by the University
- Industry collaborations with Samsung R&D for 'Machine learning and Agile Process' and for developing 'Aerospace manufacturing Learning Center' with Aequs and
- Overseas collaborations and students achievement in national events.

BOG expressed it's satisfaction over the progress made by the University and appreciated the work of the Vice-Chancellor and his team.

Participating in discussions, Dr. Prabhakar Kore, Chairman of BOG, asked the Vice-Chancellor to study and present demography of placed students in next meeting.

Prof. B.S. Sonde asked the Vice-Chancellor to try to get QIP center from AICTE. He also advised to look into AICTE-Margdarshan programme to take care of nearby institutions.

Resolution 7.6: BOG noted the progress report of the University presented by the Vice Chancellor. The Board of Governors expressed its satisfaction over the progress made by the University during the period.

BOG 7.7	To review progress of implementation of PhD programmes (Information agenda)
	Progress of PhD programs for the year 2017-18 is presented and it includes: 1. Review of Course work: Results of January 2016 batch of candidates 2. Review of Seminar and MOOC Courses: List of MOOC and Seminar courses offered and completed at schools and departments 3. Status of admitting 2nd batch of research scholars

Action Requested: The BOG is requested to discuss the progress of implementation of PhD programmes of the University.

Discussion: Dr. Prakash Tewari, Registrar (in-charge) presented the progress report of the PhD programme. He briefed that number of applications received for PhD programme is 160 and number of candidates qualified in research entrance test (RET) are 79. Interviews for the qualified candidates have been scheduled on 10th October 2017 and University has plans to admit 48 candidates this year as compared to 32 the previous year.

Prof. B.S. Sonde, expressed the need to make stay on campus compulsory during course work.

Resolution 7.7: BOG noted the progress of implementation of PhD programmes of the University.

BOG 7.8	To approve the formats proposed for the Degree Certificates of MTech and MBA programmes.
	Degree certificates for M.Tech and MBA programmes have been designed with security features. Executive council is requested to consider and approve the proposed formats of the Degree Certificates.
	Proposed formats are given in annexure 4

Discussion:

Resolution 7.8: BOG reviewed the formats and enquired about the security features and the process of procurement and printing of the degree certificates, having satisfied with the procedures approved the proposed formats for M.Tech and MBA programmes.

BOG 7.9	To ratify the Schemes and Syllabi of Undergraduate Minor Programme in 'Automotive Engineering' as recommended by the Mechanical Engineering Board of studies and approve the same.
	KLE Technological University strives to produce Engineers with multidisciplinary skills and abilities, to succeed in the technologically complex world. Earning a minor degree along with engineering major degree is a great way to broaden education, enhance technical, managerial and business skills. Minors are intended to encourage and officially acknowledge the attainment of a fair measure of expertise and knowledge in more than one academic field, with the goal of broadening a student's education, and have an advantage in the competitive job market.

KLE Tech offers multi-term, on campus minors consisting of 15 Credits of course work specified by the School / Department / Centre offering the minor.

KLE Tech is already offering following UG Minor programmes:

    I.   Minor in Entrepreneurship

    II.   Minor in Computer Science & Engineering

    III.   Minor in Electronics

    IV.   Minor in Innovation and Product Development

    V.   Minor in Robotics

In order to meet the demands of the students and to encourage students participation in national competitions mechanical engineering department has offered Minor in 'Automotive Engineering'.

Scheme and Syllabi are given in annexure 5 |

Action Requested: The BOG is requested to discuss and approve the schemes and syllabi of the UG Minor Degree Programme in 'Automotive Engineering'.

Discussion:

Resolution 7.9: BOG noted the offer of Minor in 'Automotive Engineering' by the school of Mechanical Engineering.

BOG 7.10	**Any other subject with the permission of the Chair**

NIL

NIL

Annexure-1

[Proposed changes in regulations governing undergraduate and postgraduate programmesof KLE Technological University 2015]

Proposed changes in regulations governing undergraduate and postgraduate programmesof KLE Technological University 2015

The original regulations (if exits) and modified /new regulations are presented below.

<table>
<tr><td colspan="4">**Existing regulation**</td></tr>
<tr><td>**Assessment**</td><td>**46**</td><td></td><td>The University shall follow a combination of In-Semester Assessment (ISA) and the End-Semester Assessment (ESA) for assessing the performance of a student in each course. The ISA and ESA components for each course shall be conducted as per the calendar of events and the time-table specified from time to time. The weights of ISA and ESA components in the total marks for a course shall be notified by the Teacher in the lesson plans as per the approval of Board of Studies. A student shall be awarded a letter Grade for every course at the end of the semester, indicating the level of performance, considering the scores both in ISA and ESA.</td></tr>
<tr><td colspan="4">**Modified regulation**</td></tr>
<tr><td>**Assessment**</td><td>**46**</td><td></td><td>The University shall follow a combination of In-Semester Assessment (ISA) and the End-Semester Assessment (ESA) for assessing the performance of a student in each course. The ISA and ESA components for each course shall be conducted as per the calendar of events and the time-table specified from time to time. The weights of ISA and ESA components in the total marks for a course shall be notified by the Teacher in the lesson plans as per the approval of Board of Studies. A student shall be awarded a letter Grade for every course at the end of the semester, indicating the level of performance, considering the scores both in ISA and ESA.

The assessment for theory courses carrying ISA and ESA components will be done on **Relative Grading system**. Other courses will be assessed by absolute grading system. List of courses assessed by **Absolute Gradingsystem** is as follows:
Laboratory Courses.
Courses with enrolment less than 30.
Industry Visit and Lecture / Industrial Training / Seminar.
Mini Project / Minor Project / Capstone Projects.
P.G Programs (M.Tech only)</td></tr>
</table>

Regulation number	Earlier regulation	New regulation
Grading system 63	The University shall follow the absolute grading system by allocating a letter grade for each band of marks in a course. The letter grades shall be awarded grade points, as per the following table:	The University shall follow both the relative grading and absolute grading system depending on the type of course.

The University shall follow both the relative grading and absolute grading system depending on the type of course.

#	Letter grade	Grade points	Marks	Remarks
1	S	10	91-100	Outstanding
2	A	9	81-90	Excellent
3	B	8	71-80	Very Good
4	C	7	61-70	Good
5	D	6	51-60	Fair
6	E	5	40-50	Satisfactory
7	F	0	< 40	Fail
8	I*	-		Absent for ESA due to calamity
9	W*	-		Withdrawal
10	X*	-		Incomplete
11	AP	-		Audit Pass
12	AF	-		Audit Fail
13	FA	0		Fail due to attendance shortage

"W", "X" and "I" grades shall be considered to be transitional grades.

However, for the purpose of reporting the performance of a student, letter grades and grade points will be awarded as per section 63 a.

63 a. Relative Grading System

In this system, the grades are awarded to the students based on their performance relative to others in Theory courses having In-Semester Assessment (ISA) and End Semester Assessment (ESA) components.

Grades are assigned based on the Mean and Standard Deviation of the total marks scored on the respective course. (S, X, **"NE"** and **"F"** grades marks are omitted in **Mean** and **Standard Deviation** calculation)

- S shall be awarded if scored marks is greater than 90
- F shall be awarded if scored marks is less than 40

Proposed Relative Grading System

Total Mark, M secured by the student (ISA + ESA)	Grade	Relative Grade Point	Remarks
M> 90	S	10	Outstanding
Avg.+ 0.60 * SD ≤ M ≤ 90	A	9	Excellent
Avg.-0.25*SD ≤ M < Avg.+ 0.60 * SD	B	8	Very Good
Avg.-1.05 * SD ≤ M <Avg.- 0.25 * SD	C	7	Good
Avg.- 1.50 * SD ≤ M < Avg.- 1.05* SD	D	6	Fair
**40 ≤ M<Avg.-1.50*SD	E	5	Satisfactory
M<40*	F	0	Fail
I*	-	Absent for ESA due to calamity	Absent for ESA due to calamity
W*	-	Withdrawal	Withdrawal
X*	-	Incomplete	Incomplete
AP	-	Audit Pass	Audit Pass
AF	-	Audit Fail	Audit Fail
FA	0	Fail due to attendance shortage	Fail due to attendance shortage

* "W", "X" and "I" grades shall be considered to be transitional grades.

**40 marks mean: The students should score minimum 20 marks out of 50 in ISA and ESA examinations separately (i.e. 40 out of 100).

NOTE: The Course Grading table generated for the first time based on the Average & Standard Deviation will be used strictly for awarding grades to all the re-evaluated courses and Summer semester Examinations.

Absolute Grading System

#	Marks	Letter grade	Absolute Grade points	Remarks
1	91-100	S	10	Outstanding
2	81-90	A	9	Excellent
3	71-80	B	8	Very Good
4	61-70	C	7	Good
5	51-60	D	6	Fair
6	40-50	E	5	Satisfactory
7	< 40	F	0	Fail
8		I*	-	Absent for ESA due to calamity
9		W*	-	Withdrawal
10		X*	-	Incomplete
11		AP	-	Audit Pass
12		AF	-	Audit Fail
13		FA	0	Fail due to attendance shortage

* "W", "X" and "I" grades shall be considered to be transitional grades.

Result sheet shall contain the following

- Only Grades, Grade points, Credits, SGPA and CGPA.
- Grading slab of each course.

Annexure-2

[MBA Regulations]

Regulations
Governing Master of Business
Administration Programme of
KLE Technological University
2017

KLE Technological University
(Established under Karnataka Act No.22, 2013)

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Section	**Description**	**Page**

REGULATIONS GOVERNING MASTER OF BUSINESS ADMINISTRATION OF KLE TECHNOLOGICALUNIVERSITY - 2017			
No. KLETU/Acad/Reg/2017/01 Date: 29/07/2017			
In exercise of the powers conferred by Section-37 of The KLE Technological University Act, 2012 (Karnataka Act 22 of 2013), the Executive Council hereby approves the following "**REGULATIONS GOVERNING MASTER OF BUSINESS ADMINISTRATION PROGRAMME OF KLE TECHNOLOGICALUNIVERSITY - 2017**", framed and submitted by the Academic Council, as per the resolution no. EC-5 of Executive Council Meeting held on xx/08/2017.			
CHAPTER – I **PRELIMINARY**			
Short title, extent and commencement	1	i	These regulations shall be called "Regulations Governing Master of Business AdministrationProgrammeof KLE Technological University – 2017.
		ii	They shall come into force from the date of their approval by the Executive Council.
		iii	These Regulations shall be read in conjunction with the Act, Statutes, Regulations Governing Research Programmes and other notifications of the University.
		iv	These Regulations shall be applicable to the students admitted to KLE Technological University from the academic year 2017-18 onwards. However, the students, who are on the rolls of KLE Technological University before the academic year 2017-18, shall continue to be governed by the existing Regulations Governing Undergraduate and Postgraduate Programmes of KLE Technological University 2015.
Definitions	2		In these Statutes, unless the context otherwise requires:
		i	"Act" means The KLE Technological University Act, 2012 (Karnataka Act No. 22 of 2013);
		ii	"Board of Governors", "Executive Council", "Academic Council", and "Finance Council", means respectively the Board of Governors, Executive Council, Academic Council, and Finance Council, of the University.

		iii	"Campus" means a campus established and maintained by the University.
		iv	"CGPA", "TGPA" means respectively Cumulative Grade Point Average and TermGrade Point Average.
		v	"Chancellor", "Pro Chancellor", "Vice-Chancellor", "Registrar", "Controller of Examinations", "Dean", and "Departmental Chairperson" mean respectively the Chancellor, Pro Chancellor, Vice-Chancellor, Registrar, Controller of Examinations, Dean, and Departmental Chairperson of the University.
		vi	"ITA" and "ETA" means respectively the In-Term Assessment, and End Term Assessment of the University.
		vii	"Committees" means the committees formed by the various authorities and officers of the University.
		viii	"Convocation" means the convocation of the University, where Degrees, Honorary Degrees, Diplomas, Academic Distinctions, and Certificates are awarded as per requirements of the University.
		ix	"Course" means one of the units (subject) which comprises a Programme of study.
		x	"Credit" means credit earned by a student after a successful completion of a credited course.
		xi	"Degree" means a degree awarded by the University with or without Specialization and/or Minor.
		xii	"Examination Hall" means both the hall where theory examinations are conducted or the laboratory or workshop where practical examinations are conducted.
		xiii	"Government" means the Government of Karnataka.
		xiv	"Notification" means the notification of the University.
		xv	"Prescribed" means prescribed by the rules made by the University under the Act, Statutes, Regulations, and Notifications.
		xvi	"Programme" or "Programme of study" means a higher education programme pursued for a degree awarded by the University as specified under Section-22(3) of the UGC Act.

		xvii	"Department or School" means an entity that offers programme(s) instituted by the University.
		xviii	"Regulations" means the Regulations of the University, notified by the Executive Council.
		xix	"Statutes" means the Statutes of KLE Technological University, notified by the Board of Governors.
		xx	"Student" means a person admitted to and pursuing a specified Programme of study in the University.
		xxi	"Teacher", "Course Instructor" and "Guide" means respectively a faculty appointed for imparting instruction and research guidance to students in the University and the Teacher instructing a course.
		xxii	"University" means the KLE Technological University, Hubballi, established and incorporated under the KLE Technological University Act, 2012 (Karnataka Act No. 22 of 2013).
CHAPTER II **COMMITTEES AND DEPARTMENTAL CHAIRPERSON**			
Departmental/ School/ Centre Chairperson(s)	**3**	3.1	The Vice-Chancellor shall appoint a whole-time senior Teacher as Departmental Chairperson/ School Chairperson/ Center Chairperson for each Department/School/Center.
		3.2	The terms and conditions of appointment shall be those contained in the contract of appointment.
		3.3	The Departmental/ School/ Center Chairperson shall oversee the day-to-day affairs of the Department/ School/ Center, function as the administrative head of the Department/ School/ Center and perform such other duties as assigned to him/her from time to time.
Admissions Committee	**4**	4.1	The Admissions Committee shall be constituted by the Vice-Chancellor consisting of:
		i	Registrar – Chairperson
		ii	Coordinator Admission Cell - Member Secretary
		iii	ONE Dean Nominated by the Vice-Chancellor
		iv	ONE nominee of the Executive Council – Member

		v	ONE nominee of the Academic Council – Member
		vi	ONE member from society at large, nominated by the Vice-Chancellor – Member; and
		4.2	The Committee shall meet as often as required, at least TWO times in a year.
		4.3	The Admissions Committee shall be responsible for the:
		i	notification of intake following reservation policy as applicable
		ii	conduction/coordination of the entrance test(s)
		iii	preparation of merit list(s)
		iv	arrangement of counseling for candidates
		v	establishment of equivalency for candidates migrating into the University
		vi	issue of letter of admission; and
		vii	such other tasks pertaining to admissions.
Fee Fixation	**5**		There shall be two types of seats in various programmes of study offered by the University, namely,
		i	Government Quota: For 40% of seats reserved for students of Karnataka under Section-9 of the Act, the fees shall be fixed by the Fee Regulation Committee constituted by the Government of Karnataka. The reservation policy of the Government shall be applicable only for these seats;
		ii	University Quota: For the remaining 60% of seats, the fees shall be prescribed by the Finance Council with the approval of the Board of Governors;
Departmental Curriculum Committee(s)	**6**		The Dean Academic Affairs / The concerned Dean of Faculty may constitute the requisite number of Departmental Board of Studies with the approval of the Academic Council.
		6.1	A Departmental Board of Studies shall comprise of the following members:
		i	Concerned Head of the Department/ School/ Center – Chairperson;

