VIT | Vidyalankar Institute of Technology
Accredited A+ by NAAC

Information, Rules and Regulations for Undergraduate Programmes

(With effect from the Academic Year 2022-23)

Curriculum Structure, Evaluation and Examination System

Vidyalankar Institute of Technology
Wadala, Mumbai 400037
(Autonomous Institute Affiliated to the University of Mumbai)

Preface

'Vidyalankar' is a Sanskrit word which reveres *'Vidya'* as a precious *'Alankar'*; the essence being that knowledge is the true ornament of a progressive mind. Established in 1960, the Vidyalankar Group is committed to spreading the radiance of knowledge far and wide. The seeds of Vidyalankar were sown by Late Prof. Chandrashekhar S. Deshpande, a technocrat and visionary blessed with extraordinary academic acumen, engineering skills, and a great passion for education.

Established in the year 1999, Vidyalankar Institute of Technology (VIT) is a private, self-financed Engineering and Management Institute approved by All India Council for Technical Education (AICTE), New Delhi, Directorate of Technical Education (DTE), Government of Maharashtra and affiliated to the University of Mumbai (Autonomous Institute). The Institute is managed by Vidyalankar Dnyanapeeth Trust.

The Institute currently runs five Undergraduate Programs in Engineering, two Postgraduate Programs in Engineering, a Postgraduate program in Management Studies, and a Doctorate Program in Technology-Computer Engineering.

VIT aims to facilitate a holistic environment to enable students reach their optimum potential from the perspective of applying the learnings with an innovative mindset. To aid this education process, the implementation of the concept of aiming for 'student delight' has rewarded the Institute.

Currently, all UG Engineering Programs are accredited by National Board of Accreditation (NBA). The Institute is awarded accreditation with an A+ Grade by National Assessment and Accreditation Council (NAAC) with CGPA of 3.41. One of the major milestones of Vidyalankar Institute of Technology is that Institute has been granted Autonomous status by UGC from AY2022-23.

This booklet gives comprehensive information about the syllabus scheme of the Institute and the rules and regulations for B. Tech. programmes under autonomous status. These rules are framed as per the guidelines of UGC, AICTE and Government of Maharashtra and subjected to change from time to time as per the directives of UGC, AICTE.

Date: 01th July 2022

Principal

VIDYALANKAR INSTITUTE OF TECHNOLOGY, WADALA, MUMBAI-31
VIT Vidyalankar Institute of Technology

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A. Introduction

One of the major milestones of Vidyalankar Institute of Technology is that we have been granted autonomous status by UGC exactly when the National Education Policy is implemented by the Government of India. National Education Policy 2020 is a very forward-looking policy and is aimed at shaping the youth of our country in a very holistic manner. In line with the same thought process, the new syllabus and scheme of the Institute under autonomous status is designed to give a robust and enriching educational experience to the student community.

The following excerpts from National Education Policy 2020 are pointers in this direction.

> *Education is fundamental for achieving full human potential, developing an equitable and just society, and promoting national development. Providing universal access to quality education is the key to India's continued ascent, and leadership on the global stage in terms of economic growth, social justice and equality, scientific advancement, national integration, and cultural preservation. Universal high-quality education is the best way forward for developing and maximizing our country's rich talents and resources for the good of the individual, the society, the country, and the world. India will have the highest population of young people in the world over the next decade, and our ability to provide high-quality educational opportunities to them will determine the future of our country.*
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> *The world is undergoing rapid changes in the knowledge landscape. With various dramatic scientific and technological advances, such as the rise of big data, machine learning, and artificial intelligence, many unskilled jobs worldwide may be taken over by machines, while the need for a skilled workforce, particularly involving mathematics, computer science, and data science, in conjunction with multidisciplinary abilities across the sciences, social sciences, and humanities, will be increasingly in greater demand. With climate change, increasing pollution, and depleting natural resources, there will be a sizeable shift in how we meet the world's energy, water, food, and sanitation needs, again resulting in the need for new skilled labour, particularly in biology, chemistry, physics, agriculture, climate science, and social science. The growing emergence of epidemics and pandemics will also call for collaborative research in infectious disease management and development of vaccines and the resultant social issues heightens the need for multidisciplinary learning. There will be a growing demand for humanities and art, as India moves towards becoming a developed country as well as among the three largest economies in the world.*
>
> *Indeed, with the quickly changing employment landscape and global ecosystem, it is becoming increasingly critical that children not only learn, but more importantly learn how to learn. Education thus, must move towards less content, and more towards learning about how to think critically and solve problems, how to be creative and multidisciplinary, and how to innovate, adapt, and absorb new material in novel and changing fields. Pedagogy must evolve to make education more experiential, holistic, integrated, inquiry-driven, discovery-oriented, student-centred, discussion-based, flexible, and, of course, enjoyable. The curriculum must include basic arts, crafts, humanities, games, sports and fitness, languages, literature, culture, and values, in addition to science and mathematics, to develop all aspects and capabilities of students; and make education more well-rounded, useful, and fulfilling to the student. Education must build character, enable students to be ethical, rational, compassionate, and caring, while at the same time prepare them for gainful, fulfilling employment.*
>
> *The gap between the current state of learning outcomes and what is required must be bridged through undertaking major reforms that bring the highest quality, equity, and integrity into the system, from early childhood care and education through higher education.*

