VIT Vidyalankar Institute of Technology
Accredited A+ by NAAC

Information, Rules and Regulations for Undergraduate Courses

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Vidyalankar Institute of Technology
Wadala, Mumbai 400037

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 learners 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 CGPI 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: 01st July 2024

Principal

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Introduction to Autonomy

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.*
>
> *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, learner-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 learners; and make education more well-rounded, useful, and fulfilling to the learner. Education must build character, enable learners 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 "Life Enrichment" and "Knowledge Inspiring" categories.

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 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 to make it more robust and enriched to suit 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.

1. Curriculum scheme

1.1 Programme Structure and Credit Scheme

Programme Structure:

The curriculum scheme gives overview of academic activities in a semester. Every Department has a prescribed programme structure which, in general terms, is known as the Curriculum or the Courses of Study. It prescribes all the courses / labs / other requirements for the award of degree and sets out the formal sequence semester wise. It also gives the syllabus for each course. The details of Courses of Study are updated every semester and are made available at institute Website.

Credit Scheme:

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. A student's performance/progress is measured by the number of credits that he/she has earned, i.e., completed satisfactorily. Based on the course credits and grades obtained by the student, grade point average is calculated. A minimum number of earned credits and a minimum grade point average should be acquired in order to qualify for the award of degree. All Programs are defined by the total credit requirement and a pattern of credit distribution over courses of different categories.

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
30 Hrs. of Internship/ OJT per semester	1 credit

1.2 Course Category and Descriptions

Sr. No.	Category Abbreviation	Category Name	Description
1	BS or BESC_BSC	Basic Science courses	Courses like Physics, Chemistry and Maths. These courses are covered during Sem-1 to Sem-4
2	ES or BESC_ESC	Engineering Science courses	Courses which are allied to the program 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 or PC_PCC	Core courses	These courses are most relevant to the respective programme and hence called core courses.
4	PE or PC_PEC	Professional Elective courses	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.

Sr. No.	Category Abbreviation	Category Name	Description
			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	OE or MDC_OE	Open Elective courses	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	PI	Project and Internship	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	HSS	Humanities and Social Sciences including Management courses	These courses help student for building soft skills, character building with professional ethics.
8	GE	General Education including Life Enrichment courses	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. Details of Life Enrichment courses are given below.
9	HSSM_AEC	Ability Enhancement Course	To be offered in first and second year. It consists of courses on English and Modern Indian Language
10	HSSM_EEMC	Entrepreneurship/ Economics/ Management Course	Courses on Entrepreneurship, Economics and Management
11	HSSM_IKS	Indian Knowledge System	To be offered in First year. The courses Indian knowledge system
12	HSSM_VEC	Value Education Course	Value education courses such as Understanding India, Environmental Science/Education and digital and technological solutions
13	MDC_MDM	Multidisciplinary Minor Courses	A multidisciplinary minor course is an academic program that allows students to explore a specific theme or topic from the perspectives of multiple disciplines. This type of minor typically combines coursework from various departments or fields of

Sr. No.	Category Abbreviation	Category Name	Description
			study, encouraging students to think broadly and integrate knowledge from different areas.
14	SC_VSEC	Vocational and Skill Enhancement Course	This includes Vocational Skill courses which consists of hands on training corresponding Major and/or Minor courses
15	ELC_RM	Research Methodology	Course on Research Methodology
16	ELC_CEPFP	Community Engagement Project/ Field Project	Community Engagement Projects/ Field Projects includes community services to be performed by learner in Second Year
17	ELC_PRJ	Project	These courses are available at the Department level. Student shall undertake mini and major projects in their domain of Major.
18	ELC_IOJT	Internship/ On Job Training	Student shall undergo internship program in Core industry. This facilitates industry exposure and helps student gaining latest technical skillset.
19	LLC_CC	Co-curricular Course	Co-curricular Courses such as Health and wellness, Yoga education, sports and fitness, cultural activities, performing arts

Courses in the right proportion with a mix of all these categories make up a curriculum for 4 years (8 semester) UG Programme.

1.3 Course Category & 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 for the award of the degree. Students shall undergo 6-7 courses in various subject domains in each semester. To achieve holistic development of students, courses are designed in various domains KSA.