		Ii	ONE Professor, ONE Associate Professor and ONE Assistant Professor from the Department, nominated by the Dean Academic Affairs/ the concerned Dean of Faculty – Members; and
		Iii	TWO Subject experts from outside the college nominated by the Vice-Chancellor
		iv	TWO representative from industry corporate sector/ allied area relating to placement nominated by the Vice-Chancellor
		V	ONE Post-graduate meritorious alumnus nominated by the Vice-Chancellor
		vi	ONE Student Member representing each of the program offered by the Department/ School/ Center
		6.1.1	The concerned Chairman of Board of Studies may invite additional experts to the Departmental Board of Studies as deemed fit.
		6.2	A Departmental Board of Studies shall:
		i	Meet at least once a year, sufficiently before the commencement;
		ii	Prepare detailed curricula and syllabi of concerned Programmes and submit to the Academic Council for approval and publication; and
		iii	Revise the curricula and syllabi from time to time and submit to the Academic Council for approval and publication.
		6.3	The Dean Academic Affairs / The concerned Dean of Faculty may, in cases of urgency, obtain the opinion of a Departmental Board of Studies by circulation of any proposal among the members of the Committee. Such opinion, together with the action taken thereon, shall be communicated to all the members.
		6.4	The Dean Academic Affairs / The concerned Dean of Faculty shall reconstitute a Departmental Board of Studies once every THREE years under normal circumstances and under extenuating circumstances, if deemed fit, he/she may reconstitute the Departmental Board of Studies before the expiry of its term with the approval of the Academic Council.
Board of Examiners	**7**		The Dean Academic Affairs / The concerned Dean of Faculty may constitute the requisite number of Boards of Examiners with the approval of Academic Council

		7.1	A Board of Examiners shall comprise of the following members:
		I	Dean Academic Affairs/ The concerned Dean of Faculty – Chairperson;
		Ii	ONE nominee from each programme of the concerned Departmental/ School/ Center Board of Studies - Member;
		iii	ONE external member from institutions of repute nominated by the Vice-Chancellor - Member;
		Iv	Departmental/ School/ Center Chairperson – Member Secretary; and
		V	ONE Senior Teacher nominated by Dean Academic Affairs/ The concerned Dean of Faculty.
		7.2	The Board of Examiners shall:
		i	Make arrangements for setting of the question papers for various courses for which examinations are being conducted at the University;
		ii	Make arrangements to scrutinize the question papers for quality, standard, appropriateness, syllabus coverage and marks distribution;
		iii	Make arrangements to scrutinize the evaluation scheme and solutions for completeness, accuracy, appropriateness, and marks distribution;
		iv	Recommend to the Controller of Examinations suitable persons for the appointment as examiners, question paper setters, evaluators and moderators. Question paper setters shall have taught the concerned subject at least once or be an expert in that field. However, in case of emergency, the Controller of Examinations may appoint suitable persons as examiners, question paper setters, evaluators and moderators with the approval of the Dean Academic Affairs / The concerned Dean of Faculty; and
		v	Meet before the commencement of every examination.
		7.3	The Dean Academic Affairs / The concerned Dean of Faculty shall reconstitute the Board of Examiners once every THREE years under normal circumstances and under extenuating circumstances, if deemed fit, he/she may reconstitute the Board of Examiners before the expiry of its term.
Examination Squad	8		The Controller of Examinations shall appoint an Examination Squad, if required, to ensure that the examinations are held as per the code of conduct. At least

			one member of the Squad shall be a woman. The Chief of the Squad shall submit a report to the Controller of Examinations on the conduct of examination on a daily basis, in addition to a consolidated report at the conclusion of examinations.
Results Scrutiny Panel	9		The Vice-Chancellor shall constitute a Results Scrutiny Panel for the finalization and approval of the results of examinations before announcement.
		9.1	The Results Scrutiny Panel shall consist of the following members:
		i	Vice-Chancellor or his/her nominee – Chairperson;
		ii	ONE nominee of the Academic Council - Member;
		iii	Registrar – Member;
		iv	Dean Academic Affairs/ The concerned Dean of Faculty– Members; and
		v	Chairpersons of Department/ School/ Center
		vi	Controller of Examinations – Member-Secretary.
		9.2	The Results Scrutiny Panel shall:
		i	Review the report of the Controller of Examinations pertaining to the results;
		ii	Validate the statistics of the results placed by the Controller of Examinations;
		iii	Scrutinize and finalize the results of every examination, with or without moderation;
		iv	Review the answer books in extreme cases (erratic valuation/ out of syllabus questions) based on complaints, if deemed necessary; and
		v	Meet before the announcement of results.
		9.3	The Vice-Chancellor shall reconstitute the Results Scrutiny Panel once every THREE years under normal circumstances and, ifdeemed fit, he/she may reconstitute the Results Scrutiny Panel before the expiry of its term.
Examinations Malpractice Review Committee	10		The Vice-Chancellor shall constitute an Examinations Malpractice Review Committee for reviewing and recommending suitable actions on the reported cases of malpractice.
		10.1	The composition of the committee shall be:

		i	The Vice-Chancellor or his/her nominee – Chairperson;
		Ii	Dean Academic Affairs / The concerned Dean of Faculty- Member;
		iii	ONE Departmental Chairperson nominated by the Vice-Chancellor – Member;
		iv	Controller of Examinations – Member-Secretary;
		v	ONE member at the level of professor nominated by the Vice-Chancellor, a woman if no other woman member is present – Member.
		10.1.1	Chairperson of the Committee may invite the concerned Departmental Chairperson or any other Teacher as deemed necessary.
		10.2	The Examinations Malpractice Review Committee shall:
		i	Review and inquire into cases of malpractice or indiscipline during examinations reported by the Controller of Examinations and recommend suitable action and penalties, if any;
		ii	Meet after the conduct of every examination if there are cases of reported malpractice or indiscipline.
		10.3	The Vice-Chancellor shall reconstitute the Examinations Malpractice Review Committee once every THREE years under normal circumstances and under extenuating circumstances, if deemed fit, he/she may reconstitute the Examinations Malpractice Review Committee before the expiry of its term.
CHAPTER III **ADMISSION**			
			Admission to the University shall normally be made at the commencement of each academic year for various programmes of study except research programmes. The dates for advertisement, entrance examination, if any,counseling, admission, registration, commencement of classes, and other details for the academic session shall be notified by the Registrar, from time to time.
Eligibility for Admission	11		The minimum qualification for admission to each programme of study shall be as prescribed by the Academic Council from time to time, which shall be notified by the Registrar in the Admission Brochure. However, the following provisions shall be considered while specifying the eligibility for admission to various programmes:

		i	In case of SC / ST / OBC candidates, there shall be a relaxation of a specified percentage in the prescribed minimum marks or equivalent in the qualifying exam **as per Government norms**; and
		ii	The candidate shall have passed the qualifying examination on or before the date of admission which shall be duly supported by provisional certificate issued by competent authorities.
Admission Process	**12**		The admission process for various programmes shall be as follows:
		12.1	A candidate seeking admission under the Government Quota shall follow the procedures of the Post GraduateCommon Entrance Examination as notified by the Government of Karnataka from time to time.
		12.2	A candidate seeking admission under the University Quota shall appear for the entrance test conducted by the University or by the recognized Entrance Examination authorities such as KEA/CMAT/MAT/CAT.
		12.2.1	University may conduct Counseling for admissions based on the rankings in the entrance test or directly admit the candidates allotted by the central counseling conducted by the Examination Authorities.
		12.3	Candidates who have passed a qualifying examination not conducted by the Government of Karnataka or University shall submit the eligibility and migration certificate in original for admission to a programme of study. Candidates who have passed the qualifying examination through correspondence course shall not be eligible for admission to the University.
		12.4	NRI/PIO/FN seeking admission to a programme shall apply separately with equivalency/ eligibility/migration certificates along with passport/visa/clearance/NOC from concerned bodies to the Admissions Committee.
		12.5	Admission shall be subject to the candidate being certified medically fit by a registered medical practitioner recognized by the University for the purpose.
		12.6	Each applicant shall be required to submit a Character Certificate from the head of the institution last attended.
Refusal and Revoking of Admission	**13**	**13.1**	A candidate may be refused admission if he/she is found to have indulged in acts of indiscipline or unlawful demonstrations and the like. Candidates who have been expelled/ rusticated/ debarred from other institutions shall not be admitted.

		13.2	The Vice-Chancellor reserves the right to refuse admission to a candidate whose admission, in his/her judgment, is not in the interest of the University by recording the reasons for such refusal.
		13.3	If, at any time after admission, it is found that a candidate has not fulfilled all the requirements stipulated in the letter of admission or has submitted forged or invalid documents, the Admissions Committee may revoke the admission of the candidate and report the matter to the Registrar.
Student Registration Number	**14**		Each student shall be assigned a 12-character alphanumeric Student Registration Number (SRN) upon confirmation of admission as per the following scheme:

Field	Campus	Full/Part time/ Distance	Faculty	Year of admission	Level of programme	Depart ment	Serial Number
Length	2	1	1	2	1	2	3
Code	2-digit	F/P/D	1-letter	2- digit	1- letter	2-letter	3- digit

For example, 01FM17MBA001 is the Student Registration Number of the student who joined campus 01, as a Full-time student, in Faculty of Management, in the year 2017, for Master of Business Administration program of study with the serial number 001. The letter codes for various faculties and programmes of study shall be indicated in the corresponding guidelines approved by the Academic Council.

Transfer/ Migration of Students	**16**	**16.1**	Transfer/migration to a programme of study shall be possible for candidates from other recognized universities or institutions, as decided by the Admissions Committee, subject to availability of seats.
		16.2	A candidate may be admitted to an appropriate term of the relevant programme of study on the basis of equivalency. To establish the equivalency or otherwise, a committee shall be constituted by the Dean Academic Affairs / the concerned Dean of Faculty to examine the courses already studied by the student, the syllabi thereof and the examinations passed. The committee may also, if deemed necessary, conduct a proficiency test to determine the transfer of credits and course(s) from which the student may be exempted.
		16.3	Such a candidate shall submit a "No Objection Certificate" from the previous university or institution
		16.4	The fee structure shall be decided by the Admissions Committee for transfer/migration of a candidate to the

			University at the time of transfer/migration and shall be binding for his/her remaining minimum duration of the programme.
		16.5	A student applying to migrate to another university or institution may be permitted to do so provided (i) the student submits a consent letter from the other university or institution; (ii) the student obtains a clearance from the Dean Academic Affairs / the concerned Dean of Faculty of the University; (iii) the student has no dues to the University; and (iv) the student pays the prescribed fees for his/her remaining minimum duration of the programme
		16.6	Any scholarship or financial assistance awarded to a student migrating out of the University shall automatically stand terminated with effect from the date of approval of migration. Further, the University reserves the right to recover any scholarship or financial assistance already given to such a student before approval of migration.
Temporary withdrawal from the programme	17	17.1	A student may be permitted by the Registrar to withdraw from a programme for reasons of ill health or other valid reasons, after providing sufficient documentary evidence. Such a student seeking temporary withdrawal shall apply to the Registrar in the prescribed format. A student may also be permitted to withdraw temporarily from the program for a period of one year to do internship. **Students who opt for 'Temporary Withdrawal' from the term(s) are not allowed to register for Summerterm.**
		17.2	A student may be permitted only once during his/her programme of study to avail this provision.
		17.3	Any scholarship or financial assistance awarded to a student temporarily withdrawing from the University shall automatically stand terminated with effect from the date of approval of withdrawal. Further, upon rejoining, the eligibility of the student for the scholarship or financial assistance shall be re-evaluated with no guarantee of automatic renewal.
		17.4	A student who has temporarily withdrawn from the University may apply in the prescribed format for resumption of the programme of study. On approval, such a student shall be treated as a regular student for meeting the academic requirements and shall not be required to pay the fees for the period of withdrawal.
		17.5	A student who has temporarily withdrawn from the University and fails to apply for resumption of the programme of study, at the end of the approved period of temporary withdrawal, shall be deemed to have withdrawn permanently from the University. Such students are liable to pay the prescribed fees for the remaining minimum

			duration of the programme.
Permanent withdrawal from the programme / University	18	18.1	A student may be permitted by the Registrar to withdraw from a programme permanently. Such a student seeking permanent withdrawal shall apply to the Registrar in the prescribed format.
		18.2	The student discontinuing from a programme shall pay the balance fees for his/her remainder minimum duration of the programme.
		18.3	Any scholarship or financial assistance awarded to a student permanently withdrawing from the University shall automatically stand terminated with effect from the date of approval of withdrawal. Further, the University reserves the right to recover any scholarship