The new syllabus offers thoughtfully designed, industry-relevant courses and allied activities in Science-Technology-Engineering-Mathematics (STEM) and incorporates subjects for "Arts" component, thereby making it a complete STEMA-oriented syllabus. This will be achieved by offering additional electives and audit subjects in General Education category.

It requires time and patience, and most significantly, an inspiring vision and vigour to navigate new routes and new methodologies, but what is most exciting is the sense of ownership and the opportunity to breathe fresh life into the existing curriculum.

The Institute have been granted Autonomous status by UGC from AY2022-23. This is an attempt to answer some basic queries you might have as we are all set to start this new journey of autonomy.

What is Autonomy?

The affiliating system of colleges was originally designed when their number in a university was small. The university could then effectively oversee the working of the colleges, act as an examining body and award degrees on their behalf. The system became unwieldy and it became increasingly difficult for a university to attend to the varied needs of individual colleges. An autonomous college will determine and prescribe its own courses of study and syllabi, and restructure and redesign the courses to suit local needs. This opens up vistas for introducing relevant and modern courses along with the fundamental courses. An autonomous college has the freedom to design and develop curriculum at the Institute level and make significant value additions in the curriculum so as to make it more robust and enriched to suit to Industry and Society requirements. College autonomy can thus be considered as an instrument for promoting academic excellence.

Why is Autonomy significant?

An autonomous institution represents capability of self-academic governance and thus carries a prestigious image for the students and the teachers. Let us understand the significance of autonomy from a student's perspective. In an autonomous institution, we have decided to give more emphasis on effective student engagement leading to enhanced learning.

As the adage goes, one size does not fit all – so there will be more customization possible as the college now has the flexibility to modernize the curricula or make it globally/locally relevant. It can also offer need based short term courses/internships for the benefit of the students. More effective methods of assessment of students' performance can be evolved, the conduct of examinations and notification of results can be better streamlined with proper checks and balances in place.

When will Autonomy be implemented at VIT?

Autonomy will be implemented from the Academic Year 2022-23 and is applicable for all years of Engineering Degree Programme.

Who will be the beneficiaries?

The primary beneficiaries of autonomy will be students. They will have a wider platter of courses to choose from, and better customization of learning will be possible. This allows a student to get a better education and learn what they really want to learn from wide variety of courses available. Students can be taught the latest and relevant technologies to make them competent in the industry. Experts from various industries and experienced academicians from reputed institutes are consulted in the process of framing the syllabus. Dedicated efforts are made to ensure that the syllabus framed is up-to-date and relevant.

With more academic flexibility, the intellectual climate of the college will improve. Use of modern tools of educational technology to teach modern courses will help to achieve higher standards of pedagogy and there will be greater scope for innovation and creativity.

Where will Autonomy take me on my career path?

When it comes to placements, with improved industry-institute interaction, the recruiting companies will have better skilled pool of students to select from. Students will also have more options to explore, companies to apply with their focused skill set. It is an opportunity for them to stand out from the crowd.

Speaking of higher studies, students will get better orientation and guidance with various tie-ups and networking.

When it comes to inculcating start-up culture, students will get better exposure with wider choice of courses. The educational ecosystem can be injected with various entrepreneurial guidance activities, in sync with their academic pursuits.

B. Nomenclatures used in the document

MU_R-2019 XXX: Refers to XXX information/ rules/ regulations applicable to students admitted in First Year of 4-year UG programme (B.E.) in VIT in AY 2021-22 or earlier, and those Direct Second Year (DSY) students admitted through lateral entry in VIT in AY 2022-23 or earlier.

For example, MU_R-2019 Curriculum Scheme shall mean Curriculum Scheme for the students mentioned above. MU_R-2019 Exemptions for DSY shall mean rules with respect to exemption of courses/ credits for the DSY students mentioned above.

VIT_R-2022 XXX: Refers to XXX information/ rules/ regulations applicable to students admitted in First Year of 4-year UG programme (B.Tech.) in VIT in AY 2022-23 or later, and those Direct Second Year (DSY) students admitted through lateral entry in VIT in AY 2023-24 or later.

