#### Please read this

#### Dear student,

This Student Handbook is intended to provide IIT Madras BS Degree students with the information and policies they should be aware of, which may help them make the most of the opportunities offered in this programme. It also gives you formal notification and explanation of the programme's regulations, policies and procedures.

It is essential, and your responsibility, to read it and familiarize yourself with the content. It should be kept handy and referred to during your time with us.

This handbook may be revised time and again. While this student handbook was prepared on the basis of the best information available at the time of publication, all information, including policies and procedures are subject to change without notice or obligation.

All rules and regulations in this document are approved by our committee. As changes keep getting approved, we will update them here.

We hope that your time as a student in this programme is successful and enjoyable. Thank you.

This document was last updated on June 7, 2024.

#### **Table of Contents**

- A) Data Science & Applications 5
- 1. Highlights of the programme 5
- 2. Flexibility 5
- 3. Courses in the programme 6
- 3.1 Definition of credit in the program 6
- 3.2 Level 1: The Foundation level 6
- 3.3 Level 2: Diploma level 6

Diploma in Programming 6

Diploma in Data Science 6

- 3.4 Level 3: BSc Degree level courses 7
- 3.5 Level 4: BS Degree level courses 7
- 4. Fees for the entire programme 8
- 4.1 For students who are outside India: 10
- 5. Admission to the programme 10
- 5.1 Regular Entry into Foundation level 10
- 5.1.1 Eligibility to Apply for the Qualifier Exam 10
- 5.1.2 Preparation for the Qualifier exam 11
- 5.1.3 Eligibility to appear for the qualifier exam 11
- 5.1.4 Criteria for passing the qualifier exam 12
- 5.1.5 Validity of the qualifier score 12
- 5.1.6 Communication about qualifier exam results 13
- 5.1.7 Second attempt: If a candidate was absent or failed the first attempt of qualifier exam
- 5.1.8 Candidates who did not become eligible for Qualifier exam 13

- 5.1.9 Options to register to courses once qualified 13
- 5.2 JEE-based Entry into Foundation Level 14
- 6. Credit Clearing Capability 14
- 7. Course registration steps involved 15
- 8. Direct Entry into Diploma programme 16
- 8.1 Eligibility to Apply 16
- 8.2 Qualifying Process 16
- Table 1: Department Core/Elective Courses 17
- Table 2: SWAYAM NPTEL Courses Applicable for Department/Free Electives 18
- Table 3: SWAYAM NPTEL courses Applicable under HS/MG category for crediting in the BS level 18
- 9. Credit Transfer 18

Credit Transfer for NPTEL Courses 18

Credit Transfer from courses that are conducted on IITM campus (\*\*This will be in effect from January 2024\*\*) 19

- 10. Learner Life Cycle 20
- 11. Design of certificates for the 4 levels of the program 21
- 11.1 Mark transcripts 25
- 12. Academic aspects 25
- 12.1 Academic calendar 25
- 12.2 Course structure suitable for online delivery 27
- 12.3 Evaluation and grading of courses in every term 27
- 12.4 Pass criteria for each course 28
- 12.5 Repeating a course 29
- 12.5.1 Registering for Courses: Term 2 Onwards 30
- 12.5.2 Repeating a Course WA, WQ, U or I grade 30
- 12.5.3 Repeating a Course for Improvement 30
- 12.5.4 Make Up Exams 30
- 12.6 Dropping a course (This is not applicable for the students who are continuing after qualifier in the same term) 32
- 13. Learning paths available 33
- 13.1 Prerequisite course requirements 34

Foundation courses 34

Diploma level courses 34

- 14. Changes in project grading (wef now) and Eligibility to enter the BSc Level (wef May 2024) 35
- 15. New Rules for Foundation & Diploma Level Completion 37
- 16. Eligibility Criteria Prize 38
- 17. Apprenticeship in the BS level of IIT Madras' BS in Data Science and Applications 39
- 18. Software and Hardware Requirements Mandatory System Specifications 41

Hardware 41

Software/Applications 41

Internet Bandwidth 42

For Online Interactions/Proctored Examinations 42 System compatibility test 42 Other References 42

BS in Data Science & Applications - from IIT Madras

# A) Data Science & Applications

IIT Madras has launched the BS in Data Science and Applications. In this program, the course contents are delivered online and can be studied by anyone from anywhere, while the monthly quizzes and final semester exams will have to be attended in-person at designated centres. Depending on the number of courses completed, learners can earn

- a Foundation level certificate
- Diploma in Programming/Diploma in Data Science or both
- BSc degree in Programming and Data Science
- BS degree in Data Science and Applications
- 1. Highlights of the programme

Courses are taught by faculty of IIT Madras/other reputed institutes as well as experts from the industry.

Unlike many competitive admission exams which work on the philosophy of elimination and selection and admit a very limited number of learners into various programmes based on their performance relative to that of others, in this programme there are specific qualifying criteria, and a significantly large number of learners can enter.

Learners of any background, be it engineering, sciences, humanities, arts, medicine, law, etc can attempt and join this programme.

There is no limitation on the age of the learner or their geographical location.

# 2. Flexibility

There are two entry and four exit points, with learners being able to exit with either course certificates, or diploma or the degree. Learners can choose their pace of study every term. Being an online programme, there is no geographical barrier to learning from this programme - learners only need to travel to exam centres for exams each term.

IT IS IMPORTANT TO NOTE: This programme is NOT BASED on an admission process. Qualified learners can attempt respective stages of the programme and those who clear each stage will receive the certificate corresponding to that stage alone.

So, for example, the learner should be aware that they are not being admitted to a degree programme after the Qualifier. It is only for the set of Foundation courses, which on successful completion makes them eligible to enter the Diploma level. The diplomas or degrees are obtained by the candidate only when the requisite number of credits are accrued by completing the courses prescribed and satisfying any other mandatory criteria. Admission to any level does not automatically entitle the learner to exit the programme with the Diploma or the degree.

- 3. Courses in the programme
- 3.1 Definition of credit in the program

The credits here are based on the UGC system of counting 14 hours of learner engagement as 1 credit. (1 credit mentioned here would be equivalent to 3 credits in the current IITM campus Credit system.)

The number of credits required to graduate with the BSc is 114 while that for the BS is 142. The structure of the program is as follows:

3.2 Level 1: The Foundation level

- Comprises 8 courses English 1, English 2, Mathematics 1, Mathematics 2, Statistics
- 1, Statistics 2, Computational Thinking, Introduction to Python
- Number of credits: 32
- 3.3 Level 2: Diploma level
- Includes 2 Diplomas Diploma in Programming and Diploma in Data Science
- Each diploma comprises 6 courses (23 credits) and 2 project courses (4 credits)
- Number of credits: 54
   Diploma in Programming
- Database management systems (DBMS), Programming Data Structures and Algorithms using Python (PDSA), Java programming, System Commands, Application development 1, Application Development 2
- Project course in Application Development 1
- Project course in Application Development 2

Diploma in Data Science

- Machine Learning Foundations (MLF), Machine Learning Techniques (MLT), Machine Learning Practice (MLP), Business Data Management (BDM), Business Analytics (BA), Tools in Data Science (TDS)
- Project course in Business Data Management
- Project course in Machine Learning Practice

(Those students who fall short of the 54 credits in the Diploma level (temporary, for a few students) will have to do additional courses in the BSc level to make up for the deficit in credits. A student will be eligible for the BSc degree only if they complete 114 credits as per the norms given.)

3.4 Level 3: BSc Degree level courses

- Total of 28 credits
- Mandatory 2 core pairs (Software Engineering, Software Testing, Artificial Intelligence and Deep Learning)
- Mandatory course: Strategies for professional growth
- Maximum of 4 credits can be obtained from NPTEL, technical bucket
- 3.5 Level 4: BS Degree level courses
- Total of 28 credits
- Option of Apprenticeship for 4/12 credits
- Mandatory to earn 4 credits from HS/MG stream, from NPTEL or program electives
- 2 level 4 courses in programming stream and 2 level 4 courses in the data science stream should be mandatorily completed

Apprenticeship has been split into 2 courses - one of 4 credits that corresponds to the 4 month internship and another as 8 credits for the term of apprenticeship that is continued from

months 5-8 in the same company and domain.

Apprenticeship is optional and one can earn 0/4/8/12 credits from it.

- 1. The list of courses in
- a. Table 1: List of electives offered in the program
- b. Table 2: List of NPTEL electives that can be credited at the BSc level
- c. Table 3: List of HS/MG electives that can be credited from NPTEL

The list of courses in the 3 tables here are subject to periodic revision.

2. Refer Credit Transfer for NPTEL Courses for process and credit transfer fee.

The course code defines the level of the course. If the course code is 2xxx,3xxx,4xxx then the level of the course is 2/3/4 respectively.

The fee for the level 3 courses is Rs 2500/credit while that of level 4 courses is Rs 5000/credit.

- 4. Fees for the entire programme
- First year fees kept low to enable learners to try out the programme
- Entry fee for Qualifier exam: Rs. 3000 (non-refundable) with suitable waivers
- Fee waivers for learners belonging to certain categories and economic backgrounds

Number of credits in each level:

Level Theory Project Apprenticeship NPTEL MG/HS/HM

Foundation 32

Diploma in DS 23 4

Diploma in P 23 4

BSc 28-X X (0-4)

BS 28-A-B A (0/4/12) B=4

\*Only maximum of 24 credits can be transferred towards non counted CGPA

course

Foundation: Rs 32000/-

Diploma Level:  $62500 \times 2 = \text{Rs } 125,000/-$ 

BSc Level: Rs 2.21L - 2.47L

BS Level: 3.25L - 3.87L

Cost per credit

(Rs)

Number of credits Total fee Level

fees

Foundation 1000/c 32c 32000 32,000

Diploma 2500/c for Theory

1250/c for project

23x2=46c

4x2 = 8c

```
115,000
10,000
125,000
BSc Level 3 - Rs 2500/c
Level 4 - Rs 5000/c
1000/c for NPTEL
20c for 5 mandatory courses (Level 3)
4c NPTEL+4c Level 3
4c NPTEL + 4c Level 4
8c Level 3
4c Level 3 + 4c Level 4
8c Level 4
50000
4000+10000
4000+20000
20000
30000
40000
64,000
74,000
70,000
80,000
90,000
BS Level 3 - Rs 2500/c
Level 4 - Rs 5000/c
1000/c for NPTEL
2 Level 4 mandatory DS = 8c
2 Level 4 mandatory DP = 8c
4c NPTEL + 8c Level 3
4c NPTEL + 4c Level 3 + 4c Level 4
4c NPTEL + 8c Level 4
12c Level 3
```

40000 40000

4000+20000

12c Level 4

4000+30000 4000+40000 30000 60000 104000 114000 124000 110000 140000 Fee waivers depend on the category of learner and family income Family Income > 5 LPA Family Income > 1 LPA and <= 5 LPA Family Income <= 1 LPA Fees Docs Required Fees Docs Required Fees Docs Required General Full Fee NIL 50% waiver EWS+ Family Income 75% waiver EWS + Family Income OBC Full Fee NIL 50% waiver **OBC-NCL** + Family Income 75% waiver

OBC-NCL + Family Income

SC / ST 50% waiver SC / ST 50% waiver SC / ST 75% waiver

SC / ST + Family

Income

PwD 50% waiver PwD 50% waiver PwD 75% waiver

PwD + EWS /

OBC-NCL +

Family Income

SC / ST +

PwD 75% waiver SC / ST + PwD 75% waiver

SC / ST +

PwD 75% waiver SC / ST + PwD

#### 4.1 For students who are outside India:

Facilitation fee for exams is in addition to the above for candidates writing exams overseas - as fixed up with the local exam partner there. These are subject to periodic changes depending on the local exam partner identified.

Facilitation Fee

Quiz1 [irrespective of num of courses] = Rs.2000/-

Quiz2 [irrespective of num of courses] = Rs.2000/-

End term [per session] = Rs.2000/- [one course it is Rs.2000/- & more than one course it is Rs. 4000/-]

E.,g If you opt for 4 courses

Quiz1 = 2000, Quiz2 = 2000, EndTerm = 4000

Totally 8000 to be paid as a facilitation fee

\*Facilitation fee may vary based on country. Eg: Kuwait & Bahrain it is Rs. 3000/-

5. Admission to the programme

5.1 Regular Entry into Foundation level

To enter the Foundation level, applicants have to pass the Qualifier exam.

The Foundation courses allow for interested applicants with a variety of educational backgrounds to be trained in the basics (Math, Statistics, Computational Thinking, Python programming and English) required to take up the Diploma level of Programming & Data Science courses.

Entry: Via the Qualifier exam into the Foundation level

Exit 1. Foundation course certificate

Exit 2. Diploma in Programming/Data Science or both

Exit 3. BSc Degree in Programming and Data Science from IIT Madras

Exit 4: BS in Data Science and Applications from IIT Madras

5.1.1 Eligibility to Apply for the Qualifier Exam

Minimum eligibility: Should have studied Mathematics and English in Class 10.

- 1. Anyone who has passed Class 12 or equivalent can apply irrespective of age or academic background. Those who qualify can join the program immediately. View list of accepted class 12 equivalents.
- 2. School students who have appeared for their Class 11 final exams can apply irrespective of their group/stream/board. Those who qualify can join the program after passing Class 12.

No additional eligibility other than the ones mentioned above is required to apply for the qualifier process or join the foundational level courses after clearing the qualifying exam.

The week 1 content is available to all candidates to sample on the website (https://study.iitm.ac.in/ds/academics.html#AC15) and view when they fill the Qualifier exam form. The learner has to fill the qualifier form available on the website study.iitm.ac.in/ds The learner has to pay the fees for the Qualifier exam - currently set as Rs 3000/-for Gen category with suitable waivers for candidates from the SC/ST and PwD with 40% disability backgrounds. Currently there is no waiver for any other group of learners.

The fee will not be refunded once paid.

5.1.2 Preparation for the Qualifier exam

All regular entry applicants must go through the 4 week Qualifier Process to earn admission to the Foundation Level.

On the start date of the qualifier process week 1, access to the content for the four Foundation level courses - English 1, Maths-1, Statistics-1 and Computational Thinking will be provided.

The content that includes videos, tutorials, practice/graded assignments and text transcripts is released week wise.

The content will be made live with an announcement on the portal, and an alert through email. Every week the graded assignment must be submitted in each course.

5.1.3 Eligibility to appear for the qualifier exam

At the end of the 4 weeks, a qualifier exam will be conducted for eligible candidates based on the content covered in the 4 weeks of study.

Each assignment will be graded out of 100

Any assignment that is not attempted will be marked as 0.

There is a change in the modality of finalizing the students who become eligible to write the qualifier exam.

- If the average of the first 2 weeks' assignment scores is >= 40/100 (or as per the cutoff for each category of students) in each of the 4 subjects, the students will be eligible to write the qualifier exam in the first attempt within the term.
- For those who do not qualify after the week 2 assignments, the average of the best 2 out of the first 3 weeks' assignment scores will be considered. If this score is >= 40/100 (or as per the cutoff for each category of students) in each of the 4 subjects, the students will become eligible to write the qualifier exam in the second attempt within the term.
- Reattempts within the term will be given suitably.

Only those who get the minimum required average assignment scores in all four courses (as given below) will be allowed to appear for the Qualifier Exam.

Minimum Average Assignment Score required in each course

General Learner 40%

SC / ST / PwD with 40% disability 30% PwD with 40% disability & SC / ST 30% OBC-NCL / EWS 35%

Note: Relaxations in pass criteria indicated for various categories of learners is applicable ONLY for the qualifier process. There will be no relaxations in terms of grades / pass criteria once registered into the program.

Hall tickets will be released for only those candidates who become eligible to take the in-person proctored Qualifier Exam.

5.1.4 Criteria for passing the qualifier exam

In the qualifier exam comprising 4 subjects, the learner should obtain marks >= individual subject cut-off as shown below. The total of all subject marks should be greater than the total cut-off. The cutoff marks are clearly specified for the different categories of learners in the table below.

Min. Req. Qualifier Exam Score in each course

Min. Req. Average Qualifier Exam Score General Learner 40% 50% SC / ST / PwD with 40% disability 30% 40% PwD with 40% disability & SC / ST 30% 40% OBC-NCL / EWS 35% 45%

The qualifier exam marks will be displayed within the login on the portal along with an email and whatsapp alert sent to the candidates about this.

5.1.5 Validity of the qualifier score

The qualifier marks will be valid for the 3 terms that come subsequent to the qualifier exam date for the learner to register to the Foundation level. This score will be invalid after this period and the learner will have to go through the entire qualifier process (the 1 month of weekly assignments) and retake the qualifier exam, if they wish to join the programme. For students in std XII who take the qualifier exam, the validity is for 3 terms from when they pass std XII.

#### 5.1.6 Communication about qualifier exam results

Those who have qualified as per the above process will be intimated through email and

whatsapp and within their login on the portal - if they are eligible to register further. An admission letter will also be generated and provided to each qualified candidate.