A typical KSA components mapping with category of courses of the 8 baskets of Autonomy Curriculum and respective credits is shown below. Actual % for different courses may vary marginally.

R-2022 Curriculum	**Competency**								**Total**
	Knowledge			**Skills**			**Attitude**		
Percentage	~50 %			~30 %			~20 %		**100%**
Course Category	BESC_BSC	ES	Core	PE	OE	PI	HSS	GE	**8 baskets**
Credit	20	15	46	18	15	16	14	16	**160**

A typical KSA components mapping with Verticals and Sub-Verticals as defined under NEP and corresponding credit distribution is shown below. Actual % for different courses may vary marginally.

R-2023 Curriculum and onwards	Competency													Total
	Knowledge				Skills						Attitude			
Percentage	~52%				~34%						~14%			100%
Course Category	BESC_BSC	BESC_ESC	PC_PCC	MDC_MDM	PC_PEC	MDC_OE	SC_VSEC	ELC_RM	ELC_PRJ	ELC_IOJT	HSSM	ELC_CEPFP	LLC_CC	7 Verticals with 16 Sub_Verticals
Credit	14	12	44	14	18	8	8	3	6	12	14	3	4	160

1.4 A typical programme structure and credit distribution as per NEP guidelines (Applicable to First Year students admitted in A.Y. 2023-24 and onwards. Also, Lateral entry/ Multi Entry students admitted in A.Y. 2024-25 and onwards)

The curriculum of VIT has a vertical titled **Program Courses** comprising Program Core Courses (PCC) and Professional Elective Courses (PEC). Program Core Courses (PCC) of branch of engineering are positioned and sequenced to achieve sequential and integral learning of the entire breadth of the specific branch. Professional Elective Courses (PEC) offer flexibility and diversity to learners to choose specialization from a basket of recent developments in their field of technology. The selection of unique professional elective courses based on industrial requirements and organizing them into tracks is a special feature of this curricula ensuring employability.

The vertical **Multidisciplinary Courses** consists of Open Elective (OE) courses and Multidisciplinary Minor (MDM) courses. Special vocational and skill development courses are included as a part of **Skill courses** vertical that make student capable to work in industrial environment.

Internships/ on-the-job training, community engagement projects, industry projects, and research problems that fall under the **Experiential Learning** vertical are all essential to demonstrate the student's technical skill set. Additionally, our curriculum offers courses like Design Thinking, credit transfer from reputable organizations, and social service internships.

In addition to technical courses, courses in Indian Knowledge System, Entrepreneurship/Economics/Management, Ability Enhancement, and Value Education from the vertical **Humanities, Social Science, and Management** help students develop the necessary soft skills and attitude for overall growth.

In **Liberal Learning** vertical, courses like Various Dance Forms, Global citizenship Education, Facets of Astronomy etc. aims to create balance in brain hemispheres and hence improve learners' clarity in thoughts and responses.

A typical mapping of NEP Verticals and Sub-Verticals with respective credits is shown below. Actual % for different courses may vary marginally.

Sr. No.	Verticals	Sub-Verticals	Credits
1.	Basic and Engineering Science Courses	Basic Science (BESC_BSC)	14
2.		Engineering Science (BESC_ESC)	12
3.	Program Courses	Programme Core Course (PC_PCC)	44
4.		Programme Elective Course (PC_PEC)	18
5.	Multidisciplinary Courses	Multidisciplinary Minor (MDC_MDM)	14
6.		Open Elective (MDC_OE)	08
7.	Skill Courses	Vocational and Skill Enhancement Course (SC_VSEC)	08
8.	Humanities Social Science and Management	Ability Enhancement Course (HSSM_AEC)	04
9.		Entrepreneurship/ Economics/ Management Course (HSSM_EEMC)	04
10.		Indian Knowledge System (HSSM_IKS)	02
11.		Value Education Course (HSSM_VEC)	04
12.	Experiential Learning Courses	Research Methodology (ELC_RM)	03
13.		Comm. Engg. Project / Field Project (ELC_CEPFP)	03
14.		Project (ELC_PRJ)	06
15.		Internship/ OJT (ELC_IOJT)	12
16.	Liberal Learning Courses	Co-Curricular Courses (LLC_CC)	04
		Total	**160**

1.5 Award of Degree

On successful completion of prescribed requirements for a programme, degree will be conferred on a student in an annual convocation of the University of Mumbai.