CHAPTER IV

PROGRAMMES OF STUDY AND STRUCTURE

Programmes of Study and duration	19		The regular MBA Program is of two years duration. Each year shall be divided into three terms.
		19.1	The minimum duration of Management programme shall be two years and the maximum duration shall be twice the minimum duration.
		19.2	A candidate shall be eligible for admission to a MBAprogramme after passing any Bachelor's degree (10+2+3), KMAT compulsory.
Structure of a programme	20	20.1	Each academic year shall consist of three regular terms (trimester), Term I, Term II and Term III and a fast track (Summer) term.
		20.2	Activities in a termshall include teaching, learning, examination and evaluation.
		20.3	The terms I, II and III shall be normally for duration of FOURTEEN weeks. However, the fast-track term shall be normally for duration of EIGHT weeks. Term I normally shall be from August-October, Term II normally shall be from November-January and Term III normally shall be February-May each year. Fast-track term normally shall be during June-July each year. Sometimes due to delay in admission formalities, if the First term (for fresh students) is delayed by few days, the subsequent Second and Third term may be correspondingly delayed. It would be desirable to have 60 teaching days per

			termexcluding examinations.
		20.4	The calendar of events in respect of MBAprogramme shall be notified by the Registrar from time to time.
		20.5	A student shall register for the courses he/she intends to study at the beginning of each term and a letter grade shall be awarded to each registered course at the end of the term after following the prescribed evaluation process.
		20.6	A student's progress and performance shall be measured by the number of credits and grades he / she has earned. Based on the course credits and grades obtained by the student, the grade point average shall be calculated. A specified minimum number of credits for the programme of study shall be earned by the student in order to qualify for the award of degree.
Credit system	21		Term-wise credit-based system shall be followed in MBA programme of study.
		21.1	Credits shall be assigned to the each course in a programme of study based on the following pattern: • ONE credit for ONE lecture (L) hour; • ONE credit for TWO tutorial (T) hours; • ONE credit for TWO laboratory/seminar (P) hours;
		21.2	Each course shall be represented in the form of 'L-T-P' where L, T, and P mean respectively, the number of lecture hours per week, number of tutorial hours per week, and number of practical hours per week. The number of credits assigned to the course shall be represented by C. The credits assigned to each course shall be calculated as $C = L + T/2 + P/2$. For example, '3-1-0' means three lecture hours and two tutorial hours amounting to a total of 4 credits.
		21.3	The number of credits required to be earned for a MBA programme shall be calculated at an average of FOURTEEN/FIFTEEN credits per regular term with a margin of + 2.5%. For example, a 2-year MBA programme shall comprise of six regular terms and therefore require $14.66 \times 6 = 88$ credits, the minimum being 88 and the maximum being $88 \times 1.025 = 90$ credits.
		21.4	A full-time student shall normally register for FIFTEEN credits in a regular term. However, the minimum number of credits for which a student shall register is 11.
		21.5	A full-time student may be permitted to register for a maximum of NINETEEN credits during a regular term.

		21.6	Every course in a programme of study normally runs for the full length of a term.
Category of courses	22	22.1	Various Courses to be offered in programmes of study shall be categorized into the following six types:
		22.1.1	*Humanities & Social Science Courses (HS)*: Humanities & Social Sciencecourses enable students by endowing them with skills essential to pursue a given programme of study. Generally, they comprise courses in linguistics, communication, professional aptitude, management, economics, environment, psychology, philosophy, history, law, political science, professional ethics, and so on. Humanities & Social Science courses shall be in the range of 9 – 15 credits.
		22.1.2	*Basic Science Courses (BS)*: Basic Science courses Mathematics, Physics, Chemistry and Biology and they are common to all undergraduate programs except architecture. Basic Science courses shall be in the range of 20 – 30 credits.
		22.1.3	*Engineering Science Courses (ES):* Engineering Science courses give a broad spectrum of allied engineering disciplines that is needed to address real time engineering problems that are multi-disciplinary in nature. EngineeringScience courses include Materials, Workshop, Drawing, Basics of Electrical/ Electronics/ Mechanical/ Computer Engineering/ Civil engineering and are common to all undergraduate programs except architecture. Engineering Science courses shall be in the range of 25 – 35 credits.
		22.1.4	*Professional Core Courses (PC):* Professional Core courses constitute the core of the programme of study. Core courses shall be in the range of 50 – 70 credits.
		22.1.5	*Elective Courses (EC)*: Elective courses offer a choice of advanced or specialized courses related to the programme of study. They enable students to specialize in a domain of interest or tune their learning to suit career needs and current trends. Electives can be of following categories: *Essential Programme electives (EPE)* *Optional Programme electives (OPE)* Open Elective (OE) Elective courses shall be in the range of 25 – 35 credits
		22.1.6	*Internship, Research or Project Work (PW)*: These are intended to enhance the student's practical knowledge

			and exposure to research and industry. The credits for this category shall not exceed 25 credits. Project work shall normally be carried out in regular terms.
		22.1.7	*Non-credit courses:* A few courses, may not be assigned credits. Such courses shall be referred to as non-credit (NC) courses, and may be mandatory in a programme of study.
		22.2	Programmeof study may have additional requirements such as internshipand residency.
Audit courses	**23**		A student may be permitted to take any number of audit courses over and above the graduation requirements for learning a subject.

CHAPTER V

CURRICULA AND SYLLABI

Curricula and Syllabi	**24**		The curriculum of MBAprogramme of study offered by the University is intended to provide not only the right balance of broad-based and in-depth knowledge but also aptitude for life-long learning.
		24.1	Medium of instruction shall be English, except in those Faculties where other languages are permitted by the Academic Council.
		24.2	The detailed curriculum and syllabus for MBAprogramme of study shall be framed by the School Board of Studies with approval of the Academic Council and shall be notified from time to time.
Course code	**25**	25.1	Every course in a programme shall be assigned a course code, using nine alphanumeric characters as under:

Field	Year	Faculty	Programme of study	Type of Course	Level	Serial Number
	2	1	2	1	1	2
Code	2-digit	1-letter	2-Letter	1 - Letter	1-9	2 - digit

A letter shall be assigned for each course depending on the type of course as: HS category (Humanities) = H; BS category = B; ES category = F; PC category = C; EC category = E; PW category = W; Research = R; Internship = I; Seminar = S; Colloquium = V; Self-study = Y; Special-topic = T; Apprenticeship = A; Laboratory / Practical = P; Field Work = D; and Non-credit course = N. The Departmental Curriculum Committee shall assign a code

			to a course as and when a new course is introduced.
		25.2	A digit shall be assigned for each course depending on the level of course as:
		i	Levels 7-9 shall be reserved for research courses, Master's and Ph.D. research work, and the like. Example17MBAC801:is a course introduced or revised in 2017, in the faculty of Management, in Business Administration, which is a Core Course, in the second year, with a course number of 01

Teaching / Learning methods	**26**		The majority of courses shall be in the form of assisted teaching/learning through direct contact or online or hybrid with the exception of Project Work and Internship. To enrich the student experience, the teaching / learning may include guest lectures, field trips, mini projects, self-study and so on. Teachers may use state-of-the-art knowledge dissemination tools.
			
			To enrich the student experience, the teaching / learning may include any of the following methods:
			
			1. Lectures with active learning
			This method is used for large number of courses in the program. To make it more impactful several active learning practices are used by the faculty.
			
			2. Tutorials and group discussions
			Tutorials are used in the courses where students need more practicing of application of the concepts and also need practicing in the numerical problem solving in different contexts. Students also get an opportunity to clarify their doubts in the course.
			
			3. Laboratory work with cooperative learning
			The laboratory experience has been enhanced by categorizing the experiments as
			
			    a. Demo Experiments
			    b. Exercise experiments
			    c. Structured enquiry experiments
			    d. Open-ended experiments
			This categorization helps to achieve all the elements of outcome (b): Design of experiments, conduct of experiment, analysis and interpretation of data.
			
			4. Field work or relevant industry exposure
			To give a better feel of the concepts or managementpractices fieldwork is assigned to the students
			
			5. Group projects with co-operative learning

			Group projects like course projects, mini projects and dissertation create integrated experience for the students. They particularly give opportunity for the students to enhance professional competencies like team orientation, communication, lifelong learning etc., that are reflected in the outcomes. Projects challenge the students to work on complex managementproblems and take him through the whole process of problem solving. 6. **Course projects** Course projects also help the students to understand the concepts learnt in a course and application of concepts in different contexts. 7. **Directed self learning tasks** The activities like term paper writing, seminars give the student capability to develop lifelong learning skills 8. **Online or MOOC courses** Selected online / MOOC courses either independent or as part of project work give the students exposure to international best practices and help in developing self-confidence.
Course instructor / Course coordinator	27		A Teacher who is teaching a particular course shall be referred to as the course instructor for that course. If a course is taught by more than one Teacher in the same term, it shall be coordinated by one of the Teachers designated as the course coordinator. He/she has the responsibility for framing the course policy, which includes lesson plan, coverage, assignments, quizzes, tests, practicals, and other evaluation processes.

CHAPTER VI

REGISTRATION AND ATTENDANCE

Registration for courses	28		In each term, an eligible student shall register for the courses he/she intends to study. Only registered students shall be allowed to attend the classes of those courses.
		28.1	Students shall register for the courses to be studied in a particular termbefore the end of the previous termaccording to a schedule specified by the Dean Academic Affairs / the concerned Dean of Faculty, except for the courses in the first term. Registration for the first termof a programme shall be a part of admission process.
		28.2	Registration process, either online or offline, shall consist of the following steps:

		i	Meeting with the course coordinator, if required, to verify prerequisites;
		ii	Enrolment of students for different courses offered by particular Teachers;
		iii	Payment of prescribed tuition fees and other dues.
		28.3	A student who obtains "F" or "W" grade in a course other than elective (EC category) shall re-register for the same course when offered next. A student who obtains "F" or "W" grade in an elective course shall have an option of repeating the same elective course when offered next or register for any other elective course in the EC category.
		28.4	If a student fails to register for course(s) during a termwithout intimation to the Dean Academic Affairs / the concerned Dean of Faculty, his/her admission shall be liable to be cancelled.
		28.5	Late registration may be permitted by the Dean Academic Affairs / the concerned Dean of Faculty under exceptional circumstances.
		28.6	For re-registration, late registration, adding/dropping of courses, a fee may be charged as notified from time to time.
Registration record	29		The student shall ensure that the registration details are entered on the registration record which may be maintained on-line. Queries related to registration shall be considered only when accompanied by the original registration record. This record shall be preserved until the term grade card is received by the student.
Registration validation	30		Before the first day of classes, every student shall validate his registration either on-line or at the concerned School office. Students who do not validate their registration shall not be permitted to add/drop courses.
Minimum student enrollment in a course	31		A course shall be offered if a minimum number of students have registered for that course, as specified by the Dean Academic Affairs / the concerned Dean of Faculty. Under special circumstances, a course may be offered with fewer students, with the prior permission of the Vice-Chancellor. Courses without the minimum registrations on the last date for adding/dropping of courses shall not be offered. The students who registered for such courses shall be given additional time for registering for alternate courses.
Add/Drop, audit and withdrawal from courses	32	i	Add/Drop: A student may add or drop one or more course(s) before the deadline with the approval of the Dean Academic Affairs / the concerned Dean of Faculty, upon payment of additional fees, if any.

		ii	Withdrawal: A student may withdraw from a course before the deadline specified for the purpose, with the approval of the Dean Academic Affairs / the concerned Dean of Faculty. A withdrawal grade shall be awarded in such case(s).
		iii	Audit: A student may change a credit course to an audit one before the deadline specified for the purpose, with the approval of the concerned Dean of Faculty.
Registration for Summer Term	33	33.1	A student may be permitted to register for a **maximum of 11credits** during a Summer Term.
		33.2	A student may register for courses in Summer Term without any additional fees provided he/she has not registered for the same courses earlier and there is vacancy in those courses. Such a student shall pay the prescribed fees for the minimum duration of the programme, notwithstanding the number of credits to be earned during the final year / term.
		33.3	A student who registers for a course in the Summer Term on account of failure, withdrawal or any other form of discontinuance shall pay additional fees as prescribed from time to time.
Attendance	34		Attendance is the physical presence of the student in the class. Students shall make every effort to attend all classes, laboratory / practical and other sessions.
		34.1	Every Teacher handling a class, tutorialor laboratory / practical session shall take attendance till the last instruction day in the term. The students shall be informed about their attendance status periodically by the respective departments so that the students get advance notice to make up any shortage in attendance.
		34.2	A student shall maintain the prescribed minimum attendance in each individual course, as specified in the guidelines for the programme of study. Without the minimum attendance in a course, the student shall be ineligible to appear for the End TermAssessment in that course. Such a student shall be awarded "FA" grade in that course and he/she shall register for and repeat the course when offered next.
		34.3	If a student is absent from the University for more than SIX weeks without permission of the Dean Academic Affairs / the concerned Dean of Faculty, his/her registration is liable to be cancelled.
Condoning Attendance	35		In rare and genuine cases, the Vice-Chancellor may condone a shortage of attendance to a maximum extent of 10% on the recommendation of the Dean Academic