Once a candidate has qualified, they will not be permitted to apply again until their score is valid, which is for the next 3 subsequent terms. After this they will be eligible to reapply again.

The fees paid to attempt the Qualifier exam will not be refunded in either of the two situations

- for those who missed writing the qualifier exam and for those who did not pass it.
- 5.1.7 Second attempt: If a candidate was absent or failed the first attempt of qualifier exam

There are two attempts within any term currently. In every term, qualifier exams are conducted at the end of 4 weeks and at the end of 8 weeks.

Eligibility to apply for Reattempting Qualifier exam within the same term:

- A learner who became eligible for the hall ticket in the qualifier process of a term but was absent for the final exam
- failed in the first attempt

Such candidates do not have to repeat the assignments as they have already become eligible. This re-attempt application form will open up immediately after the qualifier results are announced. The fee for this is as follows:

General Category / OBC Applicant ₹1500 re-attempt fee SC / ST Category / PwD (>= 40% disability ) Applicant

₹750 re-attempt fee

SC / ST Category Applicant who is ALSO PwD (>= 40% disability)

₹375 re-attempt fee

5.1.8 Candidates who did not become eligible for Qualifier exam

There are no limits on the number of times a candidate can attempt the qualifier process.

The candidate can attempt again the subsequent terms.

They have to pay the full fees as per the fee norms applicable for their category. (and additional exam facilitation fee in case of candidates outside India)

This will be considered like a fresh application and they have to redo the 4 weeks of course work and weekly graded assignments and become eligible to get the hall ticket for the qualifier exam

- 5.1.9 Options to register to courses once qualified
- Candidates who qualify in the first attempt within a term
- have the option to register to courses and continue with completing them in the same term. In this case, qualifier score is treated as Quiz1 score to calculate the Final score.
- o Have the option to register to courses in the next 2 terms till when the qualifier

score is valid.

• Candidates who qualify in the second attempt within a term can ONLY register from the subsequent term till the qualifier score is valid.

In a learner's first term immediately following the qualifier exam, the qualifier exam scores and assignment scores in the subjects registered will be considered as Quiz 1 score and first 4 assignment scores of the corresponding subjects.

5.2 JEE-based Entry into Foundation Level

There is a direct entry into the Foundation level of the program for students who have qualified for the JEE Advanced Exams. Currently the validity of this is for the 3 terms following the release of the JEE Advanced Eligibility list.

Candidates who qualified to appear for JEE Advanced 2022 can directly join our program in the Sep 2023/Jan 2024 Term and Candidates who qualified to appear for JEE Advanced 2023 can directly join our program in the Sep 2023/Jan 2024/May 2024/Sep 2024/Jan 2025 Terms The process will be as follows:

Apply to the Qualifier process, saying Yes to the question on eligibility to JEE Advanced level. Upload a valid proof for the same.

- If the proof is found to be valid:
- The candidate will be declared eligible to join the Foundational level courses.
- o They will be issued the admission letter.
- Such candidates can directly register to courses in the foundation level with CCC as 4.
- If the proof document submitted is found to be not valid, the student will be moved into the category of non-JEE and will be treated as a regular entry candidate to the foundation level and have to go through the qualifier process.
- 6. Credit Clearing Capability

The value S used to determine the maximum number of courses that the learner is permitted to register in a term is calculated as shown below.

- Term 1: decided by qualifier marks
- Term 2: decided by average of marks of all courses taken in Term 1 in which the learner has passed
- Term n (n>2): M = average marks of courses passed in the previous two terms Term n-1 and Term n-2 (This will be calculated using marks of subjects in which the

candidate has passed, not those which he/she has not passed or is not completed yet); (n-1 and n-2 terms must be terms where the learner status is Active - defined in section 11. Learner Life Cycle

Marks M (as defined above) Maximum number of courses that learner is permitted to register in any term

0 <= M< 50 2 50 <= M< 70 3 M >= 70 4 The credit clearing capability CCC will be decided as follows:

- If a learner has passed at least one course in term n-1, then the CCC of term n will be calculated based on the marks as given in the above table.
- If a learner has failed all courses the learner has appeared for in term n-1, CCC of next term n will be 2.
- If a learner is absent for final exam of all courses, thus not completing their courses and not getting grades, CCC of next term = CCC of the learner's last term CCC is kept as 4 by default for
- everyone who chooses to register to courses in the same term as the qualifier exam
- For all JEE candidates in the first term
- For everyone in the Diploma and Degree levels
- 7. Course registration steps involved

Students who are continuing with the program will go through the following steps to sign up for the courses:

- Within the registration window, students will pick the courses they want to take in the coming term, with limiting criteria on total courses registered being their CCC i.e learners can register to maximum number of courses <= their CCC.
- Students pick 2 cities among the choices provided for their quizzes and exams for that term.
- o They have the freedom to choose a different set of cities than the ones they opted for in the previous terms.
- Also they can choose a different set of cities for every quiz/final exam while registering for the courses so that accordingly booking may be done with the Exam vendor for slots in these cities.
- Students can register to courses for which the prerequisite is completed. The pre-requisites are mentioned in 13.9 Prerequisite course requirements
- o e.g. in order to sign up for Math-2, the learner must have cleared Math-1
- Students can take any course within a particular level of study but are not allowed to sign up for courses across levels.
- Students who successfully complete all courses in the Foundation level will be eligible for admission to the Diploma level program.
- Learners who successfully complete all courses in the Foundation and diploma programme will be eligible for admission to the degree level, if they satisfy the prescribed/regulatory criteria.
- Students who complete 114 credits as per the norms will be eligible for the BSc degree and can continue onto the BS level.
- Learners pay only for the number of credits they are signing up for (online payment only).
- 8. Direct Entry into Diploma programme

For those who have the foundations to enter the Diploma programme directly and those who wish to do just the Diploma and exit with it, this is a pathway. It is primarily aimed at working professionals or learners who already possess the fundamentals taught in Year 1 of this programme to enter the Diploma level directly.

Entry - Into Diploma level

Exit - One or both Diplomas from IIT Madras

8.1 Eligibility to Apply

Students who have completed 2 years in any UG degree programme are permitted to apply to the diploma level through direct entry. Their second year marksheet or higher must be submitted as proof to qualify under this category.

8.2 Qualifying Process

- 1. A separate Direct Admission to Diploma (DAD) qualifier exam will be conducted for the Diploma in programming (DP) and Diploma in Data Science (DS).
- 2. These are conducted on the same date as the end term examinations of the IITM BS DS program. Hence these are conducted three times a year.
- 3. Any candidate crossing the cut off marks defined below will be eligible to enter the Diploma Programme corresponding to the qualifier attempted and register to the courses.
- 4. There will be no limit on the number of attempts by any candidate for direct entry, though the recommendation would be that if they do not pass the qualifier, they attempt through the foundation level.
- 5. The qualifier for DAD-DP will be a 3 hr exam, subjects being English, Aptitude and 6 weeks of Maths 1. Students have to study Computational Thinking, Introduction to Python and then move on to the Programming Diploma subjects.
- 6. The qualifier exam for the DAD-DS will be a 4 hr exam, with subjects being English, Maths 1, Statistics 1 and Python programming. Students have to start with Maths 2 and Statistics 2 and then continue with subjects in the Data Science diploma.

Students who have completed the Diploma in Data Science by Direct admission are directly eligible to also pursue the Diploma in Programming, if they wish to, without attempting the qualifier exam for this.

But students who complete the Diploma in Programming and wish to pursue the Diploma in Data Science have to appear for the qualifier for DS as they would not have studied Statistics 1 and Maths 1 as part of course work.

Fees for the DAD qualifier exam

Minimum required Qualifier Exam Score in each subject

Cut off marks required in DAD Qualifier exam

GEN / OBC-CL Rs 6000/- 40% 50/100 SC/ST/PwD Rs 3000/- 30% 40/100 SC/ST AND PwD Rs 1500/- 30% 40/100 OBC-NCL, EWS Rs 6000/- 35% 45/100

#### Table 1: Department Core/Elective Courses

# Table 2: SWAYAM NPTEL Courses Applicable for Department/Free Electives

The NPTEL courses given in the below can be credited at the BSc level. Any course can be credited only once in this programme. Also, the same NPTEL course cannot be credited twice - within your college for another academic programme and this BSc programme. It should be credited

only in either of the above.

SWAYAM NPTEL Approved Dep/Free Elective course list:

https://docs.google.com/spreadsheets/d/e/2PACX-1vSJXV0JECyoQvgWvBIVxO13G0KRm5a1q NCRBa7rAw8GDY4e0cfm1KiVCwlgs\_ed80ObtzQ1rfx\_JWIR/pubhtml?gid=399341609&single=t rue

Note that the list of courses is subject to periodic revision.

# Table 3: SWAYAM NPTEL courses Applicable under HS/MG

category for crediting in the BS level

Upto a maximum of 4 credits can be credited under the HM category in the BS degree level, which can be done from NPTEL or courses within the program.

(Refer Credit Transfer for NPTEL Courses)

SWAYAM NPTEL Approved HS/MG course list:

https://docs.google.com/spreadsheets/d/e/2PACX-1vSJXV0JECyoQvgWvBIVxO13G0KRm5a 1qNCRBa7rAw8GDY4e0cfm1KiVCwlgs\_ed80ObtzQ1rfx\_JWIR/pubhtml?gid=1418834182&si ngle=true

Note that the list of courses is subject to periodic revision. From the NPTEL course URL, please select the

SWAYAM Certification courses. Only these are eligible for Credit Transfer

#### 9. Credit Transfer

#### Credit Transfer for NPTEL Courses

The following process is to be followed for credit transfer from NPTEL:

- a. An NPTEL course of duration 4/8/12 weeks carries credit equivalence of 1/2/3 credits in the BS degree program.
- b. The learner must register for the NPTEL exam using the @ds.study.iitm.ac.in Email ID.
- c. The learner has to register for NPTEL exams, pay the exam fee, and complete the NPTEL course.
- d. An NPTEL course can be transferred for credit only once and only to one program. The learner has to give an undertaking that they are submitting this course for credit transfer only to the IITM BS Degree program.

- e. The NPTEL courses will be added in PASS/FAIL mode and counted towards the credits with no letter grade and will not be included in the CGPA calculation.
- f. The fee for credit transfer from NPTEL courses is fixed as Rs 1000/- per credit. Hence, Rs 1000/-, Rs 2000/-, Rs 3000/- should be remitted as fees if a learner opts for credit transfer from NPTEL courses of duration 4/8/12 weeks. This fee is to be paid to the BS degree program, and is separate from the fee to be paid to NPTEL to complete the course.
- g. The learner can complete NPTEL courses any time after joining the Foundation Level (using the official IITM email) and apply for the course credit transfer in the BSc/BS levels.
- h. Refer the below table to know which term NPTEL courses can be transferred to which term in BS

NPTEL courses completed in below term Credit Transfer to BS Program in Term

January September July January

Credit Transfer from courses that are conducted on IITM campus (\*\*This will be in effect from January 2024\*\*)

- A maximum of 24 credits can be earned from IITM campus courses.
- Students who have completed the foundation and the 2 diplomas and have cgpa of >=8 will be eligible to earn credits from campus courses.
- The maximum number of credits that can be taken at the BSc level will be 8. These credits are to be obtained from the Engineering, Science or Management departments.
- Students who have completed 114 credits in the IITM BS program and completed the BSc level with a cgpa of >=8 will be permitted to credit 24-x credits at the BS level where x is the number of credits they have earned in the BSc level from IITM campus courses. A maximum of 8 credits can be transferred from the HS category in the BS level, including the HS category credits earned through NPTEL.
- IITM BS students can apply to courses they are interested in and their acceptance will be based on the availability of seats for the course.
- The fees for transferring the credits from each on-campus course will be Rs 2500/- per credit of IITM BS program. The fee to be paid to the institute will be apart from this and will be as per the institute norms.
- Students will have to attend the class in person unless a hybrid mode of accessing the classes is available. The on-campus courses credited by the BS students will be listed in the transcript along with the corresponding grades. The credits transferred from the on-campus courses into the BS program will be counted towards the CGPA of the student.

#### 10. Learner Life Cycle

Once a learner clears the qualifier, he/she will be eligible to register for the Foundation level. Using their personal email id, they register to as many courses as permitted by CCC and make the payment. After approval of the uploaded documents, the learner is given a roll\_number@ds.study.iitm.ac.in email id.

Henceforth all interactions on the portal right from login to accessing the learner dashboard

and courses will be via this email id.

There will be 5 statuses for any learner in the programme : On the rolls/Active, On Academic Probation, Struck off the rolls, Alumnus, Quit the programme

- On the rolls/Active When a learner is registered in any term for one or more courses after paying the course fees, the status will be "On the rolls" or Active.
- On academic probation/Not registering to any course in a term:

  After joining the programme, a learner may skip up to 2 terms consecutively without taking any courses. In the two terms where the learner does not register for any course, the learner status will be marked as "On Academic Probation". The learner
- o The learner can actively inform us about not registering to courses by paying the "Registration keep alive fee (RKA)" of Rs 1000/- per term. In case of registering to courses in the next term, the learners have to only pay the course fees.

email ID will still be kept alive while the learner is on academic probation.

- The learner may not pay the RKA and have it as pending to be paid. Pending RKA will include 10% extra over regular RKA when re-registering back.
- To register to courses in the next term if not paid the RKA: The learner will have to pay the pending dues = (which will be Rs 1100/- or Rs 2200/- (Rs 1000 RKA +10% as penalty for each term where no courses are registered). The learner has to select the courses and pay the course fees. Once they do this, the learner status is changed to "On the rolls".
- Struck off the rolls: If a learner with status "On Academic Probation" for 2 consecutive terms does not register for courses in the next term too, the learner's status is changed to "Struck off the rolls". The official email id is suspended.
- Once struck off the rolls, to reactivate the registration, they will have to apply through a separate process as defined:
- If the RKA for the previous 3 terms has already been paid, they have to request for reactivating the email id on payment of Re-admission fee of Rs 2500/-. Once done, they can register for the courses in the upcoming term.
- If the RKA for the previous 3 terms has not been paid, the learner has to apply to activate his/her account by paying the pending dues which will be Rs 5800/- = Rs 2500 (Readmission fee) + Rs 3300/- (Rs 1000 RKA x 3terms+Rs 300 (10% as penalty)). On receipt of the payment, the official email id is activated again and they are permitted to register using this id. Once they do this, the status is changed to "On the rolls".
- Any learner who is struck off the rolls 2 times, is removed from the programme.
- Quitting the programme: There will also be an option inside the candidate dashboard which says "I quit the programme". Once the learner applies for this midway through a

level, we suspend the official email account and activate the personal email account to access the dashboard. No reactivation for continuing the program is possible.

• Alumnus: Learners who complete the BSc level / BS level and quit the program, at the end of it, we again suspend the official email id and activate the personal email account to access the dashboard. Their status will be changed to "Alumnus". Students completing the foundation or diploma level and quitting the programme will have

status as "FL certified" and "DS certified"/"DP certified"/"Both diplomas certified" but will not be awarded the Alumnus status.

Timeline for certificate:

\*We need to get the senate approval before generating the original certificate. Senate meetings will be conducted three or four times in a year. Please refer the below timeline for certificate issue date

Term

Cut off date for quit gform response

Cert Delivery date Type of Cert

May 2023

Friday, November 17, 2023

Friday, December 22, 2023

Original

Sep 2023 Friday, December 1, 2023

Friday, December 15, 2023\*

Provisional

Sep 2023 Friday, January 12, 2024 Friday, March 1, 2024

Provisional (P) or Original

(O)

Jan 2024 Friday, March 15, 2024 Tuesday, April 2, 2024\* Provisional Jan 2024 Monday, May 20, 2024 Wednesday, July 3, 2024

Provisional (P) or Original

(O)

May 2024 Sunday, July 28, 2024 Sunday, August 11, 2024\* Provisional May 2024

Sunday, September 22, 2024

Tuesday, November 5, 2024

Provisional (P) or Original

(O)

Sep 2024

Sunday, November 17, 2024

Monday, December 2, 2024\*

Provisional

Sep 2024

Sunday, January 12, 2025

Thursday, February 27, 2025

Provisional (P) or Original

(O)

\*Applicable only for project only registered students.

2024 calendar link: https://study.iitm.ac.in/ds/academic\_calendar.html

Note: Updated photo used for hall ticket will be printed in provisional certificate.

11. Design of certificates for the 4 levels of the program

The design has been finalised for the 4 levels of certificates, as shown on the website.

Design for provisional certificates:

# 11.1 Mark transcripts

There will be 2 types of documents that will be made available automatically.

1. Term wise Progress card

This document will list all the courses taken by the learner term wise.

The values for every course will be course code, course name, level, grade obtained. Note that the transcript will show all attempts and grades obtained in each of the attempts.

#### 2. Grade Card

This will have the courses at each level listed only once. The best score obtained among all attempts for each course is what will be shown here.