Maximum limit (in number of years) to complete credits required for award of degree will be as per guidelines issued by UoM from time to time.

Award of UG Engineering Degree (Applicable to First Year students admitted in A.Y. 2022-23 and Lateral entry (DSY) students admitted in A.Y. 2023-24)

Student who completes minimum specified credits shall be eligible for award of BTech degree. BTech with Honours or Minor shall be awarded to student who completes additional credits required for Honours or Minor.

BTech with Honors or BTech with Minor:

An Honors or Minor degree typically refers to a higher level of academic achievement either for research orientation or for improving employability by opting the additional courses totaling 20 credits.

A student can do B.Tech. degree in the chosen field as per the career goal, and optionally enroll for a Honors/ Minor to enhance the depth of knowledge, diversity, breadth and skills in the field. Students can select specialization stream for an Honors or Minor degree as per his/her choice.

For Honours degree, student shall select specialisations offered by own department. Alternatively, for Minor, student shall opt specialisations/courses available from the other department. Student shall opt for Honours or Minor specialisations from semester 5.
Basic eligibility for opting for Honours/Minor shall be as specified in the Honours/ Minor Degree Programme document of their curriculum.

Typical credit structure for Honors/ Minor Degree is shown below.

Sr. No.	Category	Credits
1	Course Work	9
2	Industrial Interaction and Survey Paper	3
3	Seminar	1
4	Capstone Project -Part 1	3
5	Capstone Project -Part 2	4
	Total	20

Provision for Lateral Entry as per AICTE:

Eligibility for lateral admission to 2nd year shall be governed by the rules specified time to time by AICTE, New Delhi, Directorate of Technical Education, MS and other regulatory bodies.

Depending on courses he/she has undergone in his/her prior curriculum, after due mapping of courses of prevailing syllabus, he/she may need to undergo bridge courses as specified by the Principal. Courses/ Credits under a course category exempted for such students would be as stated in the Program Structure document of the curriculum of respective department.

Award of UG Engineering Degree (Applicable to First Year students admitted in A.Y. 2023-24 and onwards. Also, Lateral entry/ Multi Entry students admitted in A.Y. 2024-25 and onwards)

For UG degree, there are four options for students to choose from. Nomenclatures for various degree and their typical credit requirements are as follows:

Level	Sublevel	Name of Degree	Duration	Semesters	Credits
UG	6.0	B.Tech. in Engg with Multidisciplinary Minor	4	8	160
	6.0	B.Tech. in Engg – Honors and Multidisciplinary Minor	4	8	180
	6.0	B.Tech. in Engg – Honors with Research and Multidisciplinary Minor	4	8	180
	6.0	B.Tech. in Engg – Major Engg Discipline with Double Minors (Multidisciplinary and Specialization Minors)	4	8	180

BTech with Honors and Multidisciplinary Minor or BTech with Double Minor (Multidisciplinary and Specialization):

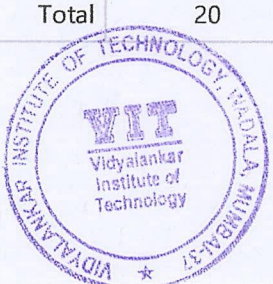
An Honors or Minor degree typically refers to a higher level of academic achievement either for research orientation or for improving employability by opting the additional courses totaling 20 credits.

A student can do B.Tech. degree in the chosen field as per the career goal, and optionally enroll for a Honors/ Specialization Minor to enhance the depth of knowledge, diversity, breadth and skills in the field. Students can select specialization stream for an Honors or Specialization Minor degree as per his/her choice.

For Honours degree, student shall select specialisations offered by own department. Alternatively, for Specialization Minor, student shall opt specialisations/courses available from the other department. Student shall opt for Honours or Specialization Minor from semester 5.
Basic eligibility for opting for Honours/ Specialization Minor shall be as specified in the Honours/ Specialization Minor Degree Programme document of their curriculum.

Typical credit structure for Honors/ Specialization Minor Degree is shown below.