Shortage			Affairs/ the concerned Dean of Faculty.
CHAPTER VII **EXAMINATION SYSTEM**			
Controller of Examinations	**36**		The Controller of Examinations shall be responsible for the conduct of examinations of all the courses of all the programmes of the University, and all other matters incidental thereto and ancillary therewith, under the supervision and monitoring by the Vice-Chancellor. The Controller of Examinations shall:
		i	Supervise the day-to-day activities concerning examinations of the University;
		ii	Convene the meetings of the Authorities of the University for which he/she is the Member-Secretary, on the approval of the Vice-Chancellor;
		iii	Arrange for the preparation and notification of examination time table from time to time;
		iv	Supervise the registration of students for End TermAssessment, if applicable;
		v	Appoint the required number of officials and staff for the conduct of examinations, with the approval of the Vice-Chancellor;
		vi	Prepare detailed guidelines for the duties and responsibilities of various officials and staff connected with examinations;
		vii	Convene meetings of all the concerned officials and staff from time to time, to explain to them their duties and responsibilities pertaining to the examinations;
		viii	Obtain help from local authorities to maintain law and order for the conduct of examinations, if necessary;
		ix	Arrange for the issue of grade cards, transcripts, provisional degree certificates, degree certificates, migration certificates and so on to the students;
		x	Maintain utmost secrecy while preparing and maintaining the confidential materials, bills, and proceedings;
		xi	Recommend the remunerations, if any, connected with the examination work, to the Finance Council for consideration and further action;
		xii	Make arrangements for maintenance of stock, accounts, records, and statistics of the Office of the Controller of Examinations and for annual stock verification;

		xiii	Submit the infrastructural requirements of the Office of the Controller of Examinations as and when required to the Registrar for consideration and further action; and
		xiv	Prepare the budget for the Office of the Controller of Examinations and place it before the Finance Council for its consideration.
Deputy Controller of Examinations	**37**		Deputy Controller of Examinations, if any, shall assist the Controller of Examinations for the conduct of examinations and all other matters incidental thereto and ancillary therewith.
Chief Superintendent	**38**		The Controller of Examinations shall appoint a Chief Superintendent from amongst the senior Teachers of the University during each term to assist him/her for the conduct of examinations, with the approval of the Vice Chancellor.
		38.1	One Chief Superintendent shall be appointed for each examination centre.
		38.2	The Chief Superintendent shall:
		i	Arrange for the required materials (e.g. answer books, drawing cards, data handbooks and other stationery) for the conduct of examinations, and supply of the same to the students, as necessary;
		ii	Arrange for and appoint the required personnel for the conduct of examinations, with the approval of the Controller of Examinations;
		iii	Arrange for the seating of students and notify the seating arrangements;
		iv	Be available at the examination center during the examinations; and
		v	Discharge any other responsibility assigned by the Controller of Examinations from time to time.
Additional Chief Superintendent(s)	**39**		The Controller of Examinations shall appoint Additional Chief Superintendent(s), if necessitated by the number of students registered for the examination, from amongst the senior Teachers of the University, with the approval of the Vice Chancellor. The Additional Chief Superintendent(s) shall perform similar duties as those of the Chief Superintendent.
Deputy Chief Superintendent(s)	**40**		The Controller of Examinations shall appoint Deputy Chief Superintendent(s), from amongst the senior Teachers of the University, with the approval of the Vice Chancellor, if required. The Deputy Chief Superintendent(s) shall assist

			the Chief Superintendent in the conduct of examinations.
Invigilators	**41**		The Chief Superintendent shall appoint the required number of Invigilators for all blocks where examinations are held, as required.
Group Invigilators	**42**		The Chief Superintendent shall appoint the required number of Group Invigilators for the coordination and supervision of a group of invigilators, as needed. In case of emergency, a Group Invigilator may relieve an invigilator for short intervals.
Obligation to perform the examination work	**43**		Any person, who is entrusted with any kind of examination work relating to paper setting, invigilation, supervision, evaluation, conduct of practical examinations, printing of question papers and answer books, tabulation, preparation of grade cards and all such activities incidental thereto and connected therewith, shall discharge such duties prudently and with utmost integrity for ensuring high academic standards.
		43.1	If any person who has been allotted any kind of examination work is found to be guilty of breach of duties or involves in any misbehavior and/or misconduct, disciplinary action shall be taken against him/her as per the rules of the University.
		43.2	No employee of the University shall accept the assignment of taking part in the conduction of examinations and all such activities incidental thereto and connected therewith, whenever his/her kith and kin are appearing for the examinations.
Errors committed by an examiner	**44**		Disciplinary action shall be initiated by the Controller of Examinations against an examiner, who has committed error(s) in the work pertaining to examinations, as per the rules of the University.
Remuneration	**45**		Remuneration for different assignments in the examination shall be proposed by the Controller of Examinations from time to time and recommended by the Finance Council for the approval by the Board of Governors. External examiners shall be entitled for TA/DA. All work relating to ISA, ESA and all other matters incidental thereto and ancillary therewith, with or without remuneration shall be deemed to be a part of normal duty of every employee of the University.
Assessment	**46**		The University shall follow a combination of In-TermAssessment (ITA) and the End-Term Assessment (ETA) for assessing the performance of a student in each course. The ITA and ETA components for each course shall be conducted as per the calendar of events and the time-table specified from time to time. The weights of ITA and ETA components in the total marks for a course shall

			be notified by the Teacher in the lesson plans as per the approval of Board of Studies. A student shall be awarded a letter Grade for every course at the end of the term, indicating the level of performance, considering the scores both in ITA and ETA. The assessment for theory courses carrying ITA and ETA components will be done on **Relative Grading system**. Other courses will be assessed by absolute grading system. List of courses assessed by **Absolute Gradingsystem** is as follows: • Laboratory/ skill based Courses. • Courses with enrolment less than 30. • Industry Visit and Lecture / Industrial Training / Seminar. • Internship/ Immersions. • P.G Programs (M.Tech only)
Question papers	47		All question papers for written, online or hybrid examinations shall be set and answered in English, except in those Faculties where other languages are permitted by the Academic Council. The question paper of each course shall cover entire syllabus with the distribution of marks considering the number of hours allocated for each unit/module/topic in the syllabus.
Make-up for ISA/ESA components	48		Students who have remained absent at ITA/ETA in one or more courses due to valid reasons, may be given a make-up exam which can be held as per dates notified in the Academic Calendar immediately after the ITA/ETA. However, it would also be possible to hold a makeup exam at any other time in the term with the permission of the Academic Council of the College. Make up exam shall also be available to students awarded "X" grade and this make-up examination will be conducted along with summer examination at the end of the academic year in which the candidate is awarded "X" grade. Make up exams are not conducted for any courses, theory or practical, of summerterm.
CHAPTER VIII **IN-TERM ASSESSMENT**			
ISA	49		The ITA for courses may be carried out by the way of various components such as Mid Term Examinations, quizzes, tests, seminars, term papers, demonstrations, presentations and award of marks for attendance. Practical components of courses may be evaluated by the

			way of experiments, demonstrations, field work, models, worksheets, practical record books, quizzes, tests, and award of marks for attendance. If a student misses a practical / laboratory session owing to genuine reasons, he/she shall complete the activity of that session before the end of the term, with the approval of the concerned School Chairperson.
Conduct of ITA	50		The weight and syllabus for each component of ITA for a course shall be notified by the concerned Teacher before the commencement of each termthrough the lesson plans, adhering to the norms stipulated from time to time.
		50.1	The concerned Teacher in association with Head of the School shall be responsible for the conduct of different components of ITA.
Admit Card		50.1a	The Controller of Examinations shall make arrangements for issuance of Admit Cards to eligible students, based on the ITA list. The Admit Card of a student shall be valid only for the ITA for which it is issued. The Admit Card of a student shall include (i) recent photograph of the student and (ii) registered courses for ITA with course codes.
		50.2	The concerned Head of the School shall make arrangements to notify the scheme of evaluation for various ITA components. After each event of ITA, the students shall have an opportunity to view his/her performance and bring the discrepancies or errors, if any, to the notice of the concerned Teacher, for addressing the same.
		50.3	The marks obtained by a student in each component of ITA shall be added and finalized for the total marks bythe concerned Teacher, within the specified time as stipulated by the Controller of Examinations.
		50.4	The records pertaining to each component of ITA shall be maintained by the concerned department / Teacher for such period as specified by the Controller of Examinations from time to time.
ITA of Special Topics, REPG (Research Experience for Postgraduates), Seminar, Internship-Projects, Major Project	51		The ITA for Special Topics, REPG, Seminar, Internship-Projects, Major Project/ Dissertationmay be carried out in the form of various components, such as oral presentations, demonstrations, technical / project report, and viva-voce. The concerned Head of the Department/ School/ Center shall make arrangements for the evaluation of such components. The format for preparation of technical and project reports shall be notified by the concerned Head of the Department/ School/ Center from time to time.
Announcement of	52		The concerned Head of the School shall make

ITA marks			arrangements for the announcement of ITA marks obtained by the students in various courses at the end of each term. The students shall be given THREE working days for verification, redressal of discrepancies or errors, if any, and acknowledgement.
CHAPTER IX **END TERM ASSESSMENT**			
Registration for ETA	**53**		A student, who has complied with the minimum specified attendance in a course, shall register for ETA for that course by paying the prescribed examination fees. The registration process for ETA may be online/off-line as notified from time to time by the Controller of Examinations. The registration of a student shall be liable to be cancelled by the Office of the Controller of Examinations where disciplinary issues are raised by the concerned Head of the School.
Eligibility to attend ETA	**54**		To be eligible to attend the ETA in a specific course for which a student is registered, following requirements must be met:
		i	Attendance as mentioned in section 34.2
		ii	ITA marks: Not less than 40% of ITA marks (except in those cases where it is not specially mentioned in the scheme of evaluation)
		iii	Students not fulfilling attendance requirement or ITA requirement shall be assigned an 'FA" or "F" grade respectively.
Student list for ETA	**55**		After the last date of registration for ETA, the list of students along with their registered courses shall be released by the Office of Controller of Examinations. A student shall verify the accuracy of his/her particulars in the list and discrepancies, if any, shall be reported to Office of the Controller of Examinations within THREE working days from the date of release.
Admit Card	**56**		The Controller of Examinations shall make arrangements for issuance of Admit Cards to eligible students, based on the ETA list. The Admit Card of a student shall be valid only for the ETA for which it is issued. The Admit Card of a student shall include (i) recent photograph of the student and (ii) registered courses for ETA with course codes.
Missing Names in Student list	**57**		With the specific approval of the Vice-Chancellor, under extra-ordinary circumstances, a student whose name does not find a place in the student list may be permitted to appear for ETA of a course. The results of such a student may be announced after due verification.

ETA and evaluation:	58	58.1	The Controller of Examinations shall make arrangements to conduct ETA for all courses, through the Chief Superintendent.
		58.2	The Controller of Examinations shall notify the evaluation procedure to be adopted for the evaluation of various courses, from time to time. The ETA for courses having a practical or laboratory component may be based on laboratory records, conduction of experiments, demonstrations, field work, models, worksheets, quizzes, and viva voce.
		58.3	The answer books of ETA may be coded for the purpose of anonymous evaluation by the Office of the Controller of Examinations.
		59.4	Central valuation shall be conducted in the University premises only.
ETA for Mini and Major Projects	59		The ETA for mini and major projects shall be held in batches which may span over several days. The evaluation may be based on various components such as writing of abstract, project or technical report, oral presentation, demonstration, and viva voce. The distribution of marks for various components shall be notified from time to time by the Controller of Examinations in consultation with the Dean Academic Affairs / the concerned Dean of Faculty.
Appointment of Examiners	60		The examiners may be appointed by the Controller of Examinations from the panel recommended by the Board of Examiners. However, the Controller of Examinations may choose examiners outside the panel for valid reasons, with the approval of the Vice-Chancellor.
Tabulation of Marks	61		After the evaluation, the marks shall be tabulated by the Office of the Controller of Examinations either manually or via computerization.
Contingency arising from loss of answer books	62		In a contingency arising out of loss of answer books beyond the hope of retrieval, the Vice-Chancellor may exercise an option of ordering an additional examination.
CHAPTER X GRADING SYSTEM			
Grading system	63		The University shall follow both the relative grading and absolute grading system depending on the type of course. However, for the purpose of reporting the performance of a student, letter grades and grade points will be awarded as per section 63 a.:

| Relative Grading System | | 63 a. | In this system, the grades are awarded to the students based on their performance relative to others in Theory courses having In-Term Assessment (ITA) and End Term Assessment (ETA) components. Grades are assigned based on the Mean and Standard Deviation of the total marks scored on the respective course. (S, X, "NE" and "F" grades marks are omitted in Mean and Standard Deviation calculation) |

In this system, the grades are awarded to the students based on their performance relative to others in Theory courses having In-Term Assessment (ITA) and End Term Assessment (ETA) components.

Grades are assigned based on the Mean and Standard Deviation of the total marks scored on the respective course. (S, X, "NE" and "F" grades marks are omitted in Mean and Standard Deviation calculation)

- S shall be awarded if scored marks is greater than 90
- F shall be awarded if scored marks is less than 40

Total Mark, M secured by the student (ISA + ESA)	Grade	Relative Grade Point	Remarks
M> 90	S	10	Outstanding
Avg.+ 0.60 * SD ≤ M ≤ 90	A	9	Excellent
Avg.-0.25*SD ≤ M < Avg.+ 0.60 * SD	B	8	Very Good
Avg.-1.05 * SD ≤ M <Avg.- 0.25 * SD	C	7	Good
Avg.- 1.50 * SD ≤ M < Avg.- 1.05* SD	D	6	Fair
**40 ≤ M<Avg.-1.50*SD	E	5	Satisfactory
M<40*	F	0	Fail
I*	-	Absent for ESA due to calamity	Absent for ESA due to calamity
W*	-	Withdrawal	Withdrawal
X*	-	Incomplete	Incomplete
AP	-	Audit Pass	Audit Pass
AF	-	Audit Fail	Audit Fail
FA	0	Fail due to attendance shortage	Fail due to attendance shortage

* "W", "X" and "I" grades shall be considered to be transitional grades.
**40 marks mean: The students should score minimum 20 marks out of 50 in ISA and ESA examinations separately (i.e. 40 out of 100).
NOTE: The Course Grading table generated for the first time based on the Average & Standard Deviation will be used strictly for awarding grades to all the re-evaluated courses and Summer term Examinations.

Absolute Grading System		63 b.		

#	Letter grade	Grade points	Marks	Remarks
1	S	10	91-100	Outstanding
2	A	9	81-90	Excellent

3	B	8	71-80	Very Good
4	C	7	61-70	Good
5	D	6	51-60	Fair
6	E	5	40-50	Satisfactory
7	F	0	< 40	Fail
8	I*	-		Absent for ESA due to calamity
9	W*	-		Withdrawal
10	X*	-		Incomplete
11	AP	-		Audit Pass
12	AF	-		Audit Fail
13	FA	0		Fail due to attendance shortage

"W", "X" and "I" grades shall be considered to be transitional grades.

Result sheet shall contain the following

- Only Grades, Grade points, Credits, SGPA and CGPA.
- Grading slab of each course.

	63.1	The normal percentage of students in a course to be awarded each letter grade shall be as per the policy set forth by the Dean Academic Affairs / the concerned Dean of Faculty with the approval of the Academic Council.
	63.2	*'AP' and 'AF' grades:* A student shall be awarded either an AP (Audit Pass) or an AF (Audit Fail) grade for an audit course. The Audit Pass (AP) grade shall be awarded if the student satisfies the attendance and performance criteria specified for the course by the concerned Teacher. Otherwise, an AF grade shall be awarded. Students having qualified for ETA in mandatory non-credit courses/audit courses and obtained an 'AF' grade need not re-register for the course again but are required to pass the course to qualify for the degree.
	63.3	*'W' grade*: "W" grade shall be awarded to a student who has withdrawn from a course. Further, the "W" grade shall be recorded in the grade card. A student may withdraw

| | | | from an audit course in which case there shall be no mention of the course in the grade card.