GPA will be calculated for the courses in a particular term of the programme. GPA= $\Sigma i(GPi^*Ci)/\Sigma Ci$ 

Where GP = grade point of a course and Ci is the number of credits assigned to that course and  $\Sigma$ Ci is the total number of credits of all courses in the term, including those with U or W grades.

The CGPA will also be computed for all unique courses completed until this point in time with the best grade being considered in case a course is attempted multiple times.

11.2 Procedure to Apply for Official Transcript & Bonafide

#### Certificate

Students who are interested in applying for a transcript/bonafide certificate have to follow these steps. Note that these certificates will be issued every Thursday. Students have to plan suitably and contact us.

Please refer the link to know the criteria for official documents given to students: https://docs.google.com/document/d/e/2PACX-1vQnn2cFan5BqTTAByCoqtue-0XSmFXQPT9 1bADDL\_i33tHMh8C0ZJepvFBwze4E5zJbGiBMdQa59VeT/pub

- 12. Academic aspects
- 12.1 Academic calendar
- 1. There will be 3 terms every year Jan-Apr, May-Aug and Sep-Dec.
- 2. All the foundation, diploma level courses, the mandatory courses of the BSc level will be offered in every term.
- \* While 36 months (3 years/9 terms) is time permitted for completion of any level, 96 months (8 years/24 terms) is the time permitted for the entire programme.

#### For Project:

Category Payment Category Waiver Grade New Registration 2500 Yes Actual grade Fee for Level 1 or 2 reattempt 1000 No Actual grade

If the project is not completed in the registered term - the fee is retained for the subsequent term, grade will be marked as I.

If the project is not completed in the second term also, then the registration becomes invalid, grade will be marked as U and the

student has to pay the full fees again.

#### 2500 Yes I or U

If the student fails in the project, grade awarded will be U and Student has to redo the project by registering to the project by

paying the full fees.

2500 Yes U

If the submission is found to be Plagiarized,

- a. Student maybe subjected to disciplinary action
- b. Student has to redo the project by registering to the project by paying the full fees.

2500 Yes U

12.2 Course structure suitable for online delivery

All courses of 4 credits will be of duration 12 weeks.

The recorded content which is released every week will be for a total of about 2-4 hours, split into multiple lectures which includes the theory and tutorial videos. All videos are copyrighted to IIT Madras but will be available on YouTube as a public playlist for anyone to access and view.

Self test assessments for every video lecture, a practice assignment for the week with solutions will also be released apart from text transcripts and any related notes.

The weekly graded assignment will also be released along with the above content.

12.3 Evaluation and grading of courses in every term

Each course has 3 types of assessments - online weekly assignments, monthly in-person proctored quizzes and an in-person end term exam.

- 1. Online assignments:
- A 12 week course will have one or more weekly assignments to be submitted online within the due date specified.
- The average score of the best 5 out of the first 9 weekly assignments given during the course run should be >= 40/100 to be eligible to write the final exam and get the hall ticket for the same.
- This will also contribute to the Final score and course grade. (Score in any unattempted assignment will be counted as 0).
- May change from course to course check the grading document for actual details
- 2. 2 proctored Quizzes to be attempted in person in the city chosen

Two quizzes will be conducted at the end of Weeks 4 and 8 based on the content of Weeks 1-4 and 1-8 respectively.

- Will be a single session exam with 4 hrs to attempt 4 subjects, 3 hrs to attempt 3 subjects and 2 hrs to attempt 2 or 1 subject.
- The Qualifier score will be counted as Quiz 1 score for the courses registered in the Foundation level only in the subsequent term of the qualifier exam, unless the

candidate attempts Quiz 1 again in which case the better of the 2 scores will be used for calculations.

- The score of a quiz not attempted will be taken as 0. No make-up quiz will be provided.
- At least one of the 2 quizzes has to be mandatorily attended by the candidate else he/she will not be eligible to write the final exam. (check grading document for changes)
- 3. Final end term exam at the end of the course
- At the end of a term, there will be an end term exam of 1.5 hours duration for each course. (This will ensure exams can be conducted only on Sundays and exams for 4 courses completed in 2 sessions of 3 hrs each throughout the program.)
- Eligibility to write the End sem exam: Pls check the grading document for details.
- The final exam score accounts for 50% of the Total Course Score T called End Semester Score (E)

12.4 Pass criteria for each course

Total Course Score (T) will be the sum of all assessment components in every course as defined in the Grading document of that term.

A candidate is deemed to have passed a course IF Total Course Score  $(T) \ge 40/100$  This criteria is the same for all learners in the course.

An absolute grading system, as described in the following table, will be followed:

# Condition satisfied by

'T' - Total Course Score (Out Of 100)

Status Letter Grade Grade point

(T ≥ 90) Pass S 10

(90 > T ≥ 80) Pass A 9

(80 > T ≥ 70) Pass B 8

(70 > T ≥ 60) Pass C 7

(60 > T ≥ 50) Pass D 6

(50 > T >= 40) Pass E 4

(T < 40) Fail U 0

Weekly average assignment score

<40/100

or 0 quizzes attended - (Not eligible to write the final exam)

Fail WA/WQ 0

Complete ET alone in next term; OPPE will NOT be scheduled.

GA, quiz and OPPE marks will be carried over OR Repeat the entire course

Incomplete (Absent in ET alone)

I -

Complete ET and OPE in next term, Both oppes will be scheduled.

GA and quiz marks will be carried over OR Repeat the entire course

Incomplete (Absent in both ET & OPPE)

I BOTH -

Complete OPE alone in next term, Both oppes will be scheduled. GA, quiz and ET marks will be carried over OR Repeat the entire course

Incomplete (Absent/fail in OPPE)

I\_OP -

#### 12.5 Repeating a course

#### 1. For improvement

A learner can repeat a course for improvement in grades any number of times. The fee for repeating the course for improvement will be twice the regular course fee and the learner will have to submit all the weekly assignments, appear for the quizzes and final exams. The highest score amongst all attempts for a course will be used for calculating the CGPA.

2. If learner was not eligible to attempt the end term exam (grade=WA/WQ) or if the learner did not pass the course (Grade = U)

If average assignment score < 40/100 or no quiz attended or T<40/100, the learner has to repeat the entire course. This includes submission of assignments and redoing all the subsequent quizzes and the end term exam. Fees for repeating the course is the same as the course fees.

- 3. If the learner was absent for the final exam alone (grade = I): The learner has 2 options:
- a. Reappear for the final term exam Makeup exam: They can attend only the end term exam whenever it is conducted in the subsequent term.
- The fee to repeat an end term exam will be Rs.1000 for each course of the foundational level and Rs. 2000 for each course of the diploma / degree levels.
- If the learner reattempts the course in the immediate next term, then the average Quiz Score Q will be carried over and the learner does not have to resubmit the quizzes or the assignments.
- If the learner wishes to skip the immediate next term and attempt the course in subsequent terms, then the entire course will have to be repeated including the weekly assignments and guizzes.
- A learner can reappear for the makeup exam only once. If the learner misses the makeup exam, then the learner has to repeat the entire course in the term thereafter, by paying the full course fees and repeating all assignments, invigilated quizzes and the end term exam.
- b. Repeat the entire course: They can choose to repeat the entire course.
- The fee to repeat the course will be the same as the regular course fees.
- The learner must complete all assignments, invigilated quizzes and the end term exam.
- Registering to this course will be counted as one of the courses permitted as per the CCC of the learner.

Note: Learners repeating a course for any reason must do so within the time and term limits:

- Each level must be completed within 36 months (3 years / 9 terms).
- The entire programme must be completed within 96 months (8 years / 24 terms).

# 12.5.1 Registering for Courses: Term 2 Onwards

- Maximum number of final exams (full course+makeup exams) <= 4</li>
- Maximum number of new + repeat full course (if failed/absent if reqd/improvement) <=</li>
- Registering for new courses is subject to fulfilment of all rules and prerequisites.
- If a student passes all/some courses then CCC is calculated on the average of passed courses.
- If a student fails all courses, then CCC is set to 2.
- If a student is absent for all courses then CCC of the previous term is carried forward.
- Make up exam will be permitted as an option only once in the subsequent term.

12.5.2 Repeating a Course - WA, WQ, U or I grade

Applicable for courses with WA, WQ, U or I grade.

You can choose to repeat courses in a single term or across multiple terms. You can also register for new courses in the term. The total number of courses must be within the CCC limit. Learners with an Incomplete (I) grade in a course can take a Make Up Exam instead of

repeating the course.

12.5.3 Repeating a Course for Improvement

Applicable for courses with S, A, B, C, D or E grade.

You can choose to repeat courses to improve the grade in the course. The highest grade will be recorded in the transcript. The total number of courses must be within the CCC limit. Course fee Repeat for Improvement courses will be double the normal fee. Improvement courses can be registered at any level. Eg: Foundation course improvement can be registered at diploma level.

Note: It is recommended that learners try and progress with new courses instead of repeating courses for improvement, unless a learner deems it absolutely necessary or needs to improve their learning of a course. All course material of completed courses are available to the learner throughout the course.

Please write to support to get an improvement gform. Students have to mandatorily apply for any new course or RKA in course registration form. We will not accept gform entry alone.

12.5.4 Make Up Exams

Applicable for courses with I grade.

You can choose to take a Makeup Exam for a course with Incomplete (I) grade. Learners will only be required to reappear for the Final Exam for that course. The Makeup Exam does not count towards CCC, but a student can appear for a maximum of FOUR final exams in a term. If you have already registered for 4 courses, you do not have any more final exam slots available.

Note: The grading pattern for make-up exams will be as follows: the pattern used will be as per the formula used in the term the course work was done and not as per the term the makeup exam was taken.

Quick Reckoner Table COURSE PASS STATUS

New Course Allowed?

Repeat Course?

Take Make Up Exam?

Passed all Yes

Not recommended but available

Failed any/all Yes Yes Absent for all final exams

Yes Yes

Passed + Absent Yes Yes Failed + Absent Yes Yes Yes

Repeating OPPE:

OPE1/OPE2 ET T Grade

Condition for OPPE/course reg

Foundation Diploma

Absent Absent - U Repeat the entire course Course Fee Course Fee

**Absent Present** 

>=35 I

Complete OPE alone in next term, GA, quiz and ET marks will be carried over OR Repeat the entire course

1000 2000

<35 U Repeat the entire course Course Fee Course Fee

Present score < x/100 Present

>=40 I

Complete OPE alone in next term, GA, quiz and ET marks will be carried over OR

Repeat the entire course

1000 2000

<40 U Repeat the entire course Course Fee Course Fee

Absent - I

Repeat OPPE and ET OR Repeat Entire course

2000 4000

Present score> x/100 Present

>=40

Actual grade

PASS (depending on course criteria)

Course Fee Course Fee <40 U Repeat entire course Course Fee Course

Absent - I

Fee

Repeat ET alone OR Repeat Entire course

1000 2000

- OPPE will not be applicable for the students who registered for repeating ET alone.
- ET will not be applicable for the students who registered for repeating OPPE alone.
- Students who registered for repeating OPPE & ET will have to appear for OPPE1, OPPE2 & ET.

Registered Category OPPE
ET alone No OPPE will be conducted
OPPE alone Both OPPE will be conducted
ET + OPPE Both OPPE will be conducted

12.6 Dropping a course (This is not applicable for the students who are continuing after qualifier in the same term)

Once the registration window closes in any term, adding courses will not be allowed. Dropping a course will be allowed within 4 weeks of the term start date and not beyond. Rs 2000 will be deducted if a Foundation level course is dropped and Rs 4000 will be deducted if a Diploma/Degree level course is dropped.

- a. If the learner decides to drop out of the programme completely using the "I quit the programme" option, the course fee paid minus the deduction will be refunded to the learner and the learner will be removed from the programme, cancelling his official email id access. The status will also be changed to "Quit the programme".
- b. If the learner drops one/a few of the courses registered to in a term, the refund will be made as given in the table below but the email id will be kept active so that he/she can continue with other ongoing courses and the programme. Status will be "Active".
- c. If the learner opts to drop all courses registered in a term, the refund will be done as per the table given below and the email id will be kept active so that the learner can come in and register in the next term. But this will be counted as a term with 0 courses. Status will be changed to "Academic probation".
- d. The fee receipt will be generated post these 4 weeks after term start when drop is permitted so that all the courses and fees are tallied and confirmed.
- e. Learners writing exams outside India would have paid Exam facilitation Fee while registering for the courses. For such learners:
- i. If they drop from all courses in a term, 100% of the facilitation fee for Quiz 1 will be retained while 50% of the facilitation fee for quizzes 2 and final exam will be refunded.

Level

Paid Retained by IITM as Admin charges

Refund

Foundation 4000 2000 2000

2000 2000 0

1000 2000 0

Diploma/Degree 10000 4000 6000

5000 4000 1000

2500 4000 0

Project Course 2500 500 2000

Please note, The amount to be refunded will be added to your student wallet and NOT refunded to the

bank account. This amount can be used when you register for courses in the next term and deducted

from the fees to be paid then.

13. Learning paths available

Here are some suggested learning paths...

- 1. Foundation course certificate
- 2. Diploma in Programming
- 3. Diploma in Data Science
- 4. Diploma in Programming and Data Science
- 5. BSc degree in Programming and Data Science

Term

Foundatio

n

Plan for One

Diploma

Plan for Both

the Diplomas

BSc Degree BS Degree

**Shortest** 

Path for BSc

Degree

Year 1

Term 1 3 1 1 2 2 4

Term 2 2 2 2 3 3 4

Term 3 3 2 2 3 3 4

Year 2

Term 1 2 2 3 3 4

Term 2 1 2 2 2 4

#### Term 3 2 2 2 2 4

Year 3

Term 1 1 1 3 3 4

Term 2 1 2 3 3 3

Term 3 2 1 2 2

Year 4 Term 1 2 3 3

Term 2 2 2 2

Term 3 1 3 3

**Total Courses** 

8 14 20 31 31

# 13.1 Prerequisite course requirements

Foundation courses

Level Course Pre-req Coreq

Foundation Maths 1 - -

Statistics 1 - -

English 1 - -

CT - -

Maths 2 Maths 1

Statistics 2 Statistics 1 Maths2

English 2 English 1

Intro to python CT

A co-requisite for Statistics-2 is Maths-2. So either Maths-2 has to be done before statistics-2 or both can be taken together. Statistics-2 cannot be done without having done Maths-2. All the 8 Foundation courses should be completed before the candidate can register to any Year 2 Diploma level course.

Diploma level courses

Level Course Pre-req Coreq

Diploma in DS MLF - -

BDM - -

MLT MLF

MLP MLT, MLF

BA BDM

TDS MLF

Diploma in Prog DBMS - -

PDSA - -

App dev 1 - DBMS

Java - -

App dev 2 App dev 1 SC - -

Without completing all the 8 Foundation courses and the 12 Diploma level courses + 4 project courses, one cannot proceed to register for Year 3 Degree level courses. Degree Level Courses:

Please note that L5\_Degree courses are complex compared to Degree and L4\_Degree courses. Course

fee and credits are same as L4\_Degree courses.

14. Changes in project grading (wef now) and

Eligibility to enter the BSc Level (wef May 2024)

Here are two changes being effected with respect to project grading and eligibility to enter the degree level.

1. Project grading:

So far - students had to complete all feature requirements given for a project, pass the L1 viva and move onto the L2 viva and pass that too to get a pass grade.

Looking into the data we have, we understand that all students may not be equally proficient in the areas of programming, machine learning and business and excel in all 4 projects.

Hence the grading is being changed as follows:

MAD1, MAD2, MLP projects: WEF current term

1. For MAD1 and MAD2 projects, when the submitted Application passes the check for Appdev, L1 viva will be scheduled.

For MLP project, if the cutoff is crossed in the Kaggle contest and the student declares that all the models have been completed, the L1 viva is scheduled.

- 2. There are 2 cutoff marks that will be decided for the L1 level for each term:
- a. Cutoff1: X, Cutoff2: Y;
- b. X<Y, X>0
- 3. The L1 viva will be conducted and scoring will be done based on the rubrics defined for
- it. Based on the marks scored in L1 viva (L1\_S), the following are the possibilities:
- a. If (L1\_S < X): Student has to resubmit the project. A few days are given for them to resubmit in the same term. If the second time also, L1\_S<X, they will have to redo the project in the next term.
- b. If (X <= L1\_S < Y), then students are asked some additional questions for assessing their knowledge and awarded D or E grade. Such students do not go in for L2 viva at all. They will have a pass grade.
- c. If  $(L1_S \ge Y)$ , L2 viva is scheduled for them.
- i. If they pass the viva cutoff for L2, they get a grade including L1 and L2 scores
- ii. If they do not pass the L2 viva cutoff, they get one more chance at L2

viva.

iii. If they do not pass in the second attempt at L2 viva, they get an appropriate grade (C or D or E) based on their L1 performance alone.

# BDM project evaluation

So far: The process has been identifying the business, collecting data, analysing and sharing their insights.

Going forward from Jan 2024:

Students will be allowed to web scrape data and analyse it, sharing the source from where the data was taken. The BDM team will outline the steps involved. The maximum grade that the student can earn in this case will be D.