Sr. No.	Category	Credits
1	Course Work	9
2	Industrial Interaction and Survey Paper	3
3	Seminar	1
4	Capstone Project -Part 1	3
5	Capstone Project -Part 2	4
	Total	20



Multi exit provision: Intermediate exit degree as per National Educational Policy

VIT autonomy curriculum is in alignment with NEP 2020. Students may enter a program in odd semesters and exit after successfully completing even semesters. Exit options are provided with Certification, Diploma, and B. Voc. degrees at the end of the second, fourth, and sixth semesters, respectively, in the four-year degree programme. Nomenclature for exit degree options and their typical credit requirements are as follows:

Level	Sublevel	Name of Degree	Duration	Semesters	Credits
UG	4.5	One Year UG Certificate in Engg	1	2	40
	5.0	Two Years UG Diploma in Engg	2	4	80
	5.5	Three Years Bachelor's Degree in Vocation (B.Voc.) or B.Sc. (Engg)	3	6	120

Provision for Lateral Entry as per AICTE and Multi Entry as per NEP:

Lateral admission to 2nd year

Eligibility for lateral admission to 2nd year shall be governed by the rules specified time to time by AICTE, New Delhi, Directorate of Technical Education, MS and other regulatory bodies.

Depending on courses he/she has undergone in his/her prior curriculum, after due mapping of courses of prevailing syllabus, he/she may need to undergo bridge courses as specified by the Principal. Courses/ Credits under a course category exempted for such students would be as stated in the Program Structure document of the curriculum of respective department.

Intermediate Entry:

Eligibility for admission to the programme through Multi Entry provision shall be granted as per the guidelines of NEP as applicable at the time of admission. Depending on courses he/she has undergone in his/her prior curriculum, after due mapping of courses of prevailing syllabus, he/she may need to undergo bridge courses as specified by the committee appointed by the Principal.

2. Evaluation

Assessment is integral part of education. To make it very meaningful, the syllabus considers continuous assessment methodology. This provides learner with a greater number of opportunities to prove their ability and makes teacher know the pace & depth of understanding among students. This makes teaching-learning process more inclusive and effective.
The syllabus considers the following three modes of assessment.

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

2.1 Evaluation of Theory Courses (Compulsory/Elective)

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

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. • Student is required to complete the ISA activities for the grant of term.
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 weekly. 2 MSE's will be conducted per course throughout the semester. Average of marks obtained in 2 MSE's shall be considered as final marks. • Only one MSE will be conducted for the courses from the Open Elective, Multidisciplinary, Honors, Minors category • For the HSSM, LLC_CC category course the conduction of MSE will be decided as per course.
End Semester Examination (ESE)	At end of the semester an ESE will be conducted • ESE shall be a paper-based assessment. 100% syllabus covered in the class shall be considered for ESE. • ESE shall be conducted at the end of the semester as per Academic calendar.

The general weightage of ISA, MSE and ESE for Theory courses are 20%, 30% and 50% respectively.

For example,

Head of Learning	Credits	Break up of Total Marks			Total Marks
		ISA	MSE	ESE	
Theory	4	25	40	60	125
Theory	3	20	30	50	100
Theory	2	15	20	40	75

The exact weightage of each component for a course will be as stated in the Scheme and Syllabus document of the curriculum.

2.2 Evaluation of Laboratory Courses

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

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. • Student is required to complete the ISA activities for the grant of term
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

The general weightage of ISA and ESE for Practical courses are 50% and 50% respectively. The exact weightage of each component for a course will be as stated in the Scheme and Syllabus document of the curriculum.

2.3 Evaluation of 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.

The general weightage of ISA and ESE for Practical courses are 50% and 50% respectively. The exact weightage of each component for a course will be as stated in the Scheme and Syllabus document of the curriculum.

3. Examination

3.1 Criteria to earn credits

Student shall be declared successful in the course provided,

- He/ She earns at least 40% marks out of total marks (ISA+MSE+ESE taken together) assigned to the course.
- He/ She fulfils at least 75% attendance at coursework of the course.
- He/ She completes the ISA activities of all the courses of semester to the satisfaction of the Principal.

If student fails to fulfil above criteria, his/her appearance and result of ISA, MSE and ESE of the course shall be considered as null and void.

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.

The results of courses completed during the inter-semester break will appear in the marksheet of the next semester.