A student with "W" grade must re-register for the course during the Summerterm of that academic year and the "W" grade shall be converted to one of the other letter grades (S to F) after the completion of scheduled ETA of Summer term. If the student does not register or appear for the ETA of Summer term, the "W" grade shall be converted to an "F" grade.

"W" grade is not awarded in Summer term. |
|---|---|---|---|
| | | **63.4** | 'I' grade: "I" grade shall be awarded temporarily to a student who is unable to appear for ETA for one or more courses, with the permission of the Dean Academic Affairs / the concerned Dean of Faculty in response to a written appeal by the student, due to valid reasons such as medical emergency, calamity in the family or any other valid reason. For such a student, the "I" grade shall be converted to one of the other letter grades (S to F) after the completion of scheduled make-up ETA. If the student does not appear for the make-up ETA, the "I" grade shall be converted to an "F" grade.

"I" grade is not awarded at Makeup exams or in Summer term. |
| | | **63.5** | 'X' grade: Awarded to a student having satisfactory attendance and greater than or equal to 40% of ITA marks in a course, but ETA performance observed to be poor, which could result in an overall F Grade in the Course and will be valid till immediate make up examination is conducted for the course within that academic year. For such a student, the "X" grade shall be converted to one of the other letter grades (S to F) after the completion of scheduled make-up ETA. If the student does not appear for the make-up ETA, the "X" grade shall be converted to an "F" grade.

"X" grade is not awarded at Makeup exams or in Summer term. |
		63.6	'F' grade: A student shall be awarded an "F" grade if he/she either fails in the course or is absent for the ETA of that course.
		63.6.1	A student who obtains "F" grade in a non-elective course shall re-register for the same course when offered next.
		63.6.2	A student who obtains "F" grade in an elective course shall have an option of repeating the same elective course when offered next or register for any other elective course.
		63.6.3	The 'FA' grade denotes poor attendance i.e. failure in a course due to attendance shortage (i.e. <75%) and the

			course instructor is supposed to take utmost care while awarding this double-letter grade. A student with "FA" grade may re-register for the course during the Summer term of that academic year and the "FA" grade shall be converted to one of the other letter grades (S to F) after the completion of scheduled ETA of summer term. If the student does not register or appear for the ETA of summer term, the "FA" grade shall be converted to an "F" grade.
Passing Standards for a Course	**64**		The minimum requirements to pass in a course for which a student is registered are as follows: ITA: 40% of ITA marks ETA: 40% of ETA marks A student is considered to have successfully completed a course and earned the credits assigned to that course if the student earns a letter grade S to E. "F" Grade implies failure and "I", "W" and "X" grades are transitional grades and will be replaced by an appropriate letter grade once the student completes the course requirement.
Passing Standards – Progression to Next Academic Year -Vertical Progression	**65**		The requirement to progress to the next academic year is only on the basis of number of courses and is as follows:
		65.1	Maximum number of F grades that can be carried at the end of any academic year is 04
		65.2	To progress to higher odd term, the candidate shall have CGPA (as defined in section 66.2) of minimum of 5.0, after the results of summer examination in the previous academic year. However failure to secure a minimum CGPA = 5.0 at the end of any term for the first time, shall attract a warning before approval of the student to continue in the following term.
		65.3	The failure grades of mandatory non-credit courses/audit course shall not be considered for vertical progression.
SGPA and CGPA	**66**		The overall performance of a student shall be indicated by two indices namely, Term Grade Point Average (TGPA) and Cumulative Grade Point Average (CGPA).
		66.1	The TGPA is the weighted average of the grade points obtained in all courses registered by the student during a particular term. The TGPA shall be calculated as: TGPA = $\Sigma C_i G_i / \Sigma C_i$, where C_i's, are the number of credits for the courses registered for the term, and G_i's are the corresponding grade points secured by the student.

		66.2	The CGPA is an indication of an up-to-date overall performance of a student and the weighted average of the grade points obtained in all the courses registered by the student since he/she is admitted to the University. It shall be calculated as: CGPA = $\Sigma C_i G_i / \Sigma C_i$, the summation is carried out for all courses to which the student has registered up to that point of time, excluding courses with "F" & "FA" grades and transitional grades.
		66.3	If a student obtains an "F" grade in a course and registers for the same course in a subsequent term, the new grade obtained shall replace the previous "F" grade in calculating the CGPA.
		66.4	If a student obtains an "F" grade in an elective course and registers for the same or equivalent course in a subsequent term, the new grade obtained shall replace the previous "F" grade in calculating the CGPA.
		66.5	Grades obtained in audit courses and transitional grades shall not be considered in the calculations of CGPA and TGPA.
Class / Division declaration	**67**		The following classes of results shall be declared, for a student upon graduation, considering the below specified criteria. The class obtained by the student shall be inferred as per the table given below:
		i	*First Class with Honors*: A student completing a Programme of study within the specified minimum duration, securing a CGPA of 9.50 and above, passing all the courses of the programme in the first appearance, and not obtaining any transitional grades shall be declared to have passed in First class with Honors.
		ii	*First Class with Distinction*: A student completing a Programme of study within the specified minimum duration, securing a CGPA between 7.75 and 9.49 (both inclusive), passing all the courses of the programme in the first appearance, and not obtaining any transitional grades

CGPA	Equivalent	Class/Division
5.00-5.74		Pass
5.75-6.74	$\geq$50% and <60%	Second
6.75-7.74	$\geq$60% and <70%	First
7.75-9.49	$\geq$70% and <87.5%	First class with Distinction
9.50-10.00	$\geq$87.5%	First class with Honors

			shall be declared to have passed in First class with Distinction.
		iii	*First Class*: A student completing a Programme of study by securing a CGPA between 6.75 and 7.74 (both inclusive) shall be declared to have passed in First Class.
		iv	*Second Class*: A student completing the programme of study by securing a CGPA between 5.75 and 6.74 shall be declared to have passed in second class.
		v	*Pass Class*: A student completing the programme of study by securing a CGPA of less than 5.75 shall be declared to have passed in pass class.
Declaration of Ranks	68		Ranks shall be awarded to the graduating students in each programme of Study on the basis of CGPA. The ranks shall be awarded to top FIVE percent of students of the graduating class. However, the total number of ranks shall not exceed FIVE irrespective of the total number of graduating students in a programme of study. A student shall be eligible for a rank at the time of award of degree in the programme of Study, provided he/she has:
		i	Passed in all the courses of all terms in FIRST attempt;
		Ii	Not obtained any transitional grades;
		iii	Completed the Programme of study within the specified minimum duration;
		iv	Not rejected any of the term results;
		v	Not taken re-admission;
		vi	Academic performance will be the sole criteria for awarding the Merit rank in each program and will be based only on CGPA to be calculated as mentioned in 66.1 and 66.2. The TGPA/CGPA shall be calculated to an accuracy of 2 decimal points and will be rounded up to the nearest value. In case more than one gets the same CGPA, the ranks shall be shared by all. and
		vii	Not faced any disciplinary action.
		viii	The minimum number of registered candidates for a program during the final year shall be a minimum of 10 in that program so as to award the rank. In case the number is less than 10, then, no rank shall be awarded.
Not Fit for Programme of Study (NFPS)	69	69.1	A student shall be declared as "Not Fit for Programme of Study" (NFPS) and terminated from the programme of study if he/she:
		i	fails to obtain a term grade point average of at least 4.0 on a number of occasions numerically equal to the minimum

			duration of the programme in years. If the performance of a student at the end of a registered term is below 4.0, he/she shall be issued a warning by the Controller of Examinations in the first two instances and a show cause notice in the third instance, each of which shall be intimated to the parents or guardians.
		ii	Failure to meet the standards of discipline prescribed by the College, which may change from time to time
		iii	If a student fails to satisfy all the requirements for the award of the degree within the maximum duration as mentioned in section 19.1
		69.2	Such students, if interested, shall be eligible to apply for re-admission to the programme of study at the first year level or second year level as the case may be.
CHAPTER XI **TRANSPARENCY IN EXAMINATION SYSTEM**			
			A student shall be eligible to apply for re-totaling, revaluation and/or obtaining photocopies of the answer books of ETA only for theory component of courses. Any delay in the announcement of re-totaling and/or revaluation results for any reason whatsoever shall not confer the right upon the student for admission to the subsequent term and for any other kind of claim. There shall be no provision for re-totaling, obtaining the photocopy of answer books and revaluation of ETA for practical components of courses, including drawing, seminar, mini project / special topics, and major project.
Re-Totaling	70		A student shall be eligible to apply for re-totaling of marks of ETA for any number of theory components of courses. Such a student shall submit the application for re-totaling in the prescribed form, upon the payment of prescribed fee, to the Controller of Examinations, within THREE working days from the date of announcement of the results.
		71.1	The students who have applied for the re-totaling shall be called in batches to the office of Controller of Examinations, on the dates fixed for re-totaling of marks. Such students shall be accompanied by Faculty Advisor / Class Teacher / Parent / Guardian.
		71.2	A student, who has applied for re-totaling, shall be shown his/her answer books to verify the marks, totaling of the marks and to find out whether or not all the answers of the questions attempted were awarded marks. If such a student finds any discrepancy in totaling of marks, he / she shall bring the same to the notice of the concerned officials for incorporating the necessary corrections.

Supply of photocopy	**72**		A student may apply for obtaining the photocopies of his answer books of ETA to the Controller of Examinations, upon the payment of prescribed fee, within THREE working days from the date of the announcement of results. The photocopies of the answer books of theory component of courses shall be supplied within THREE working days after the receipt of the application at the Office of the Controller of Examinations.
Revaluation	**73**		A student may apply to the Controller of Examinations for challengeof theory components of courses in ETA, within THREE working days after obtaining the photocopies of concerned answer books and upon payment of prescribed fee. The marks obtained in the challenge valuation shall be considered for the re-computation of grade. However, if the new grade is found to be lower than the declared grade, the declared grade shall be retained. In the event of no change in the grade after challenge valuation, it shall be declared as "No Change".
Refund of fee	**74**		A refund of 50% of re-totaling or challenge valuation fees shall be made to a student in the event of an improvement in the letter grade.
Rejection of whole term results	**75**		A student may reject the results of a whole term irrespective of performance in an individual course. However, there shall be no provision for the rejection of results of any individual course. Upon rejection, the results shall be considered as null and void. Such rejection may be permitted only once during the entire programme of study. A student, who has rejected the whole term results, shall re-register for the courses of rejected term upon payment of the prescribed fees.
Production of answer books	**76**		The answer books of the University examinations are confidential property of the University and shall not be subject to submission before any internal or external authority or any agent or person on behalf of a student.
CHAPTER XII **ANNOUNCEMENT OF RESULTS**			
Process of declaration of results	**77**		The draft results shall be processed through the following stages before its announcement:
		i	Draft results prepared by the Office of Controller of Examinations shall be placed before the Results Scrutiny

			Panel for review;
		ii	Subsequent to the review, the Controller of Examinations shall announce the provisional results after the approval by the Vice-Chancellor;
		iii	A student may appeal in writing to the Controller of Examinations if any discrepancies are found in the provisional results announced within the time specified; and
		iv	The Registrar shall place the provisional results before the Academic Council and Executive Council for information.
Issue of Grade Cards, Transcripts, and other Certificates:	78	78.1	Every student who has registered for ETA after paying the prescribed examination fees shall be issued a grade card in the prescribed format by the Office of the Controller of Examinations.
		78.2	On request and payment of prescribed fee, the academic transcript, in the prescribed format, shall be issued to a student by the Controller of Examinations.
		78.3	A student, on payment of prescribed fee, if any, may request the Controller of Examinations in prescribed format for any corrections to be incorporated in the Grade card and / or transcript. On verification, the Controller of Examinations shall issue a revised / corrected grade card / transcript.
		78.4	There shall be a provision to issue a duplicate grade card or duplicate degree certificate to a student in case of loss or mutilation, upon submission of application in prescribed format along with requisite documents and payment of fee as specified by the Office of the Controller of Examinations.
Procedure for Leaving the University	79	i	A student shall leave the University on completion of his/her studies;
		ii	It shall be the responsibility of the student to obtain "No Dues Certificate" from all concerned departments/sections and submit the same to the Registrar for obtaining the "clearance certificate";
		iii	Unless a student has obtained the "clearance certificate" from the Registrar, neither "transcript of academic record" or other documents shall be issued nor security deposit or any amount due shall be refunded;
		iv	The refund of security deposit shall be permissible up to a period of ONE year from the date the student leaves the University, after which it shall stand credited to the Endowment Fund of the University; and

		v	After successful completion of all the requirements for the award of degree, the Dean Academic Affairs / the concerned Dean of Faculty shall send the report to the Registrar for notification of result. The Controller of Examinations shall subsequently issue the Provisional Degree Certificate and transcript record to the student.
Other Certificates	80		A student shall be eligible to receive other certificates such as study certificate, academic transcripts, course completion certificate and migration certificate from the University on written request in prescribed format and payment of prescribed fee.
Eligibility for the Award of Degree	81		A candidate shall be declared to be eligible for the award of a degree if he/she has:
		i	Credits and grades compliance as prescribed by the concerned Faculty of Study within the stipulated maximum time duration, including Specialization and/or Minor, if any; In case of MBA program a candidate shall earn a minimum of CGPA $\geq$ 5.0 to become eligible for the award of the degree.
		ii	Successful completion of all non-credit mandatory courses;
		iii	Minimum duration requirement as specified by the concerned Faculty of Study;
		iv	No pending disciplinary action; and
		v	No dues of any kind to the University.
Award of Degree	82		After fulfilling the above requirements, the Controller of Examinations shall recommend to the Academic Council for the award of degree to the candidate. The candidate shall be given a Provisional Degree Certificate by the Controller of Examinations, upon successful completion of all requirements, submission of application in prescribed format and payment of prescribed fees. The candidate shall be given a Degree Certificate at the ensuing Convocation, upon successful completion of all requirements, submission of application in prescribed format and payment of prescribed fees.
Bar to claim damages for delay	83		No student shall be entitled to claim any damages, whatsoever from the University on the account of late declaration of result, delay in the issue of grade cards or any other certificates, delay in re-valuation, re-totaling or any other process associated with the examinations or evaluation, or other like cases.
CHAPTER XIII			

FELLOWSHIP / SCHOLARSHIP / FINANCIAL ASSISTANCE			
Merit Scholarship	84		The merit scholarship may be awarded on a year to year basis for students in various programmes.
		84.1	The Executive Council shall, on the recommendation of the Academic Council, determine from time to time the number and the value of merit scholarships to be awarded in each programme.
		84.2	The eligibility criteria for scholarship awards shall be as determined by the Academic Council from time to time. The merit scholarship may be awarded on such basis as grade point average. However, during the year of admission, the scholarships may be awarded on such basis as performance in entrance tests and qualifying examination.
		84.3	The Registrar shall make arrangements for the disbursement, maintenance of accounts and keeping of records of the merit scholarships.
Award of Fellowships, Scholarships and Stipends by External Agencies	85		All proposals regarding the offer of fellowships, scholarships and stipends by individuals or external organizations shall be addressed to the Registrar, who may formulate the terms and conditions with the concerned parties, with the approval of the Executive Council.