For example, VIT_R-2022 Curriculum Scheme shall mean Curriculum Scheme for the students mentioned above. VIT_R-2022 Exemptions for DSY shall mean rules with respect to exemption of courses/ credits for the DSY students mentioned above.

1. Curriculum Scheme

MU_R-2019 Curriculum Scheme: The University of Mumbai curriculum "REV-2019 'C' Scheme" is adopted for MU_R-2019 students.

Provision of exemption of courses listed under first year syllabus of University of Mumbai "REV-2019 'C' Scheme" shall be applicable to MU_R-2019 DSY students for the award of degree.

Provisions for Honours/ Minor Degree Program as prescribed by University of Mumbai (with effect from academic year 2022-23) shall also remain applicable for MU_R-2019 students.

VIT_R-2022 Curriculum Scheme: The Revised curriculum drafted under autonomous status of VIT, Mumbai is applicable for VIT_R-2022 students.

Curriculum Scheme details mentioned below from section 1.1 to section 1.7 is applicable for VIT_R-2022 students. However, section 1.4 is applicable to MU_R-2019 students also.

1.1 Course Credit

Candidate earns credits every semester by satisfactorily completing the courses. The number of credits associated with a course is based on the number of hours of instruction per week for the course. Similarly, the credit associated with any of the other activities is dependent upon the quantum of work expected to be put in per week by the candidate. The credit structure and its allocation is available in the syllabus scheme of each semester. Number of Hour/s of instruction and Credit mapping followed is shown below.

1 Hr. Lecture (L) per week	1 credit
1 Hr. Tutorial (T) per week	1 credit
1 Hr. Practical (P) per week	0.5 credit

1.2 Course Category

Sr. No.	Category Name	Abbreviation	Details of Category
1	Basic Science	BS	Courses like Physics, Chemistry and Maths. These courses are covered during Sem-1 to Sem-4
2	Engineering Science	ES	Courses which are allied to the programme and which are prerequisite courses for the Core courses of that program are included here. These courses are covered during Sem-1 to Sem-3.
3	Core courses	CC	These courses are most relevant to the respective programme and hence called core courses.
4	Professional Elective courses	PE	These courses are available at the department level to enhance student skillset as per the Industrial needs. Program wise elective courses are to be opted by the students of that respective program only. Typically, 4 track domains are available in each programme, Student shall select one of it based on his/her interest in track domain. These courses are covered during Sem-5 to Sem-7
5	Open Elective courses	OE	These courses are available at the Institute level to enhance student skillset. Students from any department

			can opt for these courses. These courses are covered during Sem-6 to Sem-8
6	Project and Internship	PI	These courses are available at the Department level. Student shall undertake mini and major projects and undergo internship program. This facilitates industry exposure and helps student gaining latest technical skillset.
7	Humanities and Social Sciences including Management courses	HS	These courses help student for building soft skills, character building with professional ethics.
8	General Education	GE	These courses help student for holistic development. As this category also involves Life enrichment courses, student will get value addition in various dimensions of wellness like emotional, social, spiritual, physical and educational. These courses are spread over from Sem-1 to Sem-4.
10	Minor /Honours Degree	MHD	In our curriculum, students can choose to avail Minor/Honours Degree by completing requirements of 15 credits, which will be over and above the credits required for BTech degree. Details are given below.

As a curriculum including an appropriate proportion of all the above-listed categories helps in the holistic development of the student, an appropriate proportion of different courses from the above-mentioned categories is maintained while drafting the 4-year (8-semester) curriculum of various UG programmes.

1.3 Credit distribution as per Knowledge, Skills and Attitude components (KSA)

The curriculum of any UG programme is designed to have a total of 160-165 credits (exact credit requirement is as stated in individual Programme Structure document) for the award of the degree.

To achieve holistic development of students, courses in UG programme contribute 50% towards Knowledge component, 30% towards Skill component and 20% towards Attitude component. Student is recommended to undergo 6-7 courses in each semester, totaling to approximately 20 credits per semester. A typical category wise distribution of credits is shown below.

Component	Knowledge			Skills			Attitude		Total
Course Category	BS	ES	CC	PE	OE	PI	HS	GE	
Credit	20	15	46	18	15	16	14	16	160
Percentage	~50 %			~30 %			~20 %		

Actual number of credits for each course category are mentioned in the individual Programme Structure document.

1.4 Types of Course Registration

While registering for a course, students have the option of taking the course for credit or audit. If students decide to take the course for credit, they will receive a grade as well as academic credits that, if the course is acceptable for the award of a degree, may be used to award the degree. If students choose to take the course for audit, they will receive NO grade or academic credits for the course.

Students can register for the courses under any of the following category.

- Credit
- Audit

1.4.1 Credit

Student must ensure that they register for all those courses which are required for completion of their Programme as credit course. Every Semester, department shall offer some courses. Based on the courses specified in the course list of Programme Structure document, students can register for the courses. However, student can register for a course as Credit Course in any semester of their Programme, subject to satisfaction of the pre-requisite courses for that course.