3.2 Grace marks

01: An Examinee shall be given benefit of below mentioned marks for each head of passing i.e. Theory/ Practical/ Oral/ Project/ etc.;

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.

02: 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. Benefit of grace mark shall be applicable only if the candidate passes the entire examination. (applicable to UG students pursuing B.E. as per R-2019 C-Scheme of UoM)

3.3 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 Index (SGPI) considering credits (C) taken and Grade Points obtained in courses taken in the semester.

Semester Grade Performance Index (SGPI) = $\frac{\Sigma(GPxC)}{\Sigma C}$

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

Note: Refer Appendix A (appended to the end of the document) to understand how SGPI and CGPI is calculated.

ABC and Credit Transfer

Enrolment of Students on ABC (Academic Bank of Credits): Every student at VIT is required to possess a unique student identity known as the Automated Permanent Academic Account Registry (APAAR). APAAR also serves as a gateway to Digi locker, a digital platform enabling students to securely store essential documents and achievements, such as exam results and report cards.

Furthermore, students are granted the opportunity for multi-institutional learning, allowing them to earn credits from other Institutes with whom VIT has signed Memorandums of Understanding (MoUs) or has collaborated for credit transfer.

Statement of Marks and Grade

On declaration of result, student shall receive statement indicating his/her performance in the semester in terms of Grades and Grade Points.

The grade card shall indicate the course grades, C X G (Credits*Grade Points), SGPI and CGPI.

Note: Sample Mark sheets/ Grade Card are appended to the document in Appendix B

3.4 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"**. Grievances related to assessment of ESE answer books, if any, are handled in this activity. Any change in marks shall be reflected in final grade card on approval by the Principal.

3.5 Repeat Examination

Students who fail to obtain 40% marks in ISA+MSE+ESE taken together, shall appear repeat assessment (RA). Students aspiring for improvement in their result are also eligible for RA.

Repeat Assessment details are as below:

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

If student fails to pass even after appearing RA, he/she needs to re-register for the courses.

3.6 Re-registration for courses

Reregistration of courses shall be applicable for students admitted under Autonomy (A.Y. 2022-23 onwards). All assessment heads are considered for passing of the course (ISA+MSE+ESE). Student can appear for a repeat examination, once, immediately after the regular examination. If candidate fail in repeat examination or fails to appear the repeat examination, then candidate must re-register for the course. Candidate must appear for all the heads, i.e., ISA, MSE and ESE in the next semester. ISA can be taken care in 2-3 weeks with the help of faculty.

A candidate can typically reregister a course from -1 or -2 semester (As per provision made time to time) which he/she has previously registered for but did not pass or want to improve grade.

For students admitted prior to the implementation of autonomy (R-2019 Scheme of the University of Mumbai), re-registration shall not be applicable. The marks secured earlier in the Internal Semester Assessment (ISA) and Mid-Semester Examination (MSE) shall be retained. Such students shall appear only for the End Semester KT Examination conducted in the current semester. The marks obtained in this KT Examination shall be combined with the previously secured ISA and MSE marks for the final declaration of the course result.