Eligibility for entering degree level of the program: WEF May 2024

- For a student to progress to the degree level (BSc) of the Data Science and Applications program:
- they must secure a CGPA of 6.0 or higher at the end of two diplomas (includes the courses in the foundation level and the diploma level and the projects)
- AND a CGPA of 7.0 or higher in all the projects completed at the diploma level.
- These CGPA requirements are not applicable to students who exit the program with the diploma(s).
- Such students who exit the program with the diploma(s) without meeting either CGPA

criteria will not be eligible for any certificates of academic achievements or prizes.

- Students can repeat the theory courses any number of times within the stipulated period for diploma level to improve the overall CGPA.
- Students who have overall CGPA of 6.0 or above and CGPA<7.0 in projects, which prevents them from entering the degree level, will be given one additional opportunity to improve their project grades to earn the eligibility to progress to the degree level.
- Students who cannot improve their CGPA above the required cut-offs must exit the program with the diploma(s).
- This rule shall be applicable to all students entering the degree level (BSc) from the May 2024 term.

For those students who completed diplomas with less than 4 standalone projects (in Sep 2021/Jan 2022 terms projects were included in theory courses), whatever projects were done standalone will be counted for the average CGPA of 7.0. For example, if 2 projects were done as part of the theory and 2 projects standalone, then only the grades in the two standalone projects will be used to compute the project CGPA. The projects done as part of the theory courses will not be counted.

For those who do 4 standalone projects, eligibility to enter degree level is illustrated below with some examples:

P1 P2 P3 P4 Total points Eligible to enter the degree level?

E E S S 28 Yes

EESA27 No

D E S S/A/B 30/29/28 Yes

# D D S/A/B S/A/B 28-32 Yes D D C C 26 No

15. New Rules for Foundation & Diploma Level Completion

15.1 Foundation level checkpoints:

These conditions shall be applicable to the students admitted to the foundation level from May 2024. These are not applicable for students who have entered in Jan 2024 term or before that.

Students will be removed from the program if they do not complete

- a. at least 4 courses within 4 terms.
- b. at least 6 courses within 6 terms.
- c. the 8 foundation courses within 9 terms.

The student will be issued warnings about insufficient progress and about complying with these conditions starting from term 3.

15.2 Change in CCC at the foundation level:

This is for ALL students in the foundation level.

Currently, the CCC is calculated based on the courses passed in the last 2 terms by the students and enforced too, deciding the number of courses that students can take in a given term in the Foundation Level.

In view of the conditions imposed above leading to exit from the program if not satisfied, it was proposed that the CCC will only be a recommendation and not enforced. This will enable students to make up for term breaks and meet the proposed course completion criteria.

15.3 Increasing the maximum number of terms for completing the diploma level The Diploma level can now be completed in a maximum of 12 terms instead of 9 terms as has been the case till now. This extension of 12 terms as the maximum limit to complete the Diploma level shall be applied for all learners, starting from the first batch, who started the Diploma Level in September 2021.

The maximum duration for the BSc and BS levels shall remain unchanged at 9 terms. The total duration permissible for the BSc and BS degrees shall also remain at 6 and 8 years, respectively.

15.4 Checkpoints in the Diploma level

These conditions below shall be applicable to the students admitted to the Diploma level from May 2024. These are not applicable for students who have entered in Jan 2024 term or before that.

To ensure continuous progress and steer students towards completing courses on time, the following intermediate checkpoints were also proposed. The student must complete a. at least 3 courses and 1 project in the first 3 terms from starting the Diploma level - if not, they will be put on academic probation and given a warning.

b. at least 6 courses and 2 projects in the first 6 terms from starting the Diploma

- b. at least 6 courses and 2 projects in the first 6 terms from starting the Diploma level if not, they will be removed from the program.
- c. at least 9 courses and 3 projects in the first 9 terms from starting the Diploma level if not, they will be removed from the program.
- d. All 12 courses and 4 projects in 12 terms from starting the Diploma level if not,

they will be removed from the program

The student will be issued sufficient alerts and warnings about these checkpoints.

#### 16. Eligibility Criteria Prize

The Direct admission to the Diploma, where students exit with the Diploma, comprises 8 courses and 2 projects (35 credits).

Eligibility for Prizes:

#### 1. Certificate of Merit

Awarded to students at 2 levels: completing Foundation+2 Diplomas (86 credits), completing the BS degree (142 credits)

Criteria: CGPA between 9.00 and 9.50 at the end of Foundation+2 Diplomas or when graduating with BS.

2. Certificate of Academic Distinction

Awarded to students at 2 levels: completing Foundation+2 Diplomas (86 credits) or completing the BS degree (142 credits)

Criteria: All students with CGPA greater than 9.50 at the end of Foundation+2 Diplomas or when graduating with BS.

3. Certificate of Academic Excellence

Awarded to students at 2 levels: completing Foundation+2 Diplomas (86 credits) or completing the BS degree (142 credits)

Criteria: The students with the highest CGPA at the end of Foundation+2 Diplomas or when graduating with BS will be identified and awarded. The actual number of students will be decided by the Steering committee.

Such students will be awarded a medal along with the certificate.

The following will be the process followed for identifying the students eligible for the awards:

- a. The list of students completing the foundation+2 diplomas or the BS degree in a calendar year January-December will be consolidated and considered to finalize the prizes.
- b. Certificates will be awarded for the 3 categories with medals being given for the students identified as having the highest CGPA alone.
- c. The students completing Diplomas through the Direct admission process will be considered as a separate category and will be eligible for prizes in the highest CGPA category alone.

Prize Eligibility Criteria for Improvement Courses

We will consider the CGPA for prizes only till the term when the student completed 2 diploma's. We will not consider the courses if the student registers as improvement after they have completed both diplomas.

Eg: Student registered foundation/diploma course as improvement in May 2023 but completed both diplomas in Jan 2023, then the CGPA secured in JAN 2023 will be considered for prize.

# 17. Apprenticeship in the BS level of IIT

Madras' BS in Data Science and Applications

The program provides the students in the BS level of the program to pursue an apprenticeship with companies and research projects and earn up to 12 credits in this level. Doing an apprenticeship is optional.

Steps involved in the Apprenticeship program:

1. Approval for the company/research project where the student can work as an apprentice

If the student applies and is accepted by any of the companies that are preapproved by IITM for this purpose, the apprenticeship will be directly approved.

Else the student will have to submit the details of the company/organization and the Apprenticeship committee will decide based on the details submitted.

2. Reporting Manager

Once the apprenticeship is approved, the student has to submit the details of the Reporting Manager in the Organization to IITM.

3. Logging the weekly work report

Student has to file the work log to IITM BS office every week.

4. Review after first 4 weeks

After 4 weeks, based on the student's performance, the reporting manager has to confirm if they would like to continue with the student as an apprentice for the next 7 months. This confirmation letter should be submitted to the IITM BS Program's Office.

5. Possible exit after 4 months

After the completion of 4 months, the student or the company can choose to discontinue the apprenticeship. A letter from the company has to be submitted outlining the work done by the student and whether it was satisfactory to obtain partial credits.

6. After the completion of 8 months of internship

A letter from the Reporting Manager should be submitted to the IITM BS program on the company's letterhead stating the work done by the student and whether it was satisfactory.

The following will be norms with respect to pursuing an apprenticeship:

- 1. Number of courses that can be taken along while pursuing the apprenticeship Students can pursue a maximum of 2 courses each term during the duration of the apprenticeship.
- 2. Duration of the apprenticeship that can be credited 8 months, full time
- 3. Academic Credits
- a. <4 months: 0 credits.
- b. 4<duration<8 months: 4 credits
- c. 8 months: 12 credits
- 4. Stipend: This is mutually agreed upon between the student and the company when finalizing the apprenticeship.
- 5. Mode of apprenticeship: Remote or On-site: This will depend on the company's policy.

- 6. Pre-placement Offer: On successful completion of the apprenticeship, companies will have the option to give a pre-placement offer to the students.
- 7. Payment of fees:

The fee for credit transfer is fixed as Rs 5000/- per credit for Apprenticeship. When students opt to credit this at the BS level, they have to pay the credit transfer fee at the time of registration.

Please refer the link to know more about Apprenticeship:

https://docs.google.com/document/d/e/2PACX-1vQ\_ZCTw1\_PzVDBJ7u-wX18KUgl-IK 1POIYRvyjAYsj A-tS99K7ARRuNVKk0tp34B1woqclNxvY 0Lc/pub

18. Software and Hardware Requirements -

Mandatory System Specifications

The following are the essential requirements that are recommended to pursue the BSc Degree program from IIT Madras

1

. Please note that there will be updates in some of the specifications

with changes happening in technology.

Hardware

To enroll and study in the program, every student is required to have a laptop or desktop with the minimum configuration being as follows:

- 1. RAM Size 8 GB or higher (The ability to install more memory is desirable).
- 2. Processor Intel 8th Generation or AMD 4th Generation or upwards or its equivalent (The latest processor configuration is always recommended)
- 3. Storage Minimum of 500 GB, Desirable of 1 TB. Having an SSD storage is desirable.
- 4. Screen size and resolution Minimum of 13" for laptop and Minimum of 15" for desktop with 1080p
- 5. Webcamera, a mic and speaker or an earphone/headphone with mic. Software/Applications
- 1. Operating System Minimum requirement of Windows 10 or Ubuntu LTS Version 20.04 (or any equivalent) or Mac OS Mojave. Having the capability of dual boot is desirable. If there is no capability for dual boot, then the operating system must support virtualization software like VirtualBox using which Ubuntu 20.04 can be emulated. The System Commands course in Semester 4 will be taught primarily on Ubuntu 20.04.
- 2. Browser Latest version of Chrome with Google Account signed in 1
- 3. Basic familiarity with Google Suite of tools (Docs, Sheets and Slides), specifically collaboration features.
- 4. Any other software that is specified within the course Internet Bandwidth

Minimum of 2 MBPS connection is required to attend sessions without disruptions. However we strongly recommend broadband connections with much higher bandwidth for the best learning experience.

For Online Interactions/Proctored Examinations

- 1. Browser Latest version of Chrome is desirable
- 2. Mobile with a front camera and good internet connection (VOLTE connections are ideal)
- 3. Mic and speaker to be able to speak to and listen to the person at the other end
- 4. Any applications as required to be installed for the interactions/examinations

#### System compatibility test

All students have to mandatorily attend the system compatibility test and ensure that the system you have conforms to the above requirements and student has to participate in this on the dates mentioned by the Admin team to get this completed.

#### Other References

Some more helpful links that will help you in understanding possible system configurations:

- 1. https://towardsdatascience.com/20-necessary-requirements-of-a-perfect-laptop-for-dat a-science-and-machine-learning-tasks-7d0c59c3cb63
- 2. https://www.practicaldatascience.org/html/buying\_datascience\_computer.html
- 3. https://www.umass.edu/it/support/hardware/recommended-minimum-computer-configurations-windows
- 4. https://www.du.edu/it/support/how-to/students/laptops
- 5. <a href="https://wmich.edu/cs/laptop-requirements">https://wmich.edu/cs/laptop-requirements</a>

Quiz 1	Quiz 2	End term exam	OPPE1	OPPE2 Day 1	OPPE2 Day2
7 July 2024, Sunday	4 August 2024, Sunday	1 Sep 2024, Sunday	July 21 2024	Aug 18 2024	Aug 25 2024
2pm-6pm*	2pm-6pm*	9am-12pm, 2pm-5pm			

In centres	In centres	In centres	Online remote proctored	Online remote	Online remote proctored
			proctored	proctored	proctored

<sup>\*(</sup>If required and, we will do a morning session for the quiz)

### **ASSIGNMENT DEADLINES:**

NONE OF THE ASSIGNMENT DEADLINES WILL BE CHANGED THIS TIME FROM THE SCHEDULE GIVEN BELOW.

THE DATES HAVE BEEN SUFFICIENTLY ADJUSTED FOR ACCOMMODATING THE QUIZZES AND OPPES.

Content Release Dates		Assignment deadlines Foundation	Assignment deadlines Diploma		
Week 1	Friday, May 31, 2024	Wednesday, June 12, 2024	Sunday, June 16, 2024		
Week 2	Friday, June 7, 2024	Wednesday, June 19, 2024	Sunday, June 16, 2024		
Week 3	Friday, June 14, 2024	Wednesday, June 26, 2024	Sunday, June 23, 2024		
Week 4	Friday, June 21, 2024	Wednesday, July 3, 2024	Sunday, June 30, 2024		
Week 5	Friday, June 28, 2024	Sunday, July 14, 2024	Sunday, July 14, 2024		
Week 6	Friday, July 5, 2024	Wednesday, July 17, 2024	Monday, July 22, 2024		
Week 7	Friday, July 12, 2024	Wednesday, July 24, 2024	Sunday, July 28, 2024		
Week 8	Friday, July 19, 2024	Wednesday, July 31, 2024	Sunday, July 28, 2024		
Week 9	Friday, July 26, 2024	Sunday, August 11, 2024	Sunday, August 11, 2024		
Week 10	Friday, August 2, 2024	Wednesday, August 21, 2024	Tuesday, August 20, 2024		
Week 11	Friday, August 9, 2024	Wednesday, August 21, 2024	Tuesday, August 20, 2024		
Week 12	Friday, August 9, 2024	Wednesday, August 28, 2024	Wednesday, August 28, 2024		

#### **ASSIGNMENT DEADLINES:**

#### **Bonus Marks**

- 1. Mathematics for data science 1
- 2. English 1
- 3. Computational Thinking
- 4. Statistics for data science 1

Extra Activity for Statistics- I Assignment Deadline

- 5. Mathematics for data science 2
- 6. English 2
- 7. Intro to python programming
- 8. Statistics for data science 2

Extra Activity for Statistics- II Assignment Deadline

#### Suggested pathway to register and study Diploma level courses:

#### PLEASE NOTE:

Python exams will be scheduled for the students in one of the 3 slots given here. Please keep yourself available on that date.

OPPEs for all Diploma courses will be scheduled in the following way:

a. If you have 2 courses with OPPEs, both will be scheduled on August 18 2024.

b. If you have 3 courses with OPPEs, OPPEs for 2 courses will be scheduled on August 18 2024 and OPPE for 1 course will be scheduled on August 25 2024.

c. If you have 4 courses with OPPEs, OPPEs for 2 courses will be scheduled on August 18 2024 and OPPE for the other 2 courses will be scheduled on August 25 2024.

Diploma level courses

- 1. Machine Learning foundations (DS Diploma)
- 2. Machine Learning Techniques (Diploma in DS)
- 3. Machine Learning Practice (Diploma in DS)
- 4. Business Data management (DS Diploma)
- 5. Business Analytics (Diploma in DS)

Business Analytics (BA) Assignment Deadlines

- 6. Tools in Data Science (Diploma in DS)
- 7. Programming Data structures and algorithms using Python (PDSA) Diploma in Programming
- 8. Database management system (DBMS) Diploma in Programming
- 9. Application development 1 (Diploma in programming)
- 10. Programming concepts using Java (Diploma in programming)
- 11. System commands (Diploma in programming)
- 12. Application Development 2 (Diploma in programming)

#### **Project Courses:**

<u>Timelines (Appdev1, Appdev2 & MLP, BDM projects):</u>

#### Degree Level courses

- 1. Software Testing
- 2. Software Engineering
- 3. Deep Learning
- 4. Al: Search Methods for Problem Solving
- 5. Strategies for Professional Growth
- 6. Data Visualization
- 7. Introduction to Big Data
- 8. Operating Systems
- 9. Programming in C
- 10. Deep Learning for Computer Vision
- 12. Algorithmic Thinking in Bioinformatics
- 13. Industry 4.0
- 14. Financial Forensics
- 15. Mathematical Thinking
- 16. Linear Statistical Models
- 17. Advanced Algorithms
- 18. Special topics in ML (Reinforcement Learning)
- 19. Game Theory and Strategy

#### Annexure I

Table.1 Schedule for Elective courses

#### **Bonus Marks**

**Course Participation Marks** are for encouraging and incentivising the students to participate more in the activities of the course.

These marks will be added **ONLY** for the students who pass the course and will only impact the course grade, **and not the pass criteria**. Criteria for course participation marks:

Marks will be applicable based on availability of mock activities in the course. It can vary from course to course and can range from 0-2.

If the average of the marks obtained in all the-mock tests conducted before Quiz 1 & Quiz 2 >= 40/100, students will get 2 marks. The mock tests have to be done within the time specified.

The course team may setup additional activities in the course which will be eligible for upto 3 bonus marks.

#### Participation in the discourse forum: Badges

We will be looking at active engagement with Discourse in a term and provide badges for participation.

Badges will be given based on the number of hours a student spends on Discourse. A student is expected to spend a minimum of 1 hour per week per course in Discourse reading posts. Student will get the following badges:

Read time of upto 4 hours per course in a term: Badge 1
Read time of upto 8 hours per course in a term: Badge 2
Read time of upto 12 hours per course or more: Badge 3

(Applicable only after you get the BS student roll number)

#### **INFORMATION ABOUT GRADES of COURSES:**

S,A,B,C,D,E - Pass grade; U- Fail grade In I grade - there are 3 types:

If you are absent for ET alone with all other assessment components completed (quizzes, OPPEs, project, weekly assignments) - grade will be pushed as I.