After successful completion of the course, students will receive grade, as stated in section 3.7, for courses registered as Credit Course and acquired credits shall be accumulated towards fulfilment of minimum credit requirement for the Programme.

Additional Learning Courses

In addition to the courses required for the award of degree, students may register to credit the other courses in the interest of value addition, benefit for higher education and better employment opportunities. Project guide may advise student for additional learning courses which will enhance skills of student for project implementation.

Student can register for any number of such courses offered by any UG Programme as Additional Learning Courses, subject to satisfaction of the pre-requisite courses for that course.

After successful completion of the course, Students will receive grade, as stated in section 3.7, for courses registered as Additional Learning Courses. However, It is important to note that the acquired credits will not be accumulated towards fulfilment of minimum credit requirement for the Programme.

1.4.2 Audit

During registration, if you take a course as AUDIT, it cannot be considered for the award of degree program. You do not receive any course credit, nor any grades for audited courses other than X, and audited courses do not have any impact on your GPA.

In addition to the courses required for the award of degree, Students may register to audit the other courses in the interest of value addition, benefit for higher education and better employment opportunities. Project guide may advise student for additional learning courses which will enhance skills of student for project implementation.

Student can register for any number of such courses offered by any UG Programme, subject to satisfaction of the pre-requisite courses for that course.

The course code and course name of the course registered as Audit Course will appear on the Grade Card only if student completes the course to the required satisfaction as stated by the respective faculty.

1.5 Academic Flexibility

The core value of an autonomous institute is academic freedom. It serves as the cornerstone for sharing knowledge and encouraging students to choose interdisciplinary courses as per their needs and interest. The Institute's VIT R-2022 Curriculum offers depth by concentrating on a particular area of study through professional electives, as well as breadth by providing courses under categories like open electives, general education etc. and exposing students to a range of fields.

Institute also offers substantial academic flexibility by allowing students to take the courses they want and finish them at their own pace. Although each 4-year UG degree programme has a defined set of recommended courses for each semester based on the knowledge map, all courses offered by the institute, irrespective of the programme, will be open to students for registration. Students may enrol in the courses they want to take as long as they meet the prerequisite requirements for those courses This enables students to enrol in courses at their own pace as faculty may offer courses in both the semesters.

1.6 B.Tech. with Minor or BTech with Honours

An Honours or Minor degree typically refers to a higher level of academic achievement either for research orientation or for improving employability. It can be opted by a student to enhance depth of knowledge, diversity, breadth and skills in the field of their choice.

Curriculum has provision for VIT_R-2022 students to avail Honours/ Minor Degree by completing requirement of 15 credits in addition to the minimum credits required (as mentioned in individual Programme Structure document) for the award of B.Tech. Degree i.e. credit requirement for the award of degree programme and Honours/ Minor degree programme are required to be explicitly carried out.

	Category	Credits
1	Course Work	9
2	Industrial Interaction and Survey Paper	2
3	Seminar	1
4	Capstone Project	3
	Total	15

For Honours degree, student shall select Honour programme offered by their home department. Alternatively, for Minor degree, student shall select Honour programme offered by department other than their home department.

Eligibility Criteria

- All students are eligible to apply for Honours/ Minor degree programmes
- If student has already completed any course(s) that is listed in the chosen Honours/ Minor degree programme, as additional learning course(s), then the transfer credits for such course(s) shall be carried out towards Honours/ Minor degree programme.
- For a student to get Honours/ Minor degree, it is mandatory that the student completes the relevant courses before graduating.

1.7 Exemption of courses for Lateral Entry students

Students who will secure admission through lateral entry from the A.Y. 2023-24 onwards shall follow the Autonomy curriculum of VIT, Mumbai (VIT_R-2022). Total of around 40 credits will be exempted for such students.
Category wise distribution of credits is given below

Category	Number of Credits to be exempted in the Programme				
	INFT	CMPN	EXCS	EXTC	BIOM
Basic Science	09	09	12	12	12
Engineering Science	15	15	15	18	15
Core courses	00	00	00	00	00
Professional Elective courses	00	00	00	00	00
Open Elective courses	00	00	00	00	00
Project and Internship	00	00	00	00	00
Humanities and Social Sciences including Management courses	08	08	06	06	06
General Education	07	07	07	07	07
Total Credits exempted	**39**	**39**	**40**	**43**	**40**

Courses under various categories which are exempted for VIT_R-2022 DSY students are stated in the individual Programme Structure of their home department. However, such exempted courses can be registered by any VIT_R-2022 DSY student as additional learning course or as audit course.