3.7 Rules regarding special provisions for challenged learners

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

4. Scholarship / Freeship / EBC Scheme

Department	Name of the scheme	Category	Government/Non-government	Name of the individual/ organisation	Income Limit	Fees Paid by Student	Fees by Govt. to Institute Bank A/C	Reimbursement directly by Govt.to Student bank a/c
Social Justice And Special Assistance Departme nt	Government of India Post-Matric Scholarship	SC/Scholarsh ip	Governm ent	State Governm ent Maharas htra	Upto Rs.2,50,00 0/-	No Fees	Full Tuition Fees + Developme nt Fees	Maintainanc e allowance
	Post-Matric Tuition Fee and Examination Fee (Freeship)	SC/Freeship	Governm ent	State Governm ent Maharas htra	Above Rs.2,50,00 0/-	No Fees	Full Tuition Fees + Developme nt Fees	-
Tribal Developm ent Departme nt	Post Matric Scholarship Scheme (Government Of India)	ST/Scholarsh ip	Governm ent	State Governm ent Maharas htra	Upto Rs.,250,00 0/-	No Fees	Full Tuition Fees + Developme nt Fees	Maintainanc e allowance
	Vocational Education Fee Reimburseme nt	ST/Freeship	Governm ent	State Governm ent Maharas htra	Above Rs.2,50,00 0/-	No Fees	Full Tuition Fees + Developme nt Fees	-
VJNT,OBC & SBC Welfare Departme nt	Post Matric Scholarship to VJNT Students	VJ-NT/Scholars hip	Governm ent	State Governm ent Maharas htra	Upto Rs. 1,50,000/ -	Development Fees	Full Tuition Fees	Maintainanc e allowance
	Tuition Fees and Examination Fees to VJNT Students	VJ-NT/Freeship	Governm ent	State Governm ent Maharas htra	Rs.1,50,00 0/- To Rs.8,00,00 0/-	Development Fees	Full Tuition Fees	-
	Post Matric Scholarship to SBC Students	SBC/Scholars hip	Governm ent	State Governm ent Maharas htra	Upto Rs.1,50,00 0/-	Development Fees	Full Tuition Fees	Maintainanc e allowance
	Tuition Fees and Examination Fees to SBC Students	SBC/Freeshi p	Governm ent	State Governm ent Maharas htra	Rs.1,50,00 0/- To Rs.8,00,00 0/-	Development Fees	Full Tuition Fees	-
	Post Matric Scholarship to OBC Students	OBC/Scholar ship	Governm ent	State Governm ent Maharas htra	Upto Rs.1,50,00 0/-	Half of Tution Fees+Develop ment Fees (100% Tution Fee waiver to female students)	Half of Tuition Fees (100% Tution Fee waiver to female students)	Maintainanc e allowance

Department	Name of the scheme	Category	Government/Non-government	Name of the individual/ organisation	Income Limit	Fees Paid by Student	Fees by Govt. to Institute Bank A/C	Reimbursement directly by Govt.to Student bank a/c
	Tuition Fees and Examination Fees to OBC Students	OBC/Freeship	Government	State Government Maharashtra	Rs.1,50,000/- To Rs.8,00,000/-	Half of Tution Fees+Development Fees (100% Tution Fee waiver to female students)	Half of Tuition Fees (100% Tution Fee waiver to female students)	-
Directorate of Technical Education	Rajarshi Chhatrapati Shahu Maharaj Shikshan Shulkh Shishyavrutti Yojna (EBC)	EBC	Government	State Government Maharashtra	Upto Rs.8,00,000/-	Full Fees (Open),Half of Total Fees (SEBC and EWS) (100% Tution Fee waiver to female students)	Half of Tuition Fees (EWS/SEBC) (100% Tution Fee waiver to female students)	Half of Tuition Fees (Open-if paid full fees)
	DrPunjabrao Deshmukh Vastigruh Nirvah Bhatta Yojna(DTE)	Open/EWS	Government	State Government Maharashtra	Upto Rs.8,00,000/-	Full Fees (Open),Half of Total Fees (SEBC and EWS)	-	Rs.10,000/- (Hostel) / Rs.30,000/- (Alpabhudharak Shetkari)
	Scholarship for students of minority communities pursuing Higher and Professional courses(DTE)	Open Minority	Government	State Government Maharashtra	Upto Rs.8,00,000/-	Full Fees (Open),	-	Rs.50,000/-

Appendix A

Calculation of SGPI & CGPI

Results are denoted as Semester Grade Performance Index (SGPI) & Cumulative Grade Performance Index (CGPI). At the end of every semester SGPI of that semester and CGPI i.e. cumulative grade Performance Index till that semester is calculated. SGPI and CGPI are based on credits & grade points.

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

From the table shown above, grade & grade points are obtained based on % marks obtained in each head of passing. GPxC is then calculated for each subject. Then, SGPI is calculated using total number of credits for the semester and GPxC taken together for all the subjects.