Options: You can register to take up ET exam alone in the subsequent term. OPPE and quizzes will **not** be scheduled for you. All other marks for Final course score will be taken from the previous run.

If you have failed in the OPPE but wrote the ET exam and crossed the cutoff for T as given in the course grading policy, grade = I\_OP.

You can register to do the OPPE alone whereby if the course has one OPPE, that will be scheduled. If the course has 2 OPPEs, both will be scheduled for you. You can attempt the OPPE alone. All other mark components of Final course score will be taken from the previous run. ET and quizzes will not be scheduled for you.

If you have failed in the OPPE and absent for ET, then grade = I\_BOTH You can register to ET and OPPEs alone. If the course has one OPPE, that will be scheduled. If the course has 2 OPPEs, both will be scheduled for you. You will attempt the ET and OPPEs. Quiz and GAA and other components will be taken from the previous run and not scheduled.

In all the above cases, you can also choose to Repeat the entire course and not just do the ET/OPPE alone if you want to reattempt all assessment components.

# Suggested pathway to register and study Foundation level courses:

4 terms	Term1	Term2	Term3	Term4			
	English 1	Stats 1	Math 2	Python			
	Maths 1	CT	English 2	Stats 2			
3 terms	Term1	Term2	Term3	Recommended when doing			
	English 1	Stats 1	Stats 2	another program - and if you			
	Maths 1	Maths 2	Python	have some foundations in			
	CT	English 2		Maths/programming			
2 Terms	Term1	Term2					
	English 1	English 2					
	Maths 1	Maths 2	Recommended <u>only</u> for learners doing this program Full time or learners who ar strong in Maths/programing				
	CT	Python					
	Stats 1	Stats 2					

For those entering Foundation Level in May 2024, kindly go through the new rules: 4/6/8 courses to be completed in 4/6/9 terms. Else you will be removed from the program.

#### Foundation level courses

## 1. Mathematics for data science 1

Quiz 1: July 7th, 2024 Quiz 2: August 4th, 2024 End term: Sep 1st 2024 Above to be attended in person at designated centres.

**Eligibility to write the final exam:** Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100 AND attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam

The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 out of First 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

(Though the W12 assignment score is not included in GAA, W12 contents will be included for the final exam. Hence please practice and submit on W12 assignment).

# 2. English 1

Quiz 1: July 7th, 2024 Quiz 2: August 4th, 2024 End term: Sep 1st 2024 Above to be attended in person at designated centres.

**Eligibility to write the final exam:** Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100 AND attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam

The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 out of First 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

(Though the W12 assignment score is not included in GAA, W12 contents will be included for the final exam. Hence please practice and submit on W12 assignment).

# 3. Computational Thinking

Quiz 1: July 7th, 2024 Quiz 2: August 4th, 2024 End term: Sep 1st 2024 Above to be attended in person at designated centres.

**Eligibility to write the final exam:** Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100 AND attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam

The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 out of First 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

(Though the W12 assignment score is not included in GAA, W12 contents will be included for the final exam. Hence please practice and submit on W12 assignment).

## 4. Statistics for data science 1

Above to be attended in person at designated centres.

**Eligibility to write the final exam:** Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100 AND attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 out of First 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2) + Bonus marks for Extra activity - capped to 5

(Though the W12 assignment score is not included in GAA, W12 contents will be included for the final exam. Hence please practice and submit on W12 assignment).

**Bonus marks for course specific activity:** 5 marks in total - 3.75 marks for weekly extra activity + 1.25 marks based on the quality of activity (Instructors' and Faculty's discretion)

#### **Extra Activity for Statistics- I Assignment Deadline**

Note: If a student does not complete the required number peer review, he/she will be awarded 0 marks for that activity even if he/she submitted the activity.

Extra activity	Release date for extra activity	End date of submission	End date for peer review
Extra Activity 1	Friday, July 12, 2024	Wednesday, July 24, 2024	Sunday, July 28, 2024
Extra Activity 2	Friday, July 12, 2024	Wednesday, July 24, 2024	Sunday, July 28, 2024
Extra Activity 3	Friday, July 26, 2024	Wednesday, August 7, 2024	Sunday, August 11, 2024
Extra Activity 4 Friday, August 9, 2024		Wednesday, August 21, 2024	Sunday, August 25, 2024

# 5. Mathematics for data science 2

Above to be attended in person at designated centres.

**Eligibility to write the final exam:** Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100 AND attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam

The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 out of First 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

(Though the W12 assignment score is not included in GAA, W12 contents will be included for the final exam. Hence please practice and submit on W12 assignment).

# 6. English 2

Above to be attended in person at designated centres.

**Eligibility to write the final exam:** Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100 AND attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam

The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 out of First 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

(Though the W12 assignment score is not included in GAA, W12 contents will be included for the final exam. Hence please practice and submit on W12 assignment).

# 7. Intro to python programming

Quiz 1: July 7th, 2024 No Quiz 2 for this course. End term: Sep 1st 2024

OPPE1: Sunday, July 21, 2024 (08:00 to 09:30 AM, 10:30 to 12:00 PM, 04:30 to 06:00 PM)

OPPE2: Sunday, August 25, 2024 (10:00 AM - 11:30 AM, 01:30 PM - 03:00 PM, 04:30 PM - 06:00 PM)

For Both OPPE1 & OPPE2, out of the 3 slots one will be allocated from IITM. Please keep yourself free on the dates given.

# OPPE 1 will be scheduled for ALL who enrolled to the course Eligibility to appear for the OPPE 2:

If the Average of the scores of the best 5 out of the first 6 Weekly programming assignments (GrPA) >= 40/100

#### AND

Average of the best 5 out of the first 9 weekly assessments (objective and programming) scores >= 40/100

then we will schedule the OPPE2 for you. If you do not satisfy this, we will not schedule OPPE2 for you.

#### Eligibility to appear for the final exam is as follows:

Average of the best 5 out of the first 9 weekly assessments (objective and programming) scores >= 40/100

Eligibility to obtain the final course grade: Both the conditions below should be satisfied.

Attending the end term exam AND

Minimum score to be obtained in one of the programming exams (OPPE1, OPPE2) should be  $\geq$  40/100 -

#### The calculation of Final course Score for eligible students is as follows:

GAA1 = Average score in Best 10 objective assignments out of First 11 graded objective assignments

GAA2 = Average score in Best 10 programming assignments out of First 11 graded programming assignments

Qz1 = score in Quiz I (0, if not attempted) - in centre

PE1 = score in OPPE1 (0, if not attempted) - programming exam 1

PE2 = score in OPPE2 (0, if not attempted) - programming exam 2

F = score in final exam

# T = 0.1 GAA1 (objective) + 0.1GAA2 (programming) + 0.1Qz1+ 0.4F+ 0.25 max(PE1, PE2) + 0.15 min(PE1, PE2) — capped to 100

	OPE1/ OPE2	ET	Т	Grade	Possibilities for student
1.	Absent	Absent	-	U	Repeat the course.
2.	Absent	Present	>=35	I_OP	Complete OPE alone in next term;Both oppes will be scheduled. GA, quiz and ET marks will be carried over OR Repeat the entire course
3.			<35	U	Repeat the entire course
4	Present score< 40/100	Present	>=40	I_OP	Complete OPE alone in next term, Both oppes will be scheduled. GA, quiz and ET marks will be carried over OR Repeat the entire course
5			<40	U	Repeat the entire course
6		Absent	-	I_BOTH	Complete ET and OPE in next term, Both oppes will be scheduled. GA and quiz marks will be carried over OR Repeat the entire course
7	Present Score > 40/100	Absent	-	I	Complete ET alone in next term; OPPE will NOT be scheduled. GA, quiz and OPPE marks will be carried over OR Repeat the entire course

orace de per the retail desire i	8	Present		Grade as per the Total score T
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## 8. Statistics for data science 2

Quiz 1: July 7th, 2024 Quiz 2: August 4th, 2024 End term: Sep 1st 2024

Above to be attended in person at designated centres.

**Eligibility to write the final exam:** Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100 AND attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam

The calculation of Final course Score for eligible students is as follows:

GAA = Average score in Best 10 out of First 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2) + Bonus marks for Extra activity - capped to 5

(Though the W12 assignment score is not included in GAA, W12 contents will be included for the final exam. Hence please practice and submit on W12 assignment).

**Bonus marks for course specific activity:** 5 marks in total - 3.75 marks for weekly extra activity + 1.25 marks based on the quality of activity (Instructors' and Faculty's discretion)

#### **Extra Activity for Statistics-II Assignment Deadline**

Note: If a student does not complete the required number peer review, he will be awarded 0 marks for that activity even if he/she submitted the activity.

Extra activity	Release date for extra activity	End date of submission	End date for peer review
Extra Activity 1	Friday, May 31, 2024	Wednesday, June 12, 2024	Sunday, June 16, 2024
Extra Activity 2	Friday, May 31, 2024	Wednesday, June 12, 2024	Sunday, June 16, 2024
Extra Activity 3	Friday, June 14, 2024	Wednesday, June 26, 2024	Sunday, June 30, 2024
Extra Activity 4	Friday, June 28, 2024	Wednesday, July 10, 2024	Sunday, July 14, 2024
Extra Activity 5	Friday, July 12, 2024	Wednesday, July 24, 2024	Sunday, July 28, 2024
Extra Activity 6	Friday, July 26, 2024	Wednesday, August 7, 2024	Sunday, August 11, 2024

# Suggested pathway to register and study Diploma level courses:

Most aggressive pathway - completing in 4 terms - ONLY IF YOU ARE DOING THIS AS FULL TIME AND NOTHING ELSE AND CAN SPEND **70 HRs PER WEEK** MINIMUM

Comfortable pathway - 6 terms - 2 years : Suggested for students and working professionals doing this along with another degree or their job (40hrs/week)

Those from non technical backgrounds, new to programming or have busy schedules, recommended to take 6 or 7 terms for the 2 diplomas.

Same sequence of courses are suggested if you are taking only the Diploma in programming or Diploma in DS separately too.

#### Maximum number of terms to complete both Diplomas: 12

For MLT, MLF is a co-requisite. For MLP, MLT is a pre-reg. For App dev 1 proj, App dev 1 Th is coreq. For App dev 2 Theory, App dev 1 proj is a co-req. 7 terms Term1 Term2 Term3 Term 4 Term 5 Term 6 Term 7 DBMS MAD 1 Th Mad 1 Proj BDM Th BDM Proj Java PDSA MLF MLT MLP MLP proj BA TDS SC Mad 2 Th Mad 2 pro 9с 8c 6c 8c 6с 7с 8c 6 terms Term2 Term3 Term 4 Term 5 Term 6 Term1 **DBMS** MAD 1 Th Mad 1 Proj BDM Th BDM Proj TDS **PDSA** MLF MLP MLP proj BA MLT SC Mad 2 Th Mad 2 pro Java 8c 11c 10c 10c 8c 7c 5 terms Term2 Term1 Term3 Term 4 Term 5 **DBMS** MAD1 Proj MAD2 Proj BDM Proj MLP proj MAD1 Theory MAD2 Theory MLT MLP BA PDSA MLF SC, TDS BDM Th Java 10c 10c 12c 10c 12c 4 terms Term1 Term2 Term3 Term4 MAD2 Proj Java DBMS MAD1 Proj MAD1 Theory MAD2 Theory BA SC MLF BDM Theory BDM Proj TDS PDSA MLP MLP Proj MLT 16c 14c 12c 12c

Even with a relaxed pathway, you should complete a maximum of 7 or 8 terms.

The new rules for those entering Diploma Level in May 2024: Complete 3/6/9/12 courses and 1/2/3/4 projects at the end of 3/6/9/12 terms.

If you wish to do the Diploma in programming and Diploma in data science one after the other and not mix up the courses, here are the suggested pathways.

	Dip	in Prog separat	tely	
	Term 1	Term 2	Term 3	Term 4
2 terms	DBMS	App Dev 2 Th		
	App Dev 1 Th	App Dev 2 Proj		
	PDSA	SC		
	App Dev 1 proj	Java		
3 terms	DBMS	App Dev 1 proj	App dev 2 proj	
	App Dev 1	App Dev 2 Th	Java	
		PDSA	SC	
4 terms	App Dev 1	App Dev 2	PDSA	Java
	DBMS	App Dev 1 proj	App Dev 2 proj	SC
	Di	pl in DS separat	ely	
	Term 1	Term 2	Term 3	Term 4
2 terms	MLF	MLP		
	MLT	BA		
	BDM	TDS		
	BDM project	MLP proj		
3 terms	MLF	MLP	ВА	
	MLT	BDM	MLP proj	
		TDS	BDM proj	
4 terms	MLF	MLT	MLP	ВА
	BDM	BDM proj	TDS	MLP proj

	OPPE SCHEDULE (MAY 2024 TERM)										
ım	<b>Fiming</b>	ion	1S	SA	а		P	•		Big Data	
	SUNDAY JULY 21 2024										
	to 09:30 AM	A									
	to 12:00 PM	3									
E 1 (1)	to 01:00 PM										
·	to 03:30 PM	;									
	to 06:30 PM						ı				
		SUN	DAY AL	JGUST 1	8 2024						
E 2 (1)	1 to 10:00 AM										

	M to 12:00 PM							
	M to 12:30 PM			<b>A</b>				
	M to 03:30 PM							
	M to 04:00 PM			3				
	M to 06:30 PM					k.		
		SUN	DAY AL	JGUST 2	5 2024			
	1 to 10:00 AM							
	M to 12:00 PM							2 <b>A</b>
	И to 01:00 PM	4						
E 2 ( 2)	M to 12:00 PM							
	M to 03:30 PM	3						
	M to 06:30 PM							
	M to 06:00 PM							

### **PLEASE NOTE:**

**Python exams** will be scheduled for the students in one of the 3 slots given here. Please keep yourself available on that date.

Grading pattern has changed for Python this term - Weekly timed assignments is removed.

#### OPPEs for all Diploma courses will be scheduled in the following way:

If you have 2 courses with OPPEs, both will be scheduled on August 18 2024. If you have 3 courses with OPPEs, OPPEs for 2 courses will be scheduled on August 18 2024 and OPPE for 1 course will be scheduled on August 25 2024.

If you have 4 courses with OPPEs, OPPEs for 2 courses will be scheduled on August 18 2024 and OPPE for the other 2 courses will be scheduled on August 25 2024.

Pattern for OPPE for System Commands has changed from previous terms - Please check.

Only if you have a conflicting engagement on 18 August 2024, which cannot be changed or moved and you submit a request to us with proof, we will check the proofs and if found valid, we will make changes to the above allocation. Since both August 18 and August 25 are Sundays, please ensure you keep it free, especially as per the time slots given here for giving the exams.

June 30: We will release the slots allocated for each student for their registered subjects. If eligibility is specified as part of the grading document to attend the exam and if you are eligible, exam will be scheduled as per the slots allocated.

Please choose courses for May 2024 term keeping all these points in mind.

# **Diploma level courses**

# 1. Machine Learning foundations (DS Diploma)

Above to be attended in person at designated centres.

**Eligibility to attend final exam:** Average of the best 5 out of the first 9 weekly assignment scores >= 40/100 and attending at least one of the 2 quizzes in the centre

Eligibility to get the final course grade: Attending the end sem exam

The calculation of Final course Score is proposed as follows:

GAA = Average score in Best 10 out of First 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

Overall score for eligible students:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

(Though the W12 assignment score is not included in GAA, W12 contents will be included for the final exam. Hence please practice and submit on W12 assignment).

# 2. Machine Learning Techniques (Diploma in DS)

Quiz 1: July 7th, 2024 Quiz 2: August 4th, 2024 End term: Sep 1st 2024 Above to be attended in person at designated centres.

**Eligibility to attend the end term exam:** Average of the best 5 out of the first 9 weekly assessments (objective) scores >= 40/100 and attending at least one of the 2 quizzes in the centre

Eligibility to get the course grade: Attending the end sem exam

GAA = Average score in Best 10 out of First 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

Total course score T = 0.1 GAA for Weekly MCQ + 0.4F + Max(0.25 Qz1 + 0.25 Qz2, 0.4max(Qz1,Qz2))

(Though the W12 assignment score is not included in GAA, W12 contents will be included for the final exam. Hence please practice and submit on W12 assignment).

# 3. Machine Learning Practice (Diploma in DS)

Quiz 1: July 7th, 2024 Quiz 2: August 4th, 2024 End term: Sep 1st 2024

Above to be attended in person at designated centres.