2. Evaluation

Assessment is an integral part of education which provides student with more opportunities to prove their ability. The major objective of outcome-based Teaching-Learning and Evaluation processes is to build and assess students' ability towards application of knowledge, scientific temper, reasoning ability, problem solving ability and critical thinking and not restrict it to memorizing capacity.

The content delivery methodology and tools used for assessment are greatly influenced by the nature of the course. Therefore, faculty is empowered to decide on most appropriate pedagogy and assessment methodology for their course.

2.1 Scheme for assessment of Theory and Lab Courses:

In general, assessment methodologies consist of the following three components:

ISA	In Semester Assessment
MSE	Mid Semester Examination
ESE	End Semester Examination

Weightages/marks for each component differ as per credits for the course and the same are defined in the scheme of respective syllabi. **Default Credit -Marks mapping is shown below:**

Head of Teaching	Credits	Break up of Total Marks			Total marks (Passing@40% of total marks)
		ISA	MSE	ESE	
Theory	4	25	40	60	125
Theory	3	20	30	50	100
Theory	2	15	20	40	75
Theory	1	10	15	25	50
Practical	3	50	0	50	100
Practical	2	25	0	50	75
Practical	1	25	0	25	50
Tutorial	1	50	0	0	50

However, each course faculty shall have the choice to decide the assessment methodology based on the nature of the course. Faculty may propose innovative assessment methodology for the course which may be entirely different from the one stated above or may have multiple components of assessments than the three stated above. However, the proposed assessment methodology shall be approved by the Principal and published to the students before the commencement of the semester.

2.2 General Guidelines for Assessment

If faculty adopts the pattern of ISA, MSE and ESE with default credit-marks mapping as stated in 2.1 for assessment of their courses, then, the general guidelines for assessments are stated below:

2.2.1 Theory Courses:

A student shall be evaluated for academic performance in the theory courses through the following modes of assessments.

Mode of Assessment	Evaluation guidelines
In-Semester Assessment (ISA)	ISA provides continuous evaluation of students using formative assessment tools. This assessment will be carried out by the subject teacher over the course of the semester. • ISA component may include open book test, take home test, work assignments, group discussions, quiz, seminar, debate, concept video preparation, role paly, mind map preparation, crossword etc. • Subject teachers shall conduct the ISA as per the specified timeline and shall also declare and discuss the assessment results in time with the students.
Mid Semester Examination (MSE)	• MSE shall be a paper-based assessment. 35-40% of syllabus covered in the class shall be considered for MSE. • MSE shall be conducted generally in 6-7th week of the semester
End Semester Examination (ESE)	At end of the semester an ESE will be conducted • ESE shall be a paper-based assessment. Remaining 65-60% of syllabus covered in the class shall be considered for ESE. • ESE shall be conducted generally in 15th week of the semester

2.2.2 Lab courses:

A student shall be evaluated for academic performance in the Laboratory courses through the following modes of assessment.

Mode of Assessment	Evaluation guidelines
In Semester Assessment (ISA)	ISA provides continuous evaluation of students using formative assessment tools. It should be carried out by the concerned teacher throughout the semester. • ISA component may include experiments specified in the lab course, mini project, Problem Based Learning Experiments, Technical Surveys, Panel discussion etc. • Concerned teachers shall conduct the ISA as per the specified timeline and shall also declare and discuss the assessment results in time with the students.
End Semester Examination (ESE)	At end of the semester an ESE in the form of Practical/Oral examination will be conducted based on the prescribed curriculum of the Lab course

2.2.3 Project Work:

A student shall be evaluated for academic performance in project work through the modes of assessment.

Assessment	Evaluation guidelines
In Semester Assessment (ISA)	ISA provides continuous evaluation of students using formative assessment tools. • Project guide shall carry out ISA throughout the semester. • Project work of every team shall be reviewed twice per semester by the panel of internal / external experts appointed by the department. • Review shall include technical presentation including problem definition, literature survey, demonstration etc. • Performance parameters for evaluation shall be prescribed by the Department
End Semester Examination (ESE)	At end of the semester an ESE in the form of Project examination will be conducted. Students are required to demonstrate live functional projects with expected outcome.

If a faculty member receives approval to adopt the proposed innovative assessment methodology as mentioned in 2.1, then he or she is also required to make the specific assessment methodology guidelines available to the students prior to the start of the semester.

3. Examination

Examination is a formal test of a students' knowledge or skillset in a particular subject.

3.1 A typical Academic Calendar

Week	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Induction	ISA					MSE				ISA			PL	PL	ESE		Result			RE

Detailed academic calendar will be published at the start of every semester.