Consider a sample case, these calculations are illustrated below:

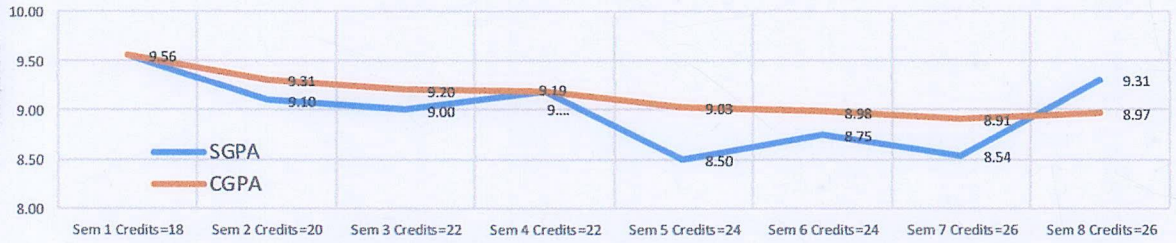
Subject	Credits (C)	Marks	% of Marks	Grade	Grade Points (GP)	GPxC
Sub1	3	79/100	79	A	09	27
Sub11	1	19/25	76	A	09	09
Sub2	2	60/75	80	O	10	20
Sub21	0.5	20/25	80	O	10	05
Sub3	2	68/70	97	O	10	20
Sub31	0.5	22/25	88	O	10	05
Sub4	3	82/100	82	O	10	30
Sub41	1	20/25	80	O	10	10
Sub5	3	77/100	77	A	09	27
Sub51	1	19/25	76	A	09	09
Sub6	1	42/50	84	O	10	10
Total	18					172

Semester Grade Performance Index (SGPI) = $\frac{\sum(GPxC)}{\sum C}$ = 172/18 = 9.56

As one progresses, one can calculate Cumulative Grade Performance Index (CGPI) = $\frac{\sum(GPxC)}{\sum C}$; by considering subjects grades, GP & credits of all the subjects, till the current point.
Following table shows SGPI and CGPI at various stages.

	Sem 1	Sem 2	Sem 3	Sem 4	Sem 5	Sem 6	Sem 7	Sem 8
Credits (C)	18	20	22	22	24	24	26	26
Grade Point GPxC	172	182	198	202	204	210	222	242
SGPI	9.56	9.10	9.00	9.18	8.50	8.75	8.54	9.31
CGPI = $\frac{\Sigma(GPxC)}{\Sigma C}$	172/18 = 9.56	354/38 = 9.31	552/60 = 9.20	754/82= 9.19	958/106 = 9.03	1168/130 = 8.98	1390/156= 8.91	1632/182 = 8.97

Credits shown are for representation purpose only and may differ from actual numbers in the syllabus.



Note :
1. Every subject-grade plays important role in SGPI. SGPI of each semester plays significant role in final CGPI
2. Subjects having more credits have more influence on SGPI
3. Failure in the subject/year drop does not affect final CGPI

Appendix B

Sample Grade Card of Passed Candidate

PROFORMA OF MARKSHEET FOR S.E. (SEM- III) (CBCGS-C SCHEME)

COLLEGE NAME:

ADDRESS:

GRADE CARD

NAME: PRANAV PATIL

EXAMINATION: SECOND YEAR IN ENGINEERING (SEMESTER-III) (CHOICE BASE)

BRANCH: INFORMATION TECHNOLOGY

HELD IN: NOVEMBER 2022

SEAT NUMBER: 130101 PRN NO: 21101A0029

COURSE CODE	COURSE TITLE	COURSE CREDITS		GRADE POINT EQUIVALENT	CREDIT EARNED (C)	GRADE POINT (G)	C X G
		Head	Credit				
ITC301	ENGINEERING MATHEMATICS-III	THEORY	4	O	4	10	40
ITC302	DATA STRUCTURE AND ANALYSIS	THEORY	3	O	3	10	30
ITC303	DATABASE MANAGEMENT SYSTEM	THEORY	3	B	3	8	24
ITC304	PRINCIPLE OF COMMUNICATION	THEORY	3	A	3	9	27
ITC305	PARADIGMS AND COMPUTER PROGRAMMING FUNDAMENTAL	THEORY	3	A	3	9	27
ITL301	DATA STRUCTURE LAB	LAB	1	B	1	8	8
ITL302	SQL LAB	LAB	1	A	1	9	9
ITL303	COMPUTER PROGRAMMING PARADIGMS LAB	LAB	1	A	1	9	9
ITL304	JAVA PROGRAMMING LAB	LAB	2	O	2	10	20
ITM301	MINI PROJECT – 1 A	LAB	2	A	2	9	18
TOTAL			**23**	**--**	**23**	**91**	**212**