Eligibility to attend the end term exam: Average of the best 5 out of the 9 weekly assessments (objective and programming) scores >= 40/100 and attending atleast one of the 2 quizzes in the centre

**Eligibility to get the course grade:** Attending the end sem exam AND one programming exam with score in programming exam >= 40/100

Online programming exam 1: – (OPE1) **July 21 2024 (04:30 to 06:30 PM IST), Sunday** Online programming exam 2: – (OPE2) **August 18th 2024 (04:30 to 06:30 PM IST), Sunday** 

GAA = score in Best 10 out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

OPE1 - Score in online remote proctored programming exam

OPE2 - Score in online remote proctored programming exam

NPE1, NPE2 - Score in Non proctored programming exam

F = score in final exam

Total course score T = 0.1GAA + 0.3F + +0.15 OPE1 + 0.15 OPE2 + Max(0.15Qz1 + 0.15Qz2, 0.2max(Qz1,Qz2)) + Bonus (0.025 NPE1 + 0.025 NPE2)

	OPE1/OPE2	ET	Т	Grade	Next steps
1.	Absent	Absent	-	U	Repeat the entire course
2.	Absent (OPE1 and OPE2=0)	Present	>=35	I_OP	Complete OPE alone in next term, Both OPPEs will be scheduled. GA, quiz and ET marks will be carried over OR Repeat the entire course

3.			<35	U	Repeat the entire course
4	Present score< 40/100	Present	>=40	I_OP	Redo OPE alone next term. Both OPPE will be scheduled, GA, quiz and ET marks will be carried over OR Repeat the entire course
5			<40	U	Repeat the entire course
6		Absent	-	I_BOTH	Redo End term exam and OPE alone in next term. Both OPPE will be scheduled for you. GA, quiz will be carried over OR Repeat the entire course
7	Present Score > 40/100	Absent	-	I	Complete ET alone in next term, OPPE will NOT be scheduled; GA, quiz and OPPE marks will be carried over OR Repeat the entire course
8		Present			Grade as per the Total score T

# 4. Business Data management (DS Diploma)

NO Quiz 1 NO Quiz 2

End term: Sep 1st 2024: to be attended in person at designated centres.

There will be no Quiz 1 or Quiz 2 for BDM in the May 2024 term.

There will be 11 weekly assignments designed for this of 10 Marks each.

Eligibility to take the final exam: Average of the best 5 out of the first 9 weekly assignment scores  $\Rightarrow$  40/100

**Eligibility to get the final course grade:** Attending the end sem exam AND average of best 7/11 weekly assignments >= 30/70

Components of evaluation for final course score T=0.7GA +0.30F

70 marks (GA)

Totally 11 weekly assignments will be released - 10 Marks each Out of 11 assignments given, best 7 will be considered Assignment marks= 7x10 = 70 marks

**30 marks(F):** End sem exam (in person in centers)

No Bonus Marks for BDM

# 5. Business Analytics (Diploma in DS)

Above to be attended in person at designated centres.

There will be no regular weekly graded assignments being designed for this course. Instead there are 3 course assignments.

#### Eligibility to take the final exam:

Submission of at least 1 out of the first two assignments - Asgn 1 and Asgn 2

Eligibility to get final course grade: Attending the end term exam AND End term exam score F >= 10/40

20 marks: In center quiz - 20 marks (Qz)

Quiz 1 will be from Week 1-4 Quiz 2 will be from Week 3-8

Quiz Marks = 0.7\*Max(Qz1, Qz2) + 0\*3Min(Qz1, Qz2)

**40 Marks:** 3 Assignments for a total of 40 marks:

Assignment 1: 20 marks Assignment 2: 20 marks Assignment 3: 20 marks

A = Sum of the Best 2 out of (Assignment 1, Assignment 2, Assignment 3)

#### 40 Marks (F): End Term Exam

Will be set to 45 marks and students can attempt all.

Marks obtained will be capped at 40.

The syllabus for the End term exam will be the contents covered in Weeks 1 to 12

#### **Business Analytics (BA) Assignment Deadlines**

Week no.	Release date	Submission date	
5	Friday, June 28, 2024	Sunday, July 14, 2024	
6	Friday, July 5, 2024	Monday, July 22, 2024	
9	Friday, July 26, 2024	Sunday, August 11, 2024	

# 6. Tools in Data Science (Diploma in DS)

No in centre quizzes for this course.

End term exam: Sep 1st 2024 - to be attended in person at designated centres.

ROE1: July 20 2024 8PM

Eligibility to attend the end term exam: Average of best 3 out of the first 5 weekly

assessment scores >= 40/100

Eligibility to get the course grade: Attending end-term exam

**GAA** = score in best 5 of 6 weekly assignments on the portal (open internet, MCQs)

**F** = Final end term exam (no internet, in-person, mandatory).

P1 and P2 will have two components - Submissions and peer reviews with weightage 80:20.

Final course score T = 0.1GAA + 0.2 ROE1 + 0.2 P1 + 0.2P2 + 0.3F

	Assessment	Open date	Submission date	Peer Review Date
ROE1	Remote Online Exam 1 (45 mins, open internet, Objective assessments)	8:00 PM July 20,2024	8:45 PM July 20,2024	-
P1	take home project 1 (open internet)	Friday, June 28, 2024	Monday, Jul 8, 2024	Sunday, Jul 14, 2024
P2	take home project 2 (open internet)	Friday, July 12, 2024	Sunday, July 21, 2024	Sunday, July 28, 2024

# 7. Programming Data structures and algorithms using Python (PDSA) - Diploma in Programming

**Weekly assignments:** Mix of autograded assignment and Programming assignments Quiz 1: July 7th, 2024 Quiz 2: August 4th, 2024 End term: Sep 1st 2024

Above to be attended in person at designated centres.

**1 programming exam of 120 minutes duration** - Online remote proctored - (August 18th 2024) (If you are absent for the OPPE, then Repeat OPPE will NOT be provided in the next term as this does not impact passing the course, only total course score)

**Eligibility for attending end sem exams:** Average of the best 5 out of the first 9 weekly assessments (objective and programming) scores >= 40/100 AND attending atleast one of the 2 quizzes in the centre

Eligibility to get the final course grade: Attendance in the End sem exam

The calculation of Final course Score is proposed as follows:

GAA = Average score in Best 9 out of First 10 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

OP = Score in Online proctored remote exam

F = score in final exam

Overall score for eligible students:

T = 0.1GAA + 0.4F + 0.2OP + max(0.2max(Qz1, Qz2), (0.15Qz1 + 0.15Qz2))

# 8. Database management system (DBMS) - Diploma in Programming

Quiz 1: July 7th, 2024 Quiz 2: August 4th, 2024 End term: Sep 1st 2024 Above to be attended in person at designated centres.

**Eligibility to write end term exam:** Average of the best 5 out of the first 9 weekly assessments scores >= 40/100 and attending at least one of the 2 quizzes in the centre

#### Eligibility to get final course grade:

Attending the End sem exam <u>AND</u> scoring a minimum of 35% in the OPE (overall) <u>AND</u> Getting the question based on Python-DB connectivity correct is mandatory to get the course grade. (The OPE will be based on SQL query(Week 2-3) and Python-Database connectivity(Week 7).) If you dont get the 35% in OPE OR dont pass the Python-DB connectivity question, you will be given Fail in the OPE.)

Assessment Type	Method	Proctoring	% of Total Score T
Week 1-12	100% objective	NA	GA
Weekly assessments, Weeks 2,3	PostgreSQL assignments will be considered.	None	GAA2
Week 7	Programming assignment	NA	GAA3
Quiz 1 : Weeks 1-4 July 7th, 2024	Objective	In person at TCS centres	Qz1 Qz2
Quiz 2 Weeks 1-8 August 4th, 2024	Objective	In person at TCS centres	
Online remote proctored exam (OPE1) August 18 2024	Testing will be on SQL queries and python-database connections - Students will be given the option to choose the date and slot. Based on logistics the slots will be allocated.	Online remote proctored	OPE1
End Sem Sep 1 2024	100% Objective	In-person at TCS centres	F

The calculation of Final course Score is proposed as follows:

GAA1 = Average score in Best 10 out of First 11 weekly graded assignments

GAA2= Average score of week 2 and 3 SQL based assignments

GAA3= Average score of week 7 programming assignment

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

OPE1 - Score in online remote proctored programming exam

F = score in final exam

Overall score for eligible students:

# T = 0.04GAA1 + 0.03GAA2 + 0.03GAA3 + 0.2OP + max (0.45F+0.15max(Qz1, Qz2), 0.4F+(0.10Qz1+0.20Qz2))

	OPE	ET	Т	Grade	
1.	Absent	Absent	-	U	Repeat the course.
2.	Absent	Present	>=35	I_OP	Complete OPE alone in next term (only one oppe in this course) GA, quiz and ET marks will be carried over OR Repeat the entire course
3.			<35	U	Repeat the entire course
4	Present score< 35/100 OR Python-DB	Present	>=40	I_OP	Complete OPE alone in next term (only one oppe in this course) GA, quiz and ET marks will be carried over OR Repeat the entire course
5	question Incorrect.		<40	U	Repeat the entire course
6		Absent	-	I_BOTH	Complete ET exam and OPE in next term, (only one oppe in this course) GA and quiz marks will be carried over OR Repeat the entire course
7	Present Score > 35/100 AND Python-DB	Absent	-	I	Complete ET alone in next term; GA, quiz and OPPE marks will be carried over OR Repeat the entire course
8	question correct.	Present		Actual grade	Grade as per the Total score T

# 9. Application development - 1 (Diploma in programming)

Quiz 1: July 7th, 2024 Quiz 2: August 4th, 2024 End term: Sep 1st 2024 Above to be attended in person at designated centres.

**Eligibility to write end term exam:** Average of the best 5 out of the first 9 weekly assessments (objective) scores >= 40/100 and attending atleast one of the 2 quizzes in the centre

Eligibility to get final course grade: Attending the End sem exam

Assessment Type	Method	Proctoring	Contribution to final score
Lab assignments, Weeks 2 - 7	100% Lab assignments auto evaluated via framework (weekly assignments)	None	<b>GLA</b> Best 5 out of 6, [2,3,4,5,6,7]
Objective Assignments, Weeks 1 - 12	100% objective	None	GA : Best 10 out of First 11
Quiz 1 and 2 , July 7th, 2024 and August 4th, 2024	Objective and subjective questions	In person at TCS centers	Qz1, Qz2
End Sem, Sep 1st 2024	Objective	In person at TCS centers	F

Final course score T = 0.15 GLA + 0.05 GA + Max(0.35 F + 0.2 Qz1 + 0.25 Qz2, 0.4 F + 0.3 Best(Qz1,Qz2))

# 10. Programming concepts using Java (Diploma in programming)

Above to be attended in person at designated centres.

OPPE: All students will be allocated for OPPE on July 21

**Eligibility to attend the end term exam:** Average of the best 5 out of the first 9 weekly assessments (objective and programming) scores >= 40/100 and attending at least one of the 2 quizzes in the center

**Eligibility to get the course grade:** Attending the end term exam AND one programming exam with a minimum score of 30%.

Assessment Type	Components	Mode	Code
Weeks 1 - 12 Weekly Objective Assessments	Objective Questions	On Course Portal	
Weeks 2 - 8 Weekly Programming Assignments	Programming Questions	On Course Portal	GAA
Quiz 1 - July 7th, 2024 Weeks 1-4	Objective + subjective	In TCS centers	Qz1 Qz2

Quiz 2 - August 4th, 2024 Weeks 1-8			
Online Proctored Examination 1 July 21 (syllabus weeks 1-6)	Programming Questions Any one of the 2 slots will be allocated based on student	On Course Portal	PE1 PE2
Online Proctored Examination 2 18th Any one slot will be allocated (syllabus weeks 1-9)	preference and logistics		
End Sem - Sep 1st 2024 Weeks 1-12	Objective	In TCS centers	F

	OPE1/OPE2	ET	Т	Grade	
1.	Absent	Absent	-	U	
2.	Absent (PE1 and PE2=0)	Present	>=35	I_OP	Complete OPE alone in next term, GA, quiz and ET marks will be carried over OR Repeat the entire course
3.			<35	U	Repeat the entire course
4	Present score< 30/100	Present	>=40	I_OP	Redo OPE alone in next term, GA, quiz and ET marks will be carried over OR Repeat the entire course
5			<40	U	Repeat the entire course
6		Absent	-	I_BOTH	Redo End term exam and OPE alone in next term. GA, quiz will be carried over. OR Repeat the entire course
7	Present Score > 30/100	Absent	-	I	Complete ET alone in next term; OPPE will NOT be scheduled. GA, quiz and OPPE marks will be carried over OR Repeat the entire course
8		Present			Grade as per the Total score T

# **11. System** commands (Diploma in programming)

Quiz 1: July 7th, 2024 NO Quiz 2 End term: Sep 1st 2024

Biweekly Programming Tests (BPT) Release Dates June 15, June 29 July 13, July 27, August 10 2024

Biweekly Programming Tests (BPT) Due Dates June 16, June 30, July 14, July 28, August 11 2024

Quiz 1 Syllabus - Week 1 to Week 4

Above to be attended in person at designated centres.

#### Eligibility to attend the end term exam:

Average of the best 7 out of the first 9 weekly assessments (objective and programming) scores >= 40/100 and successfully attempt at least 3 out of first 4 BPTs

#### Eligibility to get the course grade:

Attending the end semester exam and one programming exam (OPPE), with a score >= 40/100 We are NOT going to have 2 OPPEs going forward. It is going to be ONE OPPE based on weeks 1-9.

Students have to mandatorily attend the OPPE on the first date.

If you fail in this, you get a chance to reappear the next weekend. So you get 2 chances to attempt the exam.

If the first date is inconvenient due to a clash with some other engagement, then you can apply for a postponement to the second date providing sufficient proof. If this is accepted, your exam will be moved to the second date but if you fail in this, you will not get another chance to reattempt. You will have to do it in the subsequent term.

NPPE [Syllabus Weeks 1-9]: Aug 16, 2024

GAA = Average of score in Best 7 out of all weekly graded assignments

BPT = Biweekly Programming Tests

Each BPT have 4 programming questions

Will be released on Saturday 12.00 am and closed on Sunday 11:59 pm (2 days)

Will be conducted in the course VM

Qz1 = score in Quiz I (0, if not attempted)

OPE = Score in online remote proctored programming exam

One additional attempt will be provided only if score < 40 in first attempt

F = score in End Term exam

#### Final course score T = 0.15 GAA + 0.2 Qz1 + 0.3 OPE + 0.3 F + 0.2 BPT — (Capped to 100)

	OPE1/OPE2	ET	T	Grade	
1.	Absent	Absent	-	U	

2.	Absent (OPE1 and OPE2=0)	Present	>=35	I_OP	Complete OPE alone in next term, Both attempts will be given; GA, quiz and ET marks will be carried over OR Repeat the entire course
3.			<35	U	Repeat the entire course
4	Present score< 40/100	Present	>=40	I_OP	Complete OPE alone in next term, Both attempts will be given; GA, quiz and ET marks will be carried over OR Repeat the entire course
5			<40	U	Repeat the entire course
6		Absent	-	I_Both	Redo End term exam and 2 OPE alone in next term; GA, quiz will be carried over OR Repeat the entire course
7	Present Score > 40/100	Absent	-	I	Complete ET alone in next term; OPPE will NOT be given in this case. GA, quiz and OPPE marks will be carried over OR Repeat the entire course
8		Present			Grade as per the Total score T

# **12. Application Development** - 2 (Diploma in programming)

Above to be attended in person at designated centres.

**Eligibility to write end term exam:** Average of the best 5 out of the first 9 weekly assessments scores >= 40/100 and attending at least one of the 2 quizzes in the centre

Eligibility to get final course grade: Attending the End sem exam

Assessment Type	Method	Proctoring	Percentage contribution
Weekly assessments	100% objective	None	GAA1 = 5 marks

Weeks 1 - 11			
Programming Assignments Weeks 1 and 2	Auto Evaluated	None	GAA2 = 5 marks
Quiz 1 - July 7th, Qz1 Quiz 2 - August 4th, Qz2	Objective + Descriptive	In person at TCS centers	Qz1, Qz2
End Sem - Sep 1st, F	100% Objective	In person at TCS centers	F

GAA1 = Average score in Best 10 out of First 11 weekly graded assignments

GAA2 - Average of weeks 1 and 2 programming assignments

Final course score T = 0.05 GAA1 + 0.05 GAA2 + Max(0.35 \* F + 0.25 \* Qz1 + 0.3 \* Qz2, 0.5 \* F + 0.3 \* Best(Qz1, Qz2))

# **Project Courses:**

Project courses are now for 2 credits each - BDM, MLP, App Dev 1 and App Dev 2.

The Project courses are not part of CCC. The CCC is only for theory courses.

App Dev1 Theory is a co-requisite for App Dev 1 project.

App Dev1 project is a corequisite for App Dev2 Theory.

App Dev2 Theory is a corequisite for App Dev2 Project.

MLP course is a co-requisite for MLP project.

BDM course is a co-requisite for BDM project.

MLP: If you have completed MLP Theory course in jan 2024 or May 2024 and complete MLP project in May 2024, we will evaluate your project for 105 marks and cap it to 100. This policy is subject to change in the Sep 2024 term.