3.2 Marks to Duration Relation

If faculty adopts the pattern of ISA, MSE and ESE with default credit-marks mapping as stated in 2.1 for assessment of their courses, then marks to duration relation for ESE and MSE is as stated below

Type of Exam	Marks	Exam Duration
ESE	60 Marks	02 Hrs 30 min
ESE	50 Marks	02 Hrs
ESE	40 Marks	01 Hr 40 Min
MSE	30 Marks	01 Hr 15 Min
MSE	20 Marks	50 min

However, if a faculty member adopts to his/her innovative assessment methodology, then the faculty shall decide the duration of the examination for various components of assessment and the same shall be disseminated to the students before the commencement of the semester.

3.3 Examination Paper Pattern (MSE and ESE)

Type of Exam	Total Marks	Paper pattern

ESE	60	• Question paper will comprise of 6 questions.
		• All questions are compulsory
		• Q. 1 shall have 8 sub-questions of 2 marks each and student shall solve any 5 out of 8.
		• Each question from Q. 2 to Q. 6 can have any one of the following patterns
		  ○ Pattern 1: Three sub-questions of 5 marks each and students shall solve any two sub-questions out of three.
		  ○ Pattern 2: Two sub-questions of 10 marks each and students shall solve any one sub-question out of two.
		Note: Question no. 2 may have pattern 1 and question no. 3 may have pattern 2. Meaning it is not necessary that all questions from 2 to 6 have the same pattern.
		• There shall be no multiple-choice questions.

ESE	50	• Question paper will comprise of 5 questions.
		• All questions are compulsory
		• Q. 1 shall have 8 sub-questions of 2 marks each and student shall solve any 5 out of 8.
		• Each question from Q. 2 to Q. 5 can have any one of the following patterns
		  ○ Pattern 1: Two sub-questions of 5 marks each and students shall solve any two sub-questions out of three.
		  ○ Pattern 2: Two sub-questions of 10 marks each and students shall solve any one sub-question out of two.
		Note: Question no. 2 may have pattern 1 and question no. 3 may have pattern 2. Meaning it is not necessary that all questions from 2 to 5 have the same pattern.
		• There shall be no multiple-choice questions

MSE	30	• Question paper will comprise of 3 questions • All questions are compulsory • Q. 1 shall have 8 sub-questions of 2 marks each and student shall solve any 5 out of 8. • Q. 2 and Q. 3 can have any one of the following patterns

		○ Pattern 1: Two sub-questions of 5 marks each and students shall solve any two sub-questions out of three. ○ Pattern 2: Two sub-questions of 10 marks each and students shall solve any one sub-question out of two. Note: Question no. 2 may have pattern 1 and question no. 3 may have pattern 2. Meaning it is not necessary that both questions i.e. 2 to 3 have the same pattern. • There shall be no multiple-choice questions
MSE	40	• Question paper will comprise of 4 questions. • All questions are compulsory • Q. 1 shall have 8 sub-questions of 2 marks each and student shall solve any 5 out of 8. • Each question from Q. 2 to Q. 4 can have any one of the following patterns ○ Pattern 1: Two sub-questions of 5 marks each and students shall solve any two sub-questions out of three. ○ Pattern 2: Two sub-questions of 10 marks each and students shall solve any one sub-question out of two. Note: Question no. 2 may have pattern 1 and question no. 3 may have pattern 2. Meaning it is not necessary that all questions from 2 to 4 have the same pattern. • There shall be no multiple-choice questions

3.4 Passing criteria

Student shall be declared successful in the course, provided he/she earns at least 40% marks out of total marks assigned to the course.

At the end of the semester, upon successful completion of the courses, i.e. passing the examination/s with the required percent of marks, the student earns credits as defined for the courses.

3.5 Grace marks

3.5.1 Grace marks for MU_R-2019 students

An Examinee shall be given benefit of 4 marks for passing each head of passing i.e. Theory/ Practical/ Oral/ project in following manner;

Total marks for head of passing	Maximum number of grace marks
More than 100	4
100	3
075	2
Up to 50	1

Provided that, sum of grace marks given shall not exceed 1% of aggregate marks of respective examination. (0.5042 ordinance of University of Mumbai)

Notwithstanding what is stated above, when student is attempting whole examination, and has failed in only one head of passing, to enable passing, he/she may be given grace mark up to 1% aggregate marks of respective examination or 10% of total marks of head of passing whichever is less. (0.5045 ordinance of University of Mumbai)

Benefit of grace mark shall be applicable only if the candidate passes the entire examination.

3.5.2 Grace marks for VIT_R-2022 students

Examiner Resolution Grace Marks: An Examinee shall be given benefit of 4 marks for passing each head of passing i.e. Theory/ Practical/ Oral/ project in following manner;

Total marks for head of passing	Maximum number of grace marks
More than 100	4
100	3
075	2
Up to 50	1

3.6 Evaluation and transparency

For the sake of transparency, assessed answer books of MSE are made available to students in the classroom. Students can go through the answer books and discuss & resolve their grievances, if any, with respective teachers. For ESE, this activity is done as "Open Day" activity. Grievances related to assessment of ESE answer books, if any, are handled in this activity. Any change in marks shall be incorporated on final approval by the Principal. Students wishing to participate in Open Day shall register for the same.