REMARK: SUCESSFUL	SGPI:9.21	CGPI: 8.56	

RESULT DECLARED ON:

GRADE CARD ISSUED ON:

PRINCIPAL

PTO

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

Sample Grade Card of Candidate passed with grace marks

PROFORMA OF MARKSHEET FOR S.E. (SEM- III) (CBCGS-C SCHEME)

COLLEGE NAME:

ADDRESS:

GRADE CARD

NAME: PRANAV PATIL

EXAMINATION: SECOND YEAR IN ENGINEERING (SEMESTER-III) (CHOICE BASE)

BRANCH: INFORMATION TECHNOLOGY

HELD IN: NOVEMBER 2022

SEAT NUMBER: 130101 PRN NO: 21101A0029

COURSE CODE	COURSE TITLE	COURSE CREDITS		GRADE POINT EQUIVALENT	CREDIT EARNED (C)	GRADE POINT (G)	C X G
		Head	Credit				
ITC301	ENGINEERING MATHEMATICS-III	THEORY	4	O	4	10	40
ITC302	DATA STRUCTURE AND ANALYSIS	THEORY	3	O	3	10	30
ITC303	DATABASE MANAGEMENT SYSTEM	THEORY	3	B	3	8	24
ITC304	PRINCIPLE OF COMMUNICATION	THEORY	3	P	3	4	12
ITC305	PARADIGMS AND COMPUTER PROGRAMMING FUNDAMENTAL	THEORY	3	A	3	9	27
ITL301	DATA STRUCTURE LAB	LAB	1	B	1	8	8
ITL302	SQL LAB	LAB	1	A	1	9	9
ITL303	COMPUTER PROGRAMMING PARADIGMS LAB	LAB	1	A	1	9	9
ITL304	JAVA PROGRAMMING LAB	LAB	2	O	2	10	20
ITM301	MINI PROJECT – 1 A	LAB	2	A	2	9	18
TOTAL			**23**	--	**23**	**86**	**197**

REMARK: SUCESSFUL	SGPI:8.56	CGPI: 9.1	

RESULT DECLARED ON:

GRADE CARD ISSUED ON:

PRINCIPAL

PTO

ITC304 is passed with grace marks.

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Sample Grade Card of Candidate could not clear the credit

PROFORMA OF MARKSHEET FOR S.E. (SEM- III) (CBCGS-C SCHEME)

COLLEGE NAME:

ADDRESS:

GRADE CARD

NAME: PRANAV PATIL

EXAMINATION: SECOND YEAR IN ENGINEERING (SEMESTER-III) (CHOICE BASE)

BRANCH: INFORMATION TECHNOLOGY

HELD IN: NOVEMBER 2022

SEAT NUMBER: 130101 PRN NO: 21101A0029

COURSE CODE	COURSE TITLE	COURSE CREDITS		GRADE POINT EQUIVALENT	CREDIT EARNED (C)	GRADE POINT (G)	C X G
		Head	Credit				
ITC301	ENGINEERING MATHEMATICS-III	THEORY	4	E	4	5	20
ITC302	DATA STRUCTURE AND ANALYSIS	THEORY	3	C	3	7	21
ITC303	DATABASE MANAGEMENT SYSTEM	THEORY	3	F	0	0	0
ITC304	PRINCIPLE OF COMMUNICATION	THEORY	3	F	0	0	0
ITC305	PARADIGMS AND COMPUTER PROGRAMMING FUNDAMENTAL	THEORY	3	C	3	7	21
ITL301	DATA STRUCTURE LAB	LAB	1	B	1	8	8
ITL302	SQL LAB	LAB	1	A	1	9	9
ITL303	COMPUTER PROGRAMMING PARADIGMS LAB	LAB	1	A	1	9	9
ITL304	JAVA PROGRAMMING LAB	LAB	2	O	2	10	20
ITM301	MINI PROJECT – 1 A	LAB	2	A	2	9	18
TOTAL			**23**	**--**	**17**	**64**	**126**

REMARK: -	SGPI: 7.41	CGPI: 8.21	

RESULT DECLARED ON:

GRADE CARD ISSUED ON:

PRINCIPAL

PTO

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