App dev 1 and 2: If you have completed Appdev1/Appdev2 Theory courses in jan 2024 or May 2024 and complete the corresponding projects in May 2024, we will evaluate your project for 120 marks and cap it to 100. This policy is subject to change in the Sep 2024 term.

BDM project will be evaluated only out of 100 marks for all students, irrespective of the term submitted in.

Each project has its own modalities and processes to be followed.

There will be fortnightly assessments configured in the MLP project course alone that you have to submit. We will be using this information to cross check your engagement in the course.

Please check your course announcements for the project timelines and make the submissions accordingly.

#### **Guideline documents:**

#### BDM:

#### 1. General instructions on preparing report :

https://docs.google.com/document/d/e/2PACX-1vTzF1dpoe40s7mSD633u\_fTE1knPer32LyFxNwb978rGtMDO45Hny4KLmN2kKmN0A/pub

2. Capstone Project Rubrics for Analysis with Primary Data

https://docs.google.com/document/d/e/2PACX-1vShnBLNHmdbVlpoK9y0Fb\_5ew5rKNJpYmAJ3 HJG4rK1rRWwnKbzzqKGJcX9iGFctA/pub

#### 3. Capstone Project Rubrics for Analysis with Secondary Data

https://docs.google.com/document/d/e/2PACX-1vRuykh6558Gsw5yZmwu3xs\_sbF97aMcC2NN 2YEnd4D5xS8mKUQn5onkKuzOyzO1xA/pub

#### MLP:

https://docs.google.com/document/d/e/2PACX-1vRZo5Ztme5VrT\_P1Mybt5FT8ulJdn\_ySp9jAZd7hV8j7lNEFcZj7yL\_Espdgp8Cj6J5Mn1jzalKZkt-/pub

#### Appdev1:

https://docs.google.com/document/d/e/2PACX-1vQpC1dcw3suVePh-AciGbgxETnvlJv6c1N1qwjCSf FqX1HZ\_HIXjJxS8RYuUHfTjKTHRd1c7Xx6Ytw-/pub

#### Appdev2:

 $\frac{https://docs.google.com/document/d/e/2PACX-1vQDIEjqdQqzVcpWhG4lko72yclL4E3-ilDh2wapVl90}{h7TSkKMdzgqRKZ0usXnDY97xwVfrZffh4lKl/pub}$ 

#### Rules regarding project fees:

The fee paid for each of the 4 projects is valid for 2 terms.

#### Fee details for Project:

ree details for Project.				
Category	Payment	Category Waiver	Grade	
New Registration	2500	Yes	Actual grade	
Fee for Level 2 reattempt (only for MLP) (There is no reattempt for Level2 for Appdev1 and Appdev2)	1000	No	Actual grade	
If the project is not completed in the registered term - the fee is retained for the subsequent term, grade will be marked as I.  If the project is not completed in the second term also, then the registration becomes invalid and the student has to pay the full fees again, you will get a U grade.	2500	Yes	I or U	
If the student fails in the project, Students have to redo the project by registering to the project by paying the full fees	2500	Yes	U	
If the student fails in the project or the submission is found to be Plagiarized, Student maybe subjected to disciplinary action Student has to redo the project by registering to the project by paying the full fees.	2500	Yes	U	

# Timelines (Appdev1, Appdev2 & MLP, BDM projects):

Here are the timelines for students doing projects in the May 2024 terms who will be entering Degree level in the Sep 2024 term. Without completing the 12 courses and 4 projects, you cannot start degree level courses from Sep 2024 onwards.

For entering the Degree level in Sep 2024, you have to complete ALL projects and vivas by August 2024.

BDM project final submission has to be done and approved by July/August 2024 so that viva can be over in August 2024.

Project grade for all the courses will be pushed on/before Aug 31st.

Viva planner - Jan 2024 term:

https://docs.google.com/spreadsheets/d/e/2PACX-1vS9keZ1fpyfSsQYXWeKrol1-t66dbz4l552NQ4hvwFguYVdQCgloo4i8pK7QgUybfaYtRSonHDbbDw9/pubhtml

Students who completed App dev1, App dev2, MLP and BDM in Sep 2021/Jan 2022 terms: If you complete the 6 courses and 2 projects of any of the two Diploma, you will get the Diploma certificates. But your credits will not be 27 for this Diploma but 23 or 25 depending on how many of these courses were completed in these 2 terms. The projects done as part of the courses of Sep 2021/Jan 2022 will not get the 2 credits. So there is no issue with the Diploma level. When you come to the BSc level, 114 credits are required to obtain the BSc certificate. Hence this deficit of 2/4/6/8 credits will have to be made up by taking more elective courses offered by the IITM BS program.

# **Degree Level courses**

#### Level of the course:

Please check the course code. The first digit represents the level of the course. Eg: CT is CS1001 is a 1 level course.

Deep Learning is CS3004 and is a 3 level course.

Reinforcement Learning is CS4002 is a 4 level course.

#### **BSc level:**

It is now mandatory that students have to complete both the core pairs and SPG in the BSc level. Credits = 20

All 8 credits can be earned from IITM BS courses or NPTEL (maximum upto 4 credits from Table 2) or if there is an option to credit campus courses, that too can be done.

This will be implemented wef Sep 2023 for the batch that enters the degree level in Sep 2023.

#### **BS** level:

2 courses in the level 4 or higher should be mandatorily completed in each of the BP and BD categories. Please refer course category in <a href="table1">table1</a>

Out of the remaining 12 credits, it is MANDATORY to earn 4 credits in the HS/MG category. HS/MG can come from inhouse electives or from NPTEL-Table 3.

Remaining credits are from any of the other in-house/campus electives or Apprenticeship electives.

#### **Apprenticeship:**

Apprenticeship is **completely optional.** Students can complete the BS level by just doing only course work.

Recommendation on taking additional courses and learning more skills not taught directly in the program curriculum.

C++ programming - Prof Partha Das, IIT Kgp -

https://onlinecourses.nptel.ac.in/noc23\_cs50/preview

Introduction To Haskell Programming - Prof. S. P Suresh CMI -

https://onlinecourses.nptel.ac.in/noc23\_cs94/preview

Competitive programming - Prof. Neeldhara Misra, IIT Gn -

https://onlinecourses.nptel.ac.in/noc23\_cs30/preview

Cloud computing - Prof SK Ghosh, IIT Kgp -

https://onlinecourses.nptel.ac.in/noc23 cs42/preview

Blockchain and its applications - Prof. Sandip Chakraborty & Prof. Shamik Sural,

IIT Kgp - https://onlinecourses.nptel.ac.in/noc23\_cs47/preview

Compiler Design - Prof. Santanu Chattopadhyay, IIT M -

https://onlinecourses.nptel.ac.in/noc23\_cs14/preview

We are also collaborating with the Microsoft certification program team to offer their courses for our students at discounted rates. Would be good to complete some cloud certifications from this too when we offer it.

It is important you learn more on programming and data science outside of what the curriculum offers and strengthen your resume.

# 1. Software Testing

Above to be attended in person at designated centres.

Eligibility to write end term exam: Average of best 5 out of first 9 weekly assessments scores

>= 40/100 and attending at least one of the 2 guizzes in the centre

Eligibility to get final course grade: Attending the End sem exam

#### Overall score for eligible students:

GAA = Average score in Best 10 out of 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F - score in End Term exam

T = 0.1GAA + 0.4F + 0.25Qz1 + 0.25Qz2

# 2. Software Engineering

NO Quiz 1 Quiz 2: Aug 4 2024 End term: Sep 1, 2024

Above to be attended in person at designated centres.

#### Eligibility to write end term exam:

Average of the best 5 out of the first 7 weekly assignment scores >= 40/100 AND submission of Group project Milestone [1-3]

**Eligibility to get final course grade:** Attending the End term exam AND Submission of group project (All milestones) is mandatory for course grade AND score in group project > 0

#### Overall score for eligible students:

GAA = score in Best 9 out of first 10 graded assignments

Qz1 = NOT THERE IN THIS COURSE

Qz2 = score in Quiz II (0, if not attempted)

Group Project- Milestone 1-3 (After week 6) - GP1

Group project - Milestone 4-6 (After week 12) - GP2

Project Presentation - PP

Course participation activity - CP

F - score in End Term exam

T = 0.05GAA + 0.2Qz2 + 0.4F + 0.1GP1 + 0.1GP2 + 0.1PP + 0.05CP

(More details about the Group project will be given in the course).

# 3. Deep Learning

Quiz 1: July 7th, 2024 Quiz 2: August 4th, 2024 End term: Sep 1st 2024 Above to be attended in person at designated centres.

#### **Bonus Marks:**

The average score of all (3) programming activity assignments will be used as Bonus marks. Maximum bonus marks will be 5.

**Eligibility to write end term exam:** Average of best 5 out of first 9 weekly assessments scores >= 40/100 and attending at least one of the 2 quizzes in the centre

**Eligibility to get final course grade:** Attending the End sem exam

#### Overall score for eligible students:

GAA = Average score in Best 10 out of First 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F - score in End Term exam

T = 0.1GAA + Max((0.4F + 0.25Qz1 + 0.25Qz2), 0.5F + 0.3 Max(Qz1,Qz2)) + Bonus (as applicable)

# 4. Al: Search Methods for Problem Solving

Above to be attended in person at designated centres.

Eligibility to write end term exam: Average of best 5 out of first 9 weekly assessments scores

>= 40/100 and attending at least one of the 2 guizzes in the centre

Eligibility to get final course grade: Attending the End sem exam

Overall score for eligible students:

GAA = Average score in Best 10 out of First 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F - score in End Term exam

T = 0.1GAA + max (0.45F + 0.35max(Qz1, Qz2), 0.4F + 0.25Qz1 + 0.25Qz2))

Bonus marks for those who pass the course: 5

Programming Assignment 1 will be released between Quiz 1 and Quiz 2. The dates will be announced in the forum. This assignment will be evaluated offline.

# 5. Strategies for Professional Growth

Quiz 2: August 4th, 2024 End term: Sep 1st 2024

Above to be attended in person at designated centres.

**Eligibility to write the final exam:** Average of best 5 of the first 9 weeks' graded assignments; >= 40/100

Eligibility to obtain the final course grade: Attending the end-term exam

The calculation of the final course score for eligible students is as follows:

GAA = Average of best 10 of the 11 weeks' graded assignments

GP = score in Group Project (0, if not participated)

Qz2 = score in Quiz II (0, if not attempted), based on weeks 1-7 (Subjective & Objective)

F = score in final exam, based on weeks 1-12 (Subjective & Objective)

T = Total score (out of 100)

T = 0.15\*GAA + 0.25\*GP + 0.25\*Qz2 + 0.35\*F

Project:

Milestone	Timeline	Submission Date	Marks	Evaluation and Score Release
I	Week 1 to Week 3	End of Week 3	50 marks	Before Week 5
II	Week 4 to Week 6	End of Week 6	50 marks	Before End-Term

More details about the Group Project will be given in the course.

### 6. Data Visualization

https://onlinedegree.iitm.ac.in/course\_pages/BSCCS4001.html

Quiz 1 : July 7 2024 Quiz 2: August 4th, 2024

Above to be attended in person at designated centres.

End term exam: Not in centre, project based with presentation and viva

**Eligibility to attend final exam:** Average of the best 3 out of the 5 graded assignment scores >= 40/100, and attending at least one of the 2 quizzes in the centre.

**Eligibility to get the final course grade:** Completing & presenting the Group Project (P) with scoring more than 50/100 in it

GA: Sum of best 3 out of 5 Graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

P: Group project and presentation

Bonus: Maximum of 10 marks; 5 marks for each of the 2 Extra assignments

Total course score T = 0.3GA + Max(0.2Qz1+0.2Qz2, 0.3Max(Qz1,Qz2)) + 0.3P + Bonus

# 7. Introduction to Big Data

Note: This course requires students to have access to link a credit card and avail \$300 one time free credit available for GOOGLE CLOUD platform. If you do not have either a credit card

or have availed the free Google Cloud credits, then it will not be possible for you to take up this course.

Quiz 1 and Quiz 2: Not there End term:Sep 1st 2024 Above to be attended in person at designated centres.

OPPE: August 25th 2024, 2pm-6pm, 4 hr exam

**Eligibility to write the final exam:** Average of the best 5 out of the first 7 weeks of weekly assignment scores >= 40/100

Eligibility to obtain the final course grade: Attending the end term exam AND the OPPE

The calculation of Final course Score T for eligible students is as follows:

**GAA** = Average score in Best 6 out of 9 weekly graded assignments

OPPE: August 25th 2024, 2pm-6pm, 4 hr exam

Quiz 1 and quiz 2: Not applicable for this course

**F** = score in final exam

T = 0.25 GAA + 0.25 F + 0.5 OPPE

# 8. Operating Systems

Quiz 1: July 7th, 2024 Quiz 2: August 4th, 2024 End term: Sep 1st 2024

Above to be attended in person at designated centres

Eligibility to write end term exam: Average of the best 5 out of the first 9 weeks of weekly

assignment scores >= 40/100 AND attendance in one of the 2 guizzes

Eligibility to get final course grade: Attending the End sem exam

Overall score for eligible students:

GAA = Average score in Best 10 out of first 11 weekly assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

T = 0.1GAA + 0.4F + 0.25Qz1 + 0.25Qz2

# 9. Programming in C

Quiz 1: July 7th, 2024 Quiz 2: No Quiz 2 End term: Sep 1st 2024

Above to be attended in person at designated centres

For OPPE1, OPPE2 exam dates please refer to Annexure I

For OPPE 1 - July 21 (04:30 to 06:30 PM)
For OPPE 2 - Aug 18, 2024 4:30 PM(04:30 PM to 06:30 PM)

#### Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignments (objective and programming) scores >= 40/100

#### Eligibility to obtain the final course grade:

Both the conditions below should be satisfied.

Attending the end term exam AND

Score in one of the two programming exams (OPPE1, OPPE2) should be >= 40/100 - Minimum score to be obtained in one of the programming quizzes

#### Final course score calculation:

The calculation of Final course score for eligible students is as follows:

GAA = Average score in Best 10 assignments out of 11 weekly graded assignments

GAAP = Average score in Best 7 out of 8 weekly graded programming assignments (weeks 3-10)

Qz1 = score in Quiz 1 (0, if not attempted) - in centre

OPPE1 = score in OPPE 1 (0, if not attempted) - programming exam 1

OPPE2 = score in OPPE 2 (0, if not attempted) - programming exam 2

F = score in final End Term exam

T = 0.05GAA (objective) + 0.1GAAP + 0.15Qz1 + 0.20 OPPE1 + 0.20 OPPE2 + 0.30F

# 10. Deep Learning for Computer Vision

Above to be attended in person at designated centres

Eligibility to write end term exam: Average of the best 5 out of the first 9 weeks of weekly

assignment scores >= 40/100 AND attendance in one of the 2 guizzes

Eligibility to get final course grade: Attending the End sem exam

Overall score for eligible students:

GAA = Average score in Best 10 out of first 11 weekly assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

T = 0.1 GAA + 0.5F + Max(0.2Qz1 + 0.2Qz2, 0.3 Max(Qz1,Qz2))

# 11. Managerial Economics

Quiz 1: July 7th, 2024 Quiz 2: August 4th, 2024 End term: Sep 1st 2024

Above to be attended in person at designated centres

**Eligibility to write end term exam:** Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100 AND attendance in one of the 2 quizzes

**Eligibility to get final course grade:** Attending the End sem exam

Overall score for eligible students:

GAA = Average score in Best 8 out of first 9 weekly assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

T = 0.15 GAA+ Max(0.2Qz1 + 0.2Qz2 + 0.45F, 0.5F + 0.25Max(Qz1,Qz2))

# 12. Algorithmic Thinking in Bioinformatics

Quiz 1: July 7th, 2024 Quiz 2: August 4th, 2024 End term: Sep 1st 2024

Above to be attended in person at designated centres

**Eligibility to write end term exam:** Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100 AND attendance in one of the 2 guizzes

Eligibility to get final course grade: Attending the End sem exam

Overall score for eligible students:

GAA = Average score in Best 10 out of first 11 weekly assignments

Qz1 = score in Quiz I (0, if not attempted), Syllabus: Week 1-4

Qz2 = score in Quiz II (0, if not attempted), Syllabus: Week 5-8

F = score in final exam, Syllabus: Week 1-12

T = 0.2 GAA + Max(0.2Qz1 + 0.2Qz2 + 0.4F, 0.45F + 0.25Max(Qz1,Qz2))

# 13. Industry 4.0

Quiz 1: July 7th, 2024 Quiz 2: August 4th, 2024 End term: Sep 1st 2024

Above to be attended in person at designated centres

Eligibility to take the final exam:

Submission of at least 1 out of the first three assignments - Asgn 1, Asgn 2 and Asgn 3 AND attending atleast one of the two quizzes AND participating the game

Eligibility to get final course grade: Attending the end term exam

15 marks: In center quiz – 7.5 marks for Quiz1 and 7.5 marks for Quiz 2

Quiz 1 on July 7th, 2024 and Quiz 2 on August 4th, 2024 (In person at centers)

Quiz 1 will be from Week 1-4

Quiz 2 will be from Week 5-8

5 Marks: Online game: Yield Management Game (estimated duration 1.5 – 2 hours )

4 marks for participating the game for the entire game horizon

1 bonus mark for top 10 participants in terms of the game performance measure

40 Marks: 3 Assignments for a total of 40 marks:

Assignment 1: 20 marks Assignment 2: 20 marks Assignment 3: 20 marks

A = Sum of the Best 2 out of (Assignment 1, Assignment 2, Assignment 3)

Week no.	Release date	Submission date
5	Friday, June 28, 2024	Sunday, July 14, 2024
6	Friday, July 5, 2024	Monday, July 22, 2024

9	Friday, July 26,	Sunday, August 11,
	2024	2024

40 Marks (F): End Term Exam - Sep 1st 2024

Will be set to 45 marks and students can attempt all.