3.7 Result, Letter Grade and Grade Point Allocation

Result is prepared based on marks obtained in each head of passing by student. Refer following table for a letter Grade awarded against based on the percentage of marks obtained.

The letter grades indicate a qualitative assessment of the candidate's performance and carry a quantitative (numeric) equivalent called the Grade Point (GP).

Percentage of Marks Obtained	Letter Grade	Grade Points	Performance
80.00 and above	O	10	Outstanding
75.00 - 79.99	A	9	Excellent
70.00 - 74.99	B	8	Very Good
60.00 - 69.99	C	7	Good
50.00 - 59.99	D	6	Fair
45.00 - 49.99	E	5	Average
40.00 - 44.99	P	4	Pass
Less than 40.00	F	0	Fail

Result is declared in terms of Semester Grade Performance Average (SGPA) considering credits (C) taken and Grade Points obtained in courses taken in the semester.

Semester Grade Performance Average (SGPA) = $\frac{\sum(GPxC)}{\sum C}$

Cumulative Grade Performance Average (CGPA) is calculated by considering credits (C) taken and Grade Points obtained in courses taken in all the semesters.

Detailed information about these terms is appended to this document.

3.8 Repeat Examination

Students who fail to obtain 40% marks in the course assessment, shall appear for Repeat Examination (RE) by paying requisite fee as decided by the Principal. Students aspiring for improvement in their result are also eligible for RE.

Repeat Examination details as below are for the courses in which the ISA, MSE and ESE pattern as mentioned in 2.1 is adopted by the faculty:

- RE shall be conducted two weeks after declaration of results.
- RE shall be conducted only for 'theory' head of passing of all courses.
- RE shall consist of two components, MSE^{RA} & ESE^{RA}. Student can answer anyone or both components.
- RE shall be conducted with paper pattern and marks same as MSE & ESE.
- Marks obtained in MSE^{RA} & ESE^{RA} are compared with marks obtained in MSE & ESE of respective course. Higher of two marks in respective component shall considered for final result.
- Student who now obtains 40% marks in ISA+MSE+ESE^{RA} or ISA+MSE^{RA}+ESE or ISA+MSE^{RA}+ESE^{RA} is declared as Pass in respective course.

However, if faculty adopts their own revised assessment methodology for their course, then the guidelines for the Repeat Examination for that course shall be decided by the respective faculty and the same shall be disseminated to the students before the commencement of the semester.

3.9 Performance Card

3.9.1 Performance Card for MU_R-2019 students

On declaration of result, student shall receive Performance Card indicating his/her performance in the courses registered for the semester in terms of Grades and Grade Points. Performance card shall also indicate credits earned during the current semester for the programme and corresponding Semester Grade Point Average (SGPA).

Additionally, if applicable, Performance Card shall also include the following:

- Student's performance in terms of Grade for courses credited by the student during the semester, which are over and above his/ her programme requirement (ALC).
- Courses successfully completed by the student under his/ her opted Honours / Minor degree.
- Courses Audited by the student during the current semester.
- Extension activities organized/participated by the student during the current semester.
- Significant co-curricular / extra-curricular achievements of the student during the semester.

Refer Appendix-A1 for sample Performance Card for MU_R-2019 students.

3.9.2 Performance Card for VIT_R-2022 students

On declaration of result, student shall receive Performance Card indicating his/her performance in the courses registered for the semester in terms of Grades and Grade Points. Performance card shall also indicate credits earned during the current semester for the programme, cumulative credits earned till the current semester for the programme and corresponding Cumulative Grade Point Average (CGPA).

Additionally, if applicable, Performance Card will indicate the following:

- Student's performance in terms of Grade for courses credited by the student during the semester, which are over and above his/ her programme requirement (ALC).
- Courses successfully completed by the student under his/ her opted Honours / Minor degree.
- Courses Audited by the student during the current semester.
- Extension activities organized/participated by the student during the current semester.
- Significant co-curricular / extra-curricular achievements of the student during the semester.

Refer Appendix-A2 for sample Performance Card for VIT_R-2022 students.

3.10 Re-registration for courses for VIT_R-2022 students

If the final result of the student is failed (F grade) in a course/(s), she/he needs to re-register for that /those course/(s) whenever it is offered (in any semester and /or during summer / winter breaks), if it is mandatory requirement for the award of the degree.

Students intending to improve their grades for any course need to re-register for the course whenever it is offered (in any semester and /or during summer / winter breaks). Better grades shall be considered towards the calculation of CGPA. Such re-registrations are subject to approval by the respective faculty and Head of parent department of the course.