CHAPTER XIV

MAINTENANCE OF ACADEMIC RECORDS

Maintenance of Academic Records	86	86.1	The office of the Registrar shall maintain a file for each student comprising of the entrance test application (if applicable), copies of test results (if applicable), letter of admission, application for admission, copies of previous academic testimonials and such other relevant documents.
		86.2	The office of the Dean Academic Affairs / the concerned Dean of Faculty shall maintain a file for each student comprising of course registration details, up to date attendance, academic performance and achievements, and such other relevant documents. The Dean Academic Affairs / the concerned Dean of Faculty may choose to maintain such student files in the office of the concerned Departmental/ School Chairperson.
		86.3	The Office of the Controller of Examinations shall maintain a file for each student comprising of examination registration details, up to date academic performance, and such other relevant documents.

Maintenance of Answer Books	87		The answer books of University examinations shall be maintained securely for a period of ONE year from the last day of examinations after which they may be destroyed summarily with the approval of the Vice-Chancellor.
Weeding off of Academic Records	88	i	The admission form of the candidates not selected for admission shall be destroyed by shredding after a period of ONE year of the finalization of admissions, except in cases of disputes;
		ii	The records pertaining to the conduct of entrance examination such as question booklets, answer sheets, correspondence regarding paper setting, etc. shall be destroyed by way of shredding after a period of ONE year from the conduct of entrance test, except in cases of disputes;
		iii	The personal files of the students shall be retained as permanent records, either digitally or in hard copies;
		iv	Subject to any general or special rule or order in this behalf, no University records (including correspondence) connected with the academics shall be destroyed except in accordance with the provisions as given below:
			(a) No academic records (including correspondence) shall be destroyed which are under audit objection till audit objections are settled; (b) No academic records (including correspondence) shall be destroyed for which proceedings are going on in a Court of Law till the case is finalized; and
		v	A list of records proposed to be destroyed shall be prepared by the Dean Academic Affairs / the concerned Dean of Faculty and orders of the Vice-Chancellor shall invariably be obtained before they are destroyed. The academic records to be weeded out shall be destroyed by way of shredding under direct supervision of the Dean Academic Affairs / the concerned Dean of Faculty.

Annexure-3

[Proposed changes in Rules and Regulations governing]

Regulations Governing

PhD Programs

of
KLE Technological University
2015

KLE Technological University

(Established under Karnataka Act No.22, 2013)

1	PhD programmes	1.1 Committees			Committees responsible for admissions, monitoring and evaluation of PhD programmes. Also includes scope/functions/responsibilities, compositions, and tenure and frequency of meetings of committees.
			1.1.1		**Admission Committee:** The KLE Technological University Admission Committee is also responsible for the conduct of entrance Test for PhD admissions, scrutiny of applications and selection of applicants for PhD.
			1.1.2		**Research Programmes Committee (RPC):** The Research Programmes Committee is responsible for the programme monitoring of PhD programmes, review of progress reports, recommendations from Research Review Committee (RRC) and School heads, and any other issue related to PhD registrations. This is an interface to the programme offering schools and the University.

				i	Scope/Functions/Responsibilities of the Research Programmes Committee shall be:
					 1. Review of recommendations of Head of the school regarding monitoring of PhD programmes
					 2. Review of recommendations of Research Review Committee and Viva-Voce Committee
					 3. Sending recommendations of list of Research scholars for:
					    a. Comprehensive viva,
					    b. Pre-synopsis presentations
					    c. Synopsis submissions
					    d. Thesis submissions
					    e. Award of degree

				ii	Composition of the Research Programmes Committee: To be constituted by the Vice Chancellor and shall consist of: 1. Dean of Research - Chair person 2. Deans of faculty - Members 3. One of the senior faculty - Secretary 4. Head of the Schools -Members
				iii	Tenure and Frequency of meeting of Research Programmes Committee: 1. The tenure of the ResearchProgrammes Committee shall be *3* years. 2. The Research Programmes Committee shall meet at least *TWICE* a year. However, the Committee shall meet as often as required.
			1.1.3		**Research Review committee (RRC):** The RRC shall be formed for each of the provisionally registered PhD research scholar. The RRC shall be responsible for reviewing and monitoring the progress of the research scholar from his/her commencement of PhD research to submission of the Thesis and send recommendations to RPC.
				i	Scope/Functions/Responsibilities of the Research Review Committee shall be: 1. To scrutinize and approve the Coursework (Part-I). 2. To conduct Comprehensive Viva-Voce (Part-II) and confirmation of the PhD registration.

				3. To review/monitor periodically (at least once in *six* months) the research progress of each research scholar until his/her submission of the PhD Thesis. 4. To conductpre-synopsis presentations, recommend synopsis and Thesis submissions.
			ii	Composition of the Research Review Committee: To be constituted by the Dean of faculty for each research scholar, shall consist of: 1. Head of the School- Chair person 2. Two domain expertsmay be identified by the Dean of faculty on the recommendations of the Research Supervisor from time to time. 3. Research Supervisor(s)- Secretary The RRC may be re-constituted by Dean of faculty in the case of non-availability of existing member(s) or for any other valid reason, in consultation with the Research Supervisor (s).
			iii	Frequency of meeting of RRC Committee: The Research Review Committee shall meet at least TWO times a year. However, the Committee shall meet as often as required.
			1.1.4	**Viva-Voce Committee (VVC):** Responsible for the thesis review and conduct of final viva-voce and recommending the result of Viva-Voce to RPC.
			i	Scope/Functions/Responsibilities of the Viva-Voce Committee shall be: 1. To review the thesis. 2. The VVC shall conduct the final Viva Voce for the research scholar to defend his/her PhD Thesis. 3. The VVC shall submit the reports in the prescribed format to the RPC.
			ii	Composition of the Viva Voce Committee: To be constituted by the Vice Chancellor for each research scholar, shall consist of: 1. Head of the School: Chairperson 2. Research Supervisor(s): Secretary 3. Identified Adjudicators: Members
		1.2 Admissions		**Admission Rules and Regulations**: List of faculties for which the degrees are offered, minimum qualifications, relaxation for minimum qualifications, relaxation for Research Entrance Test (RET) and different category of PhD programmes. **Admission Process**: The Admission process involves call for admissions, processing of applications, conduct of Research Entrance Test (RET), preparation of the selected list for pre-registration presentations, conduct of pre-registration presentations and preparation of the selected list for provisional registrations.
			1.2.1	University shall permit the registration for PhD in the following Faculties, namely: 1. Faculty of Engineering 2. Faculty of Architecture 3. Faculty of Science 4. Faculty of Management andSocial Sciences **Inter-Disciplinary Subject Areas:** A research scholar is allowed to pursue PhD programme in a subject area of inter- disciplinary nature subject to the approval ofRRC.
			1.2.2	**Minimum qualifications and Relaxation for admissions:** The minimum academic qualifications to be satisfied by the research

				scholars seeking admission to PhD Programme,
				- The research scholars shall possess a Master's Degree in Engineering/Technology/Architecture (allied specialization)/MBA/MSc in Physics or Chemistry or Mathematics or MCA or equivalent from any other University recognized by Admission Committee, with a minimum CGPA of 6.75 out of 10 or First class at either the Bachelor's or the Master's Degree in respective discipline. - The research scholars pursuing M.Tech. Degree at the University who have successfully completed the prescribed coursework in the first *three* semesters of study with outstanding merit of either a minimum CGPA of 6.75 out of 10 or First class at the Bachelor's Degree in respective discipline. **Relaxation of Minimum Qualifications**: A research scholar belonging to SC / ST / Category-I / Physically challenged or any other reserved category as notified by govt. of Karnataka/competent authority from time to time shall have a relaxation not exceeding 5 % or equivalent grade in the minimum prescribed qualification level for the general category of students.
			1.2.3	**Minimum qualifications and Relaxation for RET** (a) The research scholar shall score 40% marks (35% for SC/ST research scholars) in RET to get qualified. (b) A Research scholarcan reappear to RET examination for THREE times to get qualified. (c) The following categories of research scholars may be exempted from appearing the RET with the approval of Admission Committee. - Faculty Members under QIP / FIP - Research scholars qualified in UGC-CSIR, JRF, RET or equivalent exams conducted by any state/private technological universities - Valid GATE score of 90 percentile within last THREE years
			1.2.4	**Call for Admissions:** The University may call for Applications for Admissions normally in the months of **January and June** of every academic year.
			1.2.5	**Processing of applications:** The eligible research scholar satisfying the Regulation 1.2.2 shall submit their applications for admission to the University in the prescribed format along with other necessary documents.
			1.2.6	**Conduct of RET:** All the eligible applicants shall appear for the RET, which shall determine the research scholar's aptitude for research. The marks obtained by the research scholar in the RET shall be valid for a period of *two* years according to minimum qualifications and relaxations given in 1.2.3.
			1.2.7	**Pre-registration presentations:** List of the qualified research scholars based on cut off marks of RET, as decided by Admission Committee, shall be called for Pre-registration presentations before the Admission Committee. If the performance of the research scholar is satisfactory then the research scholar is selected for provisional registration and notified.

			1.2.8	**Categories of** Research Scholars: There shall be provision for the following categories of research scholars for admission to PhD. **(a) Full-Time**: Research scholars who shall pursue PhD research on full time basis. **(b) Part-Time:** In-service research scholars having a minimum professional experience of one year after his/her PG Degree from among faculty members working in any Engineering College / Polytechnic / University / Deemed to be University (recognized / accredited by appropriate bodies in India) or research staff of public /private organizations, are eligible to pursue PhD on a part time basis.All part-time research scholarsneed to spend a minimum of 60 days on the University Campus every year till the submission of their thesis. This mandatory requirement of 60 days stay on campus may be completed with not more than 3 visits.
			1.2.9	Leave issues: **(a)** Employed research scholars, who take up PhD Programme on full time basis, shall produce a NOC certificate from their employer-organization(s) with a sanctioned study leave of a minimum period of *three* years with full salary. **(b)** Research scholar not having employment, who take up PhD Programme on full time basis shall be forbidden from taking up any employment during such period of PhD work. However, they can apply for scholarships / fellowships / stipends, if any, with intimation to University. **(c)** Foreign research scholars shall hold valid passport/visa, clearance from MHRD and other agencies as mandated by the GOI throughout the duration of the course.
			1.2.10	In case, any information provided by the research scholar is found to be false, the research scholar may be debarred from PhD programme at any stage.
			1.2.11	**Validity period of Registration:** During the period when the registration of the research scholar is in force, the research scholar shall pay the prescribed tuition and other fees to the University at the notified time intervals.
			1.2.12	Prescribing fee for registration, course work examinations, fees for dissertation evaluation and pre-PhD comprehensive Viva-Voce schedule, submission of periodic progress reports, change of topic and /or Supervisor, submission of thesis, research calendar of events and such other matters relating to any of the above shall be governed by the administrative orders issued by the University from time to time.
		1.3 Monitoring		Monitoring process: The monitoring process regarding the progress of the research scholar involves review of Coursework, Comprehensive viva voce, Pre-synopsis presentation, synopsis submission and Thesis submission.

			1.3.1	**PhD programme:**
				(a) After provisional registration, the PhD programme of a research scholar, shall consist of FOUR parts in sequence, namely,
				    1) Part-I: Coursework – Research scholars need to successfully complete the course work recommended by supervisors as specified in 1.3.2(i).
				    2) Part–II: Comprehensive Viva Voce – Research scholars need to present the research title and direction during the Comprehensive Viva to seek recommendations to continue

				with the research plan.
				3) Part-III: Pre-synopsis presentation and synopsis submission – Research scholars need to present the synopsis to RRC to seek permission for the recommendations to submit Thesis. 4) Part-IV: Thesis submission- Final Thesis submission for the award of PhD degree. (b) A research scholar shall be free to apply for a change in the Research topic /Coursework for the consideration to the RRC before the completion of Part-I. But, the research scholar shall not be permitted to change the Research topic after the completion of Part-II. **All the PhD registrations shall be provisional initially and they shall be confirmed only on the successful completion of both Part-I and Part-II.**
			1.3.2	**Course Work (Part-I):** (a) Research scholar shall choose courses from the list of courses announced by the University and successfully complete the course work with minimum pass marks prescribed by the university.
			i	(a) Research scholar from Engineering / Architecture and Management Studies stream is required to choose Minimum of *FOUR* courses, out of which *ONE* course namely Research Methodology is compulsory. RRC may recommend some extra courses for a particular Research scholar, if necessary. (b) Research scholar from MCA / MSc is required to choose Minimum *SIX* courses, out of which *ONE* course namely Research Methodology is compulsory. RRC may recommend some extra courses for a particular Research scholar, if necessary. (c) All the Research scholars shall submit their applications along with the prescribed fees for the examinations in the individual courses of Coursework in response to the notifications. (d) Research scholars may register for MOOC courses and seminar courses as a part of their course work as suggested by the RRC from the list courses recommended by the RPC.
			ii	**Norms for Maintaining Provisional Registration:** • A PhD research scholar shall complete the entire coursework within two consecutive years from the date of provisional registration. • Research scholar failing to fulfill the above requirements are liable to get their provisional registration automatically cancelled and no further extension/coursework examinations will be permissible for completing the coursework. Such research scholars are free to apply for provisional registration for PhD afresh.
			1.3.3	**Comprehensive Viva-voce (Part-II):** The Research scholars shall request to conduct the comprehensive viva after successful completion of Part-I. After the successful completion of Comprehensive viva, Research scholar's PhD admission gets confirmed.
			i	(a) The research scholar shall submit a written request, with the report on research plan and progress, for the conduct of comprehensive Viva Voce, within *SIX* months after successful completion of Coursework. (b) The Supervisor/s of the research scholar in consultation with the

				Head of the school shall conduct the comprehensive Viva Voce in the English language preferably within *four* weeks.
				(c) The Comprehensive Viva Voce shall consist of a presentation by the research scholar on his/her topic of research, including the work done till date and the proposed future work. The examiners shall test the research scholar for fundamental concepts in the coursework and applied knowledge to carry out the proposed research work.
				(d) The comprehensive Viva Voce shall be oral examination consisting of the head of the school, research supervisor/s (as examiners) and two external examiners as decided by the RPC. Examiners shall communicate the result of the Comprehensive Viva Voce to the RPC as:
				a. Performance is satisfactory and the research scholar shall continue the research work with the refining of thesis title, objectives and orientation if any, OR
				b. Performance is not satisfactory and research scholar needs strengthening of knowledge and suggesting a date preferably within the next *three* months for re-examination, OR
				c. If the result of comprehensive viva voce of a research scholar is not satisfactory even after the re-examination, the provisional registration of the research scholar shall stand cancelled automatically.
			1.3.4	**Confirmation of PhD registration:** (a) After the successful completion of coursework (Part-I) and the Comprehensive Viva Voce (Part-II), the RRC shall recommend to the RPC for issuance of notification to the research scholar of confirmation of PhD Registration. (b) The RPC shall issue the necessary notification within *fifteen* days from the date of receipt of the communication from the RRC.
			1.3.5	**Progress seminars: Conducted as per Research Calendar for research programs-** Research scholar needs to present progress seminars to RRC once a year according the admission month (January/June). These seminars are open to all the faculty members and research scholars.
			1.3.6	**Mandatory Publications requirement** Each candidate shall publish a minimum of **ONE** research paper in a referred journal before submission of the Synopsis for adjudication, and produce evidence for the same in the form of reprint or acceptance letter from the Publisher(s).

			1.3.7	**Pre-synopsis presentation and Synopsis submission (Part-III):**
				 (a) The research scholar shall submit a written request to conduct Pre-synopsis presentation to RRC at least *THREE* months prior to the submission of the Thesis.
				 (b) The research scholar shall submit *SIX* hard copies and *ONE* soft copy of the Synopsis in the prescribed format to the RPC through the School along with:
				   I. Application for adjudication of the Thesis.
				   II. Certificate from Research Supervisor (s) stating that (i) Comprehensive Viva-Voce, at least *ONE* publications and all other academic requirements are fulfilled, and (ii) There is *prima facie* case for the submission of the Thesis and the Thesis does not contain any work, which has been

				previously submitted for the award of any Degree anywhere.
				III. Undertaking from the research scholar as well as research Supervisor (s) shall mention that: "The Thesis is based on the individual, original work of the research scholar, which is previously unpublished research work". It shall be ensured by the Research Supervisor (s) that: The Thesis shall not contain any material that infringes the copyright of any other individual or organization and does not hurt the sentiments of any individual(s) or religion(s). The information such as text, tables, equations, diagrams, figures, charts, graphs, and photographs taken from sources such as published work, like research papers, books, periodicals, Web Sites or other sources has been cited appropriately. Further, the opinions expressed or implied in the Thesis shall be entirely of the research scholar.
				IV. Certificate from the School that there are no arrears of dues up to the date of submission of the Synopsis/Thesis.
				(c) The RRC conducts Pre-synopsis presentation within TWO weeks after the written request and submits recommendations to the RPC.
				(d) If the RRC is not satisfied with the research work of the research scholar, it may, in consultation with the Research Supervisor(s), recommend for improvements, if any. In such a case, the research scholar shall appear for Pre-synopsis presentation once again before the RRC within a period of *SIX* months.
			1.3.8	**Permission for Submission of Thesis:** After the successful completion of coursework (Part-I), the Comprehensive Viva Voce (Part-II), Pre-synopsis presentation and Synopsis submission (Part-III), and minimum of ONE publication, the RRC shall recommend the submission of the Thesis within *THREE to SIX months after the submission of Synopsis*.
			1.3.9	**Minimum Period for Submission of Thesis by** (a) Full Time research scholars: Full-Time research scholar for the PhD Degree shall be normally eligible for submission of the Thesis after a minimum period of *TWO* years from the date of provisional registration, subject to fulfillment of all the prescribed requirements. (b) Part-time research scholars: Part -Time research scholar for the PhD Degree shall be normally eligible for submission of the Thesis after a minimum period of *FOUR* years from the date of provisional registration, subject to fulfillment of all the prescribed requirements. However, the research scholar may be allowed to submit Thesis before FOUR years with recommendation by the RRC and RPC with the approval of Academic Council.
			1.3.10	**Maximum Period for Submission of Thesis by** (a) Full Time research scholars: • The maximum period for submission of the PhD Thesis by Full-Time research scholar shall be *FIVE* years from the date of provisional registration with 1 year extension with the recommendations of RPC. (b) Part-time research scholars • The maximum period for submission of the Thesis for Part-Time research scholar shall be *SIX* years from the date of provisional registration with 1 year extension with the recommendations of

				RPC.
			1.3.11	The research scholar shall pay the prescribed Thesis submission fees, and produce the "No Dues Certificates" from the School while submit ting the Thesis.

			1.3.12	**Plagiarism Issues:**
				1. Anti-plagiarism check and Submission of the Thesis:
				    a) The research scholar's thesis shall undergo plagiarism check as per the IEEE plagiarism rules.
				    b) After getting the clearance of **Anti-plagiarism check** from the RPC/RRC the research scholar shall submit *SIX* hard copies and *ONE* soft copy of the Thesis in the prescribed format to the School within *THREE to SIX* months from the date of submission of the Synopsis.
				    c) In case the research scholar is unable to submit his Thesis within *SIX* months from the date of submission of the Synopsis, he / she shall be free to seek extension of time from the Vice Chancellor supported by the recommendations of the Research supervisor (s) and the RRC forwarded through the School.
				2. Complaints of Plagiarism:
				    a) The Vice Chancellor shall have the powers to constitute Expert Committees to investigate into plagiarism issues connected with any PhD Thesis submitted to the University, in the case of receipt of any complaints either from the Adjudicator(s), other individuals or any other sources.
				    b) If the plagiarism is detected then the registration of such research scholar is cancelled.

		1.4 Evaluat ion		**Evaluation Process: Evaluation process involves, eligibility check to submit Thesis, Plagiarism issues, conduct of final Viva-Voce for PhD and award of degree.**

			1.4.1	**Selection and appointment of Adjudicators for evaluation of the Thesis:**
				(a) Panel of Adjudicators: The period of *three* months between the submission of Synopsis and that of the Thesis by the candidate shall be used by the Controller of Examination (CoE) for deciding the panel of adjudicators.
				(b) Selection of Adjudicators:
				    • The School/Department/Research Centre shall arrange to send *SIX* hard copies and ONE soft copy of the Synopsis along with a proposed panel of *SIX* experts with at-least THREE experts from outside the state for adjudication of the thesis as approved by the RRC. The complete postal address, e-mail ID, Telephone and fax numbers and the broad area of specialization of each proposed Adjudicator shall be provided along with the panel submitted.
				    • The Vice Chancellor shall choose *TWO* Adjudicators with at-least ONE from outside the state from the suggested panel for adjudication of the Thesis and send invitation letters to them along with a copy of the Synopsis and viva-voce date for Thesis.
				(c) The University shall arrange for the Thesis to be evaluated by the Research Supervisor(s) and*two* more Adjudicators identified within *three* months from the date of invitation, before taking further steps.

			1.4.2	**Receipt of Thesis Reports** All the Adjudicators shall evaluate the Thesis and send their Reports. **The Adjudicators shall make any one of the following recommendations with the report:** 1. That the Thesis is accepted in the present form and recommended for the award of PhD Degree, OR 2. That the Thesis needs minor clarifications indicated in the Report which need to be clarified by the candidate at final Viva-Voce and it is recommended for the award of PhD Degree, OR 3. That the Thesis needs minor corrections to be made by the candidate as indicated in the Report, which need to be incorporated in the Thesis and clarified at the final Viva Voce and it is recommended for the award of PhD Degree, OR 4. That the Thesis needs major corrections as indicated in the Report and the revised Thesis to be referred back to the Adjudicator for fresh evaluation, OR 5. That the Thesis is rejected for the reasons specified in the report and *not* recommended for award of PhD Degree.
			1.4.3	**Consideration of Thesis Reports** : a.　　　　**Acceptance of Thesis:** On receiving favorable recommendations from all the Adjudicators, including the Research Supervisor(s), the Controller of Examination shall convey the same to the Research Supervisor (s) and Head of the School along with (a copy to RPC) copies of the Reports received and request to conduct the final Viva Voce of the research scholar as scheduled. b.　　　　**Appointment of Additional Adjudicator, if necessary:** The Thesis shall not be accepted for award of the Degree if any one of the Adjudicators (other than the Research Supervisor (s)) finds that the research work is not up to the expected standard, as given in his/her Report along with detailed reasons for the same. In such cases, the Report shall be considered by the concerned RRC for deciding on the need of appointing an additional Adjudicator. An additional Adjudicator shall be appointed by the VC from the panel. If the additional Adjudicator, after evaluating the Thesis gives a favorable Report, the Controller of Examination shall initiate further steps. If the additional Adjudicator also does not approve the Thesis, then the Thesis shall be rejected. It shall be open for the candidate to seek PhD registration at the University, afresh. c.　　　　**Rejection of Thesis, based on Negative Reports**: If both the external Adjudicators (other than the Supervisor(s)) do not recommend the research scholar for the award of the PhD Degree. Thesis shall be rejected. It shall be open for the research scholar to seek registration for this Degree at the University, afresh.
			1.4.4	**Conduct of final Viva-voce** **Consolidated Report** (a) After successful completion of the Viva Voce, the Viva Voce Committee shall prepare and forward the Consolidated Report along with duly corrected version of both the hard and the soft copies of the Thesis through the School to the CoE. The CoE shall present the Consolidated Report to the Academic Council.
			1.4.5	**Award of PhD degree** :

				(a) Degree Certificates: Upon the approval by the Academic Council, the University shall issue a Provisional PhD Degree Certificate to the research scholar certifying that the Degree has been awarded in accordance with the **Regulations Governing the Degree of Doctor of Philosophy.** • The University shall award the PhD Degree Certificate during the forthcoming Convocation. (b) **Copy right: University shall hold the copyright of the Thesis submitted to it.**
			1.4.6	**Submission to UGC:** Following the successful completion of the evaluation process and announcement of the award of the PhD Degree, the Registrar shall submit a soft copy of the PhD Thesis to the UGC within a period of *THIRTY* days, for hosting the same on its Information and Library Network, accessible to all the Institutions / Universities. The University shall also maintain a repository of such PhD Thesis in its Library.
			1.4.7	**PROHIBITIONS:** (a) **Prohibition of Statutory Officers from Ph. D. Registration**: **T**he Statutory Officers of the University shall not be permitted to register for the PhD Degree of the University during the period of their tenure at the University. (b) **Prohibition of** research scholars **from Registering for any other Degree**: No PhD research scholar of the University shall be permitted to pursue any other Degree programme within the University or at other Universities / Institutions, concurrently with his/her on-going registration as a research scholar for the PhD Degree.
		1.5 Research supervisor(s)		Procedure for recognition of research supervisor(s), modalities and functioning
			1.5.1	**Recognition of supervisor** a) Persons seeking recognition as a Supervisor shall apply in the prescribed format to RPC for their recognition as a Supervisor through the Head of the School. b) The Supervisor seeking to supervise research scholars shall possess BE/B.Tech as basic degree in relevant field to supervise PhD research scholar in the faculty of Engineering. The Supervisor seeking to supervise research scholars in Science Faculty shall possess B.Sc./BCA or equivalent degree in relevant field. The Supervisor seeking to supervise research scholars in Faculty of Architecture shall possess B.Arch or equivalent degree in relevant field. The Supervisor seeking to supervise research scholars in Faculty of Management may have any basic degree at UG level with MBA from recognized University. c) Supervisor shall possess PhD in relevant field of Faculty awarded by recognized Universities. d) A research student can opt for a maximum of *TWO* supervisors and, ifone of the supervisor's is from outside the University, he/she shall be called co-supervisor. e) The following acts of research Supervisor may lead to

				disqualification of Supervisor from guiding any research scholars • Influencing the external examiner to write favorable report on Thesis. • Making effort to intervene in external examiners evaluation work. • Writing thesis valuation report on behalf of external examiners and making arrangements to send such reports from External Examiners.
			1.5.2	Not with standing any of the regulations in 1.5.1, the Vice-Chancellor shall be empowered to take suitable decisions based on the merit of the individual cases.
			1.5.3	**Functioning of Research Supervisor:** (a) There shall be a possibility for assigning a Research Supervisor(s) for a research scholar registered for PhD degree at a School as decided by the Admission Committee. (b) Supervisor(s), with either of them being from the School where the research scholar has registered for PhD. (c) No person shall function as Supervisor for his/her blood relative or spouse for PhD, as defined by the University.
			1.5.4	**Number of Research scholars** The following norms / procedure shall be strictly adhered to while assigning the Research Supervisors to the Research scholars admitted with recommendations of RPC and forwarded through the School: (a) Each Research Supervisor shall supervise not more than 08 (EIGHT) research scholars, (including reservation category) at a time including the research scholars who have registered for PhD degree at other Universities (acceptance for supervision of PhD research scholars at other Universities shall be with the written permission of the University). (b) The research scholars of a Research Supervisor who have completed the final Viva-Voce shall not be considered while counting the number of research scholars assigned to a Research Supervisor. (c) A Research Supervisor shall not be assigned more than *TWO* newly admitted research scholars during an academic year. (d) Under special consideration, admission committee may recommend up to FOUR research scholars at once to supervise with proper reasoning. This extraordinary case shall be exercised carefully by the RPC and must be approved by Vice Chancellor.