Re-registration shall not be applicable to students admitted prior to the implementation of autonomy (under the R-2019 Scheme of the University of Mumbai). Such students shall be required to appear only for the End Semester KT examinations in the courses they have failed. The previously secured marks in ISA and MSE shall be retained and combined with the End Semester KT examination result for the final declaration of the said course result.

3.11 Eligibility for admission to higher semesters and years

3.11.1 MU_R-2019 students: Student who has been admitted to First Year of the program and completed the minimum required credits as prescribed by the respective program to the satisfaction of the Principal will be eligible for Second year of the program.

Student who has completed the required credits as prescribed by the respective program of Second Year to the satisfaction of the Principal and has passed all the mandatory subjects and credits of First Year of the program and failed in less than nine heads of passing (taking semester III and IV combined) shall be eligible for admission to Third Year of the program.
Student who has completed the required credits as prescribed by the respective program of Third Year to the satisfaction of the Principal and has passed all the mandatory subjects and credits of First and Second Year of the program and failed in less than nine heads of passing (taking semester V and VI combined) shall be eligible for admission to Forth Year of the program.

3.11.2 VIT_R-2022 students: Students are eligible for admission in the subsequent years irrespective of their credits earned.

3.12 Award of degree

At the end of eighth semester, student who successfully completes all the courses and accumulates the required number of credits for the award of B.Tech. Degree of the respective programme shall be awarded with the degree designated as "B.Tech. in .....(regular) Engineering" by the University of Mumbai.

The students successfully completing the credit requirements for the Honours /Minor degree shall be awarded with the degree designated as "B.Tech. in .....(regular) Engineering with Honours / Minor in .....(specialisation)" by the University of Mumbai.

The students successfully completing all the professional elective courses from a chosen track will be eligible to receive Specialization Certificate from the Institute. There shall be no time limit to complete credits required for award of degree.

3.13 Rules regarding special provisions for challenged students

All the provisions, provided in relevant Government Resolutions and University circulars shall be followed in this respect.

Appendix A1
Performance Card for MU_R-2019 students

VIT Vidyalankar Institute of Technology

(Affiliated to University of Mumbai)

Performance Card

Name	**Pradip Shankar Radha Desai**	Roll No.	22102A0015
Examination	Second Year Computer Engineering (Semester 3) held in December 2022 (Syllabus – 2022)	Exam Seat No.	1232

Course code	Course name	Head of Teaching	Credits	Grade
CO01	Computer Programming Fundamentals	Theory	3	A
CO01T	Computer Programming	Practical	1	B
CO03			4	A
IN22			4	F
GE01			1	B

Credits earned 09 SGPA x.xx

Additional Courses towards Honours/ Minors, ALC and Audit

Course code	Course name	Head of Teaching	Credits	Grade	Credit Towards
HS302	Mathematics for Data Science	Theory	3	A	Honours
ET046	Sensor Technology	Theory	2	A	ALC
LE05	Indian Classical Music Appreciation	Theory	Audit	-	-

Co-curricular and Extra Curricular achievements and participation/ recognitions in Extension activities during the semester:

1 Winner at SIH-2022 – Project titled "Low cost design of drone for photography"
2 NSS - Participated in teaching activity for poor and deprived students.

Date : 28th Dec 2022

VIDYALANKAR INSTITUTE OF TECHNOLOGY, WADALA, MUMBAI-37. VIT Vidyalankar Institute of Technology

Principal

Appendix A2
Performance Card for VIT_R-2022 students

VIT | Vidyalankar Institute of Technology

(Affiliated to University of Mumbai)

Performance Card

Name **Pradip Shankar Radha Desai** Roll No. 22102A0015
Examination Second Year Computer Engineering (Semester 3) held in December 2022 (Syllabus – 2022) Exam Seat No. 1232

Subject code	Subject name	Head of Teaching	Credits	Grade
CO01	Computer Programming Fundamentals	Theory	3	A
CO01T	Computer Programming	Practical	1	B
CO03			4	A
IN22			4	F
GE01			1	B

Cumulative credits earned 32 CGPA x.xx

Additional Courses towards Honours/ Minors, ALC and Audit

Course code	Course name	Head of Teaching	Credits	Grade	Credit Towards
IT102	Android Programming	Practical	2	B	Minors
ET046	Sensor Technology	Theory	2	A	ALC
LE05	Indian Classical Music Appreciation	Theory	Audit	-	-

Co-curricular and Extra Curricular achievements and participation/ recognitions in Extension activities during the semester:

1 Winner at SIH-2022 – Project titled "Low cost design of drone for photography"
2 NSS - Participated in teaching activity for poor and deprived students.

Date : 28th Dec 2022

Principal