KLE Technological University
Creating Value
Leveraging Knowledge

Hubballi
Karnataka State, INDIA

Name:_____

_____

SRN _____

CGPA :_____

Date:_____

Prepared by: _____

COE:_____

_____
Signature of the Student

KLE Technological University
Creating Value
Leveraging Knowledge

(Established under Karnataka Act No. 22, 2013)

Hubballi, Karnataka State, INDIA

Provisional Degree Certificate

This is to certify that Mr/Ms_____bearing Student

Registration No._____is qualified for the award of degree of, **Master of Technology** in

_____ for having fulfilled requirements of the degree and

passed the final examination held during _____ with CGPA _____ / 10.

The degree will be conferred on him/her at the next convocation of KLE Technological University.

Hubballi   **Controller of Examinations**

Date :

KLE Technological University

Hubballi (India)

Certifies that

Rajshekargoudar R. Linganagoudar

has been duly admitted to the Degree of

Bachelor of Engineering

in recognition of the fulfilment of requirements
for the said degree through

University Seat Number	:	2BV12AT045
Program	:	Mechanical Engineering
Class	:	First Class with Distinction

A 014893   Given under the seal of the University

14

Hubballi

Date 12-05-2017

VICE CHANCELLOR

Annexure-5

[Curriculum Structure and Syllabus Minor
in
Automotive Engineering]

Board of Studies approved

Minor
in
Automotive Engineering

Curriculum Structure
and
Syllabus
2015 – 19 Batch
(2015 Admission)

School of Mechanical Engineering
2017

Preface

Automobile Engineering is one of the major contributors to the mechanical industry worldwide. Efficiency, Safety, Performance and Innovations are leading to new automotive systems being developed. In the current academic environment development and implementation of automotive systems are not being strongly emphasized. Students participating in automotive engineering competitions, seeking job opportunities, as well as entrepreneurial ventures need to be equipped with thorough automobile design fundamentals to implement development processes and problem solving skills leading to innovations. The proposed minor program shall address these gaps in the curriculum.

The minor program is open for all disciplines within engineering and will focus on experiential learning. Interactions with industry experts and teachers with industry experience shall further enhance the learning of students. The students shall go through every stage of vehicle design and development, starting with vehicular framework and finally ending with validation of design for a competition vehicle.

Students at the end of this program the student shall be able to

1. Develop a vehicle framework as per required specifications.
2. Evaluate the design in terms of safety, efficiency and performance.
3. Develop component/system solutions based on functional needs.
4. Build a vehicle integrating various sub systems.
5. Analyse vehicle behaviour against set targets.
6. Validate the vehicle through testing.

Overview of the Minor Degree

The main aim of the degree offered is to equip students with the knowledge necessary to design, build, test and validate a vehicle. The individual courses begin with introducing the student to different vehicles, automotive components and systems and their need and functionality. With this fundamental knowledge the student then learns the impact of these automotive components and systems on vehicle handling and behaviour in the succeeding course. In the next stage the student is exposed to the essentials of Electrical and Electronic control systems in a vehicle. Design and development of powertrain and drivetrain systems complete the system knowledge necessary to work on an entire vehicle. The degree finally culminates with the student testing and validating a given vehicle for competition.

Semester: IV

No	Code	Course	Category	L-T-P	Credits	Contact Hours	ISA	ESA	Total	Exam Duration
1	M16AEC201	Vehicle Chassis Systems	PC	2-0-1	3	4	100	0	100	Continuous evaluation
		TOTAL		**2-0-1**	**3**	**4**				

Semester: Summer I

No	Code	Course	Category	L-T-P	Credits	Contact Hours	ISA	ESA	Total	Exam Duration
1	M16AEC202	Vehicle Dynamics	PC	3-0-1	4	5	60	40	100	Continuous evaluation
		TOTAL		**3-0-1**	**4**	**5**				

Semester: V

No	Code	Course	Category	L-T-P	Credits	Contact Hours	ISA	ESA	Total	Exam Duration
1	M16AEC301	Automotive Electrical and Electronics	PC	2-0-0	2	2	50	50	100	Continuous evaluation
		TOTAL		**2-0-0**	**2**	**2**				

Semester: VI

No	Code	Course	Category	L-T-P	Credits	Contact Hours	ISA	ESA	Total	Exam Duration
1	M16AEC302	Advanced Powertrain & Drivetrain Systems	PC	2-0-2	4	6	60	40	100	Continuous evaluation
		TOTAL		**2-0-2**	**4**	**6**				

Semester: Summer II

No	Code	Course	Category	L-T-P	Credits	Contact Hours	ISA	ESA	Total	Exam Duration
1	M16AEC303	Vehicle Testing & Validation	PC	0-0-2	2	4	100	00	100	Continuous evaluation
		TOTAL		**0-0-2**	**2**	**4**				

ISA: In Semester Assessment, **ESA**: End Semester Assessment,

L: Lecture; **T**: Tutorials; **P**: Practical.

BS: Basic Science   **ES**: Engineering Science,   **PC**: Program Core,   **PE**: Program Elective

Assessment Scheme for all MAE courses (Tentative)

Sl. No	Course	Minor 1	Minor 2	Assignment	Total ISA	Course Project – ESA	Total
1	Vehicle Chassis Systems	00	00	100	100	00	100
2	Vehicle Dynamics	20	20	20	60	40	100
3	Automotive Electrical and Electronics	20	20	10	50	50	100
4	Advanced Powertrain & Drivetrain Systems	20	20	20	60	40	100
5	Vehicle Testing & Validation	00	00	100	100	00	100

Minors Exams:

Students shall attend two minors; Minors shall be

- Case analysis and presentation – individually or team
- Project presentations
- Written exam

Assignment:

- Case analysis and presentation – individually
- Analysis of automotive systems through different simulation software
- Field testing and validation of component/ system/ vehicle

Tutorials:

- Students shall apply their learning on real life examples;
- Use analytical and empirical tools for assignments.
- Tutorials shall be assessed every week wherever applicable

IV Semester

Course Content

Course Code: M16AEC201	Course Title: **Vehicle Chassis Systems**	
L-T-P: 2-0-1	Credits:3	Contact Hrs: 04 hrs/week
ISA Marks: 100 Marks	ESA Marks: 00 Marks	Total Marks: 100 Marks
Teaching Hrs: 20 hrs	Practical Hrs: 20	Exam Duration: Continuous evaluation

No	Content	Hrs
1	**Vehicle Frame & Layouts** General considerations, types of frames, layouts, layout of an automobile with reference to power plant, system function, power flow for two and four wheel drive	3 hours
2	**Chassis Geometry** CG location and its effects, kinematics of pitch, yaw and roll, roll centre analysis, anti-squat/anti-dive geometries.	3 hours
3	**Front & Rear Axles** Introduction, types, construction and materials used.	3 hours
4	**Steering Systems** Requirements, steering on independent and rigid axle suspension, Rack & Pinion steering, Recircrulating Ball type steering, Power steering systems, Steering Kinematics.	4 hours
5	**Brakes-Types, function, performance** Classification of brakes, types, construction, function, operation, types of master & wheel cylinders, bleeding of brakes, factors influencing operation of brakes, Antilock braking system, Combined Braking System, Power brakes-Air brakes, vacuum brakes and electric brakes and components	4 hours
6	**Suspension systems** Introduction to role of vehicle suspension, types, factors affecting design, definitions and terminology, suspension types, suspension components, Torsion bar suspension	4 hours
7	**Wheels & Tyres** Introduction and terminology, Tyre construction, components, Radial & Non- Radial tyres, Hydroplaning, Wheels & Rims, Wheel offset, matching tyres and wheels.	3 hours

References:

1. An Introduction to Modern Vehicle Design – Julian Happian – Smith, SAE International, Inc. 400 commonwealth Drive Marrendale, PA 15096-0001 edition 2004 (Reprinted) ISBN - 0 7680 0596 5.
2. Automotive Engineering, Powertrain, Chassis Sytem and Vehicle Body – Edited by David A. Crola, ISBN: 978-1-85617-577-7

Summer – I

Course Content

Course Code: M16AEC202	Course Title: **Vehicle Dynamics**	
L-T-P: 3-0-1	Credits:4	Contact Hrs: 05 hrs/week
ISA Marks: 60 Marks	ESA Marks: 40 Marks	Total Marks: 100 Marks
Teaching Hrs: 30 hrs	Practical Hrs: 20	Exam Duration: Continuous evaluation

No	Content	Hrs
1	**Introduction: Forces Acting on a Vehicle** Vehicle Axis System, Cornering forces, Forces on tyres, Wheel loads, Aerodynamic forces and applied systems.	5 hours
2	**Vehicle Stability & Control** Equations of motion, Mechanics of Neutral steer, oversteer and understeer and corresponding vehicle response, Spring mass damper system applied to a vehicle, Significant speeds and control.	5 hours
3	**Suspension & Ride** Mechanics of different suspension, Ride & Roll rates, Different springs and their calculations, Dampers.	6 hours
4	**Steering Systems** Steering geometry, application of Ackerman geometry, effects of Ride and Roll rates, Alignment.	3 hours
5	**Driving and Braking** Effects of front, rear and four wheel drive, differentials and brake systems.	3 hours
6	**Vehicle set-up** Constraints and specifications, Design process, Chassis set-up.	4 hours
7	**Testing and Development** Driver-Vehicle relation, Vehicle characteristics, Fundamentals of testing and program set-up, Methodology and Development.	4 hours

References:

1. Race Car Vehicle Dynamics by William F. Milliken & Douglas L. Milliken ISBN1 56091-526-9 SAE INC 400 Common Wealth Drive Warrandale 1995

2. Fundamentals of Vehicle Dynamics by Thomas D. Gillipse, SAE, USA, ISBN1 56091-526-9 SAE INC 400 Common Wealth Drive Warrandale 1992

Semester V

Course Content

Course Code: M16AEC301	Course Title: **Automotive Electrical & Electronics**	
L-T-P: 2-0-0	Credits: 2	Contact Hrs: 02 hrs/week
ISA Marks: 50 Marks	ESA Marks: 50 Marks	Total Marks: 100 Marks
Teaching Hrs: 30 hrs	Project Hrs: 00	Exam Duration: Continuous Evaluation

No	Content	Hrs
1	**Batteries, Charging System and Starting System** Batteries: Vehicle batteries, types, construction, maintenance and charging, Charging System: Requirements of the charging system, Charging system principles, alternators and charging units, Starting System: Requirements of the starting system, starter motors, construction and circuits.	6 hours
2	**Automotive Sensors** Temperature sensor, gas sensor, knock sensor, pressure sensor, flow sensor, torque sensor, crash sensor, Speed sensor and acceleration sensor, operation, types, characteristics, advantages and their applications.	5 hours
3	**Ignition systems** Ignition fundamentals, requirements of ignition system, Electronic ignition, Programmed ignition, Distributor less ignition, Direct ignition, spark plugs, Diagnosing ignition system faults, advanced ignition technology.	5 hours
4	**Fuel Injection Systems** Introduction, fuel system components, electronic fuel system, fuel injection types throttle body-port injection-direct injection, electronic control for fuel injection, operation, different types, fuel injectors, idle speed control, high pressure diesel fuel injection MPFI system.	6 hours
5	**Chassis Electrical Systems** Anti-lock brakes, KERS, active suspension, traction control, automatic transmission, advanced chassis system technology, Tyre pressure warning, adaptive noise control, obstacle avoidance radar.	8 hours

References:

1. Tom Denton, Automobile Electrical and Electronic systems, 3rd, SAE publication, 2004
2. Julien Happian and Smith, An introduction to modern vehicle design, 2nd, SAE publication., 2002
3. W. Bolton, Longman, Mechatronics, 2nd, Pearson publication, 1999

Semester VI

Course Content

Course Code: M16AEC302	Course Title: **Advanced Powertrain & Drivetrain Systems**	
L-T-P: 2-0-2	Credits:4	Contact Hrs: 06 hrs/week
ISA Marks: 60 Marks	ESA Marks: 40 Marks	Total Marks: 100 Marks
Teaching Hrs: 20 hrs	Project Hrs: 30 hrs	Exam Duration: Continuous Evaluation

No	Content	Hrs
1	**Intake System** Function, types, components, design requirements, air flow, fuel flow, air-fuel mixture flow, in-cylinder flow.	4 hours
2	**Exhaust Systems** Function, types, components, design requirements, air flow-exhaust valves and port, flow through pipes, catalytic converters and exhaust acoustics.	4 hours
3	**Engine Tuning** Cylinder head, fuel & compression ratio, ignition system, cooling and lubrication.	5 hours
4	**Electric and Hybrid Drives** Introduction, types, energy source, design requirements,	3 hours
5	**Drivetrain systems** Drive shafts- types, construction, Transmission- manual, automatic, DCT, sequential, paddle shift, impact of final ratio and wheel size on vehicle performance.	4 hours

References:

1. Internal Combustion Engine Fundamentals, John B. Heywood, McGraw-Hill series
2. Automotive Engineering, Powertrain, Chassis Sytem and Vehicle Body – Edited by David A. Crola, ISBN: 978-1-85617-577-7

Summer – II

Course Content

Course Code: M16AEC302	Course Title: **Vehicle Testing & Validation**	
L-T-P: 0-0-2	Credits:2	Contact Hrs: 04 hrs/week
ISA Marks: 100 Marks	ESA Marks: 00 Marks	Total Marks: 100 Marks
Teaching Hrs: 10 hrs	Project Hrs: 20 hrs	Exam Duration: Continuous Evaluation

No	Content	Hrs
1	**Introduction** Outline of testing methodology for different vehicles, maintaining log book entries, benchmarking competition, identification of areas for development.	2 hours
2	**Testing** Design of Track, Types of test, design of tests, conduct of test with focus on safety, Data acquisition, set-up changes and result logs.	3 hours
3	**Validation & Development** Interpretation of testing results, comparison and correlation of results with theoretical/simulation results, modification to design, repeat of testing-validation-development cycle.	3 hours
4	**Reports** Presenting data obtained from testing and validation.	2 hours

References:

1. Race Car Vehicle Dynamics by William F. Milliken & Douglas L. Milliken ISBN1 56091-526-9 SAE INC 400 Common Wealth Drive Warrandale 1995