Marks obtained will be capped at 40.

The syllabus for the End term exam will be the contents covered in Weeks 1 to 12

#### 14. Financial Forensics

Quiz 1: July 7th, 2024 Remote Group Project 1: July 21st, 2024 to August 4th, 2024

End term: Sep 1st 2024

#### Above to be attended in person at designated centres

Eligibility to write the final exam: Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 50/100

Eligibility to obtain the final course grade: Attending the end term exam

The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 out of all weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

GP1 = score in Group Projectl (0, if not attempted)

F = score in final exam

T = 0.1GAA + Max(0.25Qz1 + 0.25GP1 + 0.4F, 0.5F+0.3Max(Qz1,GP1))

# 15. Mathematical Thinking

#### Above to be attended in person at designated centres

Eligibility to write the final exam: Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100 AND attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam

The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 out of First 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

#### 16. Linear Statistical Models

Above to be attended in person at designated centres

Eligibility to attend final exam: Average of the best 5 out of the first 8 assignment scores >= 40/100 and attending at least one of the 2 guizzes in the centre

Eligibility to get the final course grade: Attending the end sem exam

The calculation of Final course Score is proposed as follows:

GAA = Average score in Best 10 out of all 11 weekly graded assignments (Subjective and Objective)

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

Overall score for eligible students:

 $T = 0.1 \text{ GAA} + \max(0.6 \text{ F} + 0.2 \max(Qz1, Qz2), 0.4 \text{ F} + 0.25 \text{ Q}z1 + 0.25 \text{ Q}z2)$ 

### 17. Advanced Algorithms

Above to be attended in person at designated centres

Quiz 1, Quiz 2 and End Term exams - to be attended in person at designated centres.

Eligibility to write end term exam: Average of best 5 out of first 7 weekly assessments

scores >= 40/100 and attending at least one of the 2 quizzes in the centre

Eligibility to get final course grade: Attending the End sem exam

#### Overall score for eligible students:

GAA = score in Best 10 out of all 11 graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F - score in End Term exam

T = 0.15GAA + Max((0.35F + 0.25Qz1 + 0.25Qz2), 0.5F+0.25Max(Qz1,Qz2))

# 18. Special topics in ML (Reinforcement Learning)

#### Above to be attended in person at designated centres

Eligibility to write end term exam: Average of best 5 out of first 9 weekly assessments scores

>= 40/100 and attending at least one of the 2 quizzes in the centre

Eligibility to get final course grade: Attending the End sem exam

#### Overall score for eligible students:

GAA = Average score in Best 10 out of First 11 weekly graded assignments

GPA = Graded Programming Assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F - score in End Term exam

T = 0.1 GAA(autograded) + 0.2 GPA + Max ((0.2Qz1 + 0.2Qz2), 0.3 Max(Qz1,Qz2)) + 0.3F

### 19. Game Theory and Strategy

Above to be attended in person at designated centres

Eligibility to write the final exam: Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100 AND attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam

The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 out of First 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

# **Annexure I**

# **Table.1 Schedule for Elective courses**

Course ID	Course Level	Course Name	Course Type	Co-requisite Code	Prerequisite code	May2024	Sep2024	Jan 2025	CourseFee
BSCS3001	DEGREE	Software Engineering	Core_BP			Υ	Υ	Υ	10K
BSCS3002	DEGREE	Software Testing	Core_BP	-	-	Υ	Υ	Υ	10K
BSCS3003	DEGREE	Al: Search Methods for Problem Solving	Core_BD	-	-	Υ	Υ	Υ	10K
BSCS3004	DEGREE	Deep Learning	Core_BD	-	-	Υ	Υ	Υ	10K
BSGN3001	DEGREE	Strategies for Professional Growth	Core_HM	-	-	Y	Υ	Υ	10K
BSBT4001	L4_DEGREE	Algorithmic Thinking in Bioinformatics	BD/BP	-	-	Y	N	Υ	20K
BSBT4002	L4_DEGREE	Big Data and Biological Networks	BD/BP	-	-	N	N	N	20K
BSCS4001	L4_DEGREE	Data Visualization Design	BD	-	-	Y	N	Υ	20K
BSEE4001	L4_DEGREE	Speech Technology	BD	-	-	N	Υ	N	20K
BSMS4002	L4_DEGREE	Design Thinking for Data-Driven App Development	HM/BP	-	-	N	Υ	N	20K
BSMS4001	L4_DEGREE	Industry 4.0	HM/BD	-	-	Y	N	Υ	20K
BSMS4003	L4_DEGREE	Financial Forensics	HM/BD	-	-	Y	N	Υ	20K
BSMS3002	DEGREE	Market Research	HM	-	-	N	Υ	N	10K
BSCS4004	L4_DEGREE	Introduction to Big Data	BD/BP	-	-	Υ	Υ	Υ	20K
BSCS4003	L4_DEGREE	Privacy & Security in Online Social Media	BD/BP	-	-	N	Υ	N	20K
BSMA2001	DEGREE	Mathematical Thinking	SE			Υ	N	Υ	10K
BSMA3012	DEGREE	Linear Statistical Models	SE			Υ	N	Υ	10K
BSMA3014	DEGREE	Statistical Computing	SE			N	Υ	N	10K
BSCS4021	L4_DEGREE	Advanced Algorithms	BP			Υ	Υ	N	20K
BSCS3031	DEGREE	Computer Systems Design	BP	BSCS3005		N	Υ	N	10K
BSCS4022	L4_DEGREE	Operating Systems	BP		BSCS3031	Υ	N	Υ	20K
BSCS4002	L4_DEGREE	Special topics in ML (Reinforcement Learning)	BD	BSCS3004		Y	N	Υ	20K
BSCS3005	DEGREE	Programming in C	BP			Y	Υ	Υ	10K
BSCS5002	L5_DEGREE	Introduction to Natural Language Processing (i-NLP)	BD			N	Υ	Υ	20K
BSCS5003	L5_DEGREE	Deep Learning for Computer Vision	BD			Y	N	Υ	20K
BSCS5001	L5_DEGREE	Large Language Models	BD			N	Υ	N	20K
BSMS4023	L4_DEGREE	Game Theory and Strategy	HM/BD			Υ	Υ	N	20K
BSMS3033	DEGREE	Managerial Economics	НМ			Υ	N	Υ	10K
BSMS3034	DEGREE	Corporate Finance	НМ			N	Υ	Υ	10K

# **Important Dates**

May 2024 CALENDAR						
For Qualifier Student	Start Date	End Date				
	Monday, February 26,					
Qualifier Registration Form	2024	Sunday, May 26, 2024				
Course and Program Orientation	Monday, May 20, 2024	Thursday, May 30, 2024				
Qualifier Exam	Sunday, July 7, 2024					
Publishing results for Qualifier						
exam	Friday, July 12, 2024					
QF Course Registration and						
Reattempt Qualifier window	Wednesday, July 17, 2024	Thursday, July 18, 2024				
Reattempt Qualifier Exam	Sunday, August 4, 2024					
Publishing results	Wednesday, August 14,					
Qual_Reattempt	2024					
For Term Students	Start Date	End Date				
	Wednesday, May 15,					
Course registration window	2024	Thursday, May 16, 2024				
Drop Course form window	Friday, June 21, 2024	Sunday, June 23, 2024				
Term start	Friday, May 31, 2024					
Quiz1	Sunday, July 7, 2024					

Publishing results for Quiz1	Monday, July 15, 2024	
Programming Quiz1 (Day1)	Sunday, July 21, 2024	
OPPE1 Result Release	Friday, July 26, 2024	Wednesday, July 31, 2024
Quiz2	Sunday, August 4, 2024	
Publishing results for Quiz2	Monday, August 12, 2024	
Programming Quiz2 (Day1)	Sunday, August 18, 2024	
Programming Quiz2 (Day2)	Sunday, August 25, 2024	
	Thursday, August 22,	
OPPE2 Result release	2024	Tuesday, August 27, 2024
	Sunday, September 1,	
END TERM (DAD_Qualifier)	2024	
	Monday, September 9,	Saturday, September 14,
Publishing results for EndTerm	2024	2024
Disco Student Meeting		
Class Committee	YTD	YTD
Class Committee	טוזן	טוז
Class Committee	TID	TID
For DAD Qualifier Students	Start Date	End Date
For DAD Qualifier Students DAD Qualifier Registration	Start Date	End Date
For DAD Qualifier Students	Start Date  Monday, May 20, 2024	
For DAD Qualifier Students  DAD Qualifier Registration  Window	Start Date  Monday, May 20, 2024  Sunday, September 1,	End Date
For DAD Qualifier Students  DAD Qualifier Registration  Window  DAD Qualifier Exam	Start Date  Monday, May 20, 2024  Sunday, September 1, 2024	End Date Friday, August 2, 2024
For DAD Qualifier Students  DAD Qualifier Registration Window  DAD Qualifier Exam  Publishing results for DAD	Start Date  Monday, May 20, 2024  Sunday, September 1, 2024  Monday, September 9,	End Date  Friday, August 2, 2024  Saturday, September 14,
For DAD Qualifier Students  DAD Qualifier Registration Window  DAD Qualifier Exam  Publishing results for DAD  Qualifier	Start Date  Monday, May 20, 2024  Sunday, September 1, 2024  Monday, September 9, 2024	End Date  Friday, August 2, 2024  Saturday, September 14, 2024
For DAD Qualifier Students  DAD Qualifier Registration Window  DAD Qualifier Exam  Publishing results for DAD  Qualifier  Last Date to Edit Exam City	Start Date  Monday, May 20, 2024  Sunday, September 1, 2024  Monday, September 9, 2024  Start Date	End Date  Friday, August 2, 2024  Saturday, September 14, 2024  End Date
For DAD Qualifier Students  DAD Qualifier Registration Window  DAD Qualifier Exam  Publishing results for DAD  Qualifier  Last Date to Edit Exam City  Quiz1	Start Date  Monday, May 20, 2024 Sunday, September 1, 2024 Monday, September 9, 2024 Start Date Friday, May 31, 2024	End Date  Friday, August 2, 2024  Saturday, September 14, 2024  End Date  Friday, June 7, 2024
For DAD Qualifier Students  DAD Qualifier Registration Window  DAD Qualifier Exam  Publishing results for DAD  Qualifier  Last Date to Edit Exam City	Start Date  Monday, May 20, 2024 Sunday, September 1, 2024 Monday, September 9, 2024 Start Date Friday, May 31, 2024 Friday, May 31, 2024	End Date  Friday, August 2, 2024  Saturday, September 14, 2024  End Date  Friday, June 7, 2024  Friday, July 5, 2024
For DAD Qualifier Students  DAD Qualifier Registration Window  DAD Qualifier Exam  Publishing results for DAD  Qualifier  Last Date to Edit Exam City  Quiz1  Quiz2  End Term	Start Date  Monday, May 20, 2024 Sunday, September 1, 2024 Monday, September 9, 2024 Start Date Friday, May 31, 2024	End Date  Friday, August 2, 2024  Saturday, September 14, 2024  End Date  Friday, June 7, 2024
For DAD Qualifier Students  DAD Qualifier Registration Window  DAD Qualifier Exam  Publishing results for DAD  Qualifier  Last Date to Edit Exam City  Quiz1  Quiz2	Start Date  Monday, May 20, 2024 Sunday, September 1, 2024 Monday, September 9, 2024 Start Date Friday, May 31, 2024 Friday, May 31, 2024 Friday, May 31, 2024 Sep 14 - Sep17	End Date  Friday, August 2, 2024  Saturday, September 14, 2024  End Date  Friday, June 7, 2024  Friday, July 5, 2024
For DAD Qualifier Students  DAD Qualifier Registration Window  DAD Qualifier Exam  Publishing results for DAD  Qualifier  Last Date to Edit Exam City  Quiz1  Quiz2  End Term	Start Date  Monday, May 20, 2024 Sunday, September 1, 2024 Monday, September 9, 2024 Start Date Friday, May 31, 2024 Friday, May 31, 2024 Friday, May 31, 2024	End Date  Friday, August 2, 2024  Saturday, September 14, 2024  End Date  Friday, June 7, 2024  Friday, July 5, 2024
For DAD Qualifier Students  DAD Qualifier Registration Window  DAD Qualifier Exam  Publishing results for DAD  Qualifier  Last Date to Edit Exam City  Quiz1  Quiz2  End Term  Saavan'23 (online)	Start Date  Monday, May 20, 2024 Sunday, September 1, 2024 Monday, September 9, 2024 Start Date Friday, May 31, 2024 Friday, May 31, 2024 Friday, May 31, 2024 Sep 14 - Sep17	End Date  Friday, August 2, 2024  Saturday, September 14, 2024  End Date  Friday, June 7, 2024  Friday, July 5, 2024

# BS in Electronic Systems IIT Madras

# **Grading Document**

# **Table of Contents**

	- 1		 	cti		
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May 2024 term - Important Dates

Assessments, Evaluation and Grading

Lab Handbook:

Pass criteria and Grades

Badges - for participation in Discourse forum

Foundation level courses

- 1. English I
- 2. Math for Electronics I
- 3. Electronic Systems Thinking and Circuits
- 3.1 Electronic Systems Thinking and Circuits Lab
- 4. Introduction to C Programming
- 5. English II
- 6. Introduction to the Linux Shell
- 7. Digital Systems
- 8. Electrical and Electronic Circuits
- 9. Electronics Lab
- 10. Embedded C Programming
- 11. Math for Electronics II
- 12. Signals and Systems
- 13. Intro to python programming

#### Annexure I

Term Calendar

**Assignment Dates** 

Quizzes, OPPEs, NPPEs and Exam Dates

### Introduction

This document provides detailed information about evaluation and grading of courses of BS in Electronic Systems Degree program from IIT Madras. The information includes details of each course such as number of credits, eligibility to write the final exam, eligibility to obtain the final course grade, parameters considered for calculating final score and calculation of final score.

The BS in Electronic Systems Degree program comprises three levels - Foundation, Diploma and BS Degree. The Foundation and Diploma level consists of ten courses each and BS Degree level consists of 12 courses. The BS program has 142 credits in total with 44 credits in Foundation, 42 credits in Diploma and 56 credits in Degree level.

Each course has multiple types of assessments - online weekly assignments, quizzes and an end term (semester) exam. The weekly assignments are generally non-proctored whereas quizzes and end term exams are proctored and are conducted at designated exam centres.

Students are advised to go through this grading document carefully. Students can contact the support team for any queries related to this document.

# May 2024 term - Important Dates

#### **Quizzes in Centres:**

Quiz 1: July 7, 2024

Quiz 2: August 4, 2024

End Term (Sem) Exam: September 1, 2024

# Assessments, Evaluation and Grading

Evaluation and grading varies from course to course. Generally, most courses have the following types of assessments: weekly assignments, proctored quizzes, an in-person end term (sem) exam, online proctored programming exam, and lab work. However, some courses may have special types of assessments depending on the type of the course. Please note that the assessments, evaluation and grading varies from course to course.

Details of the types of assessments are mentioned below:

#### Online assignments:

A 12 week course will have one or more weekly assignments to be submitted **online** within the due date specified.

Generally, the average score of the best five out of the first nine weekly assignments given during the course run should be >= 40/100 to be eligible to write the final exam and get the hall ticket for the same.

Score in any unattempted assignment will be counted as 0.

Depending on the course, the average of weekly assignment scores may contribute to the total course score and course grade.

#### Two proctored Quizzes

Two quizzes will be conducted after the end of Weeks 4 and 8 based on the content of Weeks 1-4 and 1-8 respectively.

These quizzes must be attempted in person in the city chosen

There will be a single session exam with 4 hours to attempt four subjects, 3 hours to attempt three subjects and 2 hours to attempt one or two subjects.

The Qualifier score will be counted as Quiz 1 score for the courses registered immediately after the qualifier exam in the same semester.

The score of a quiz not attempted will be taken as 0. No make-up quiz will be provided.

Attending one of the two quizzes will be a mandatory condition to be eligible to appear for the final exam, unless stated otherwise.

These Quizzes are conducted in designated exam centers where students have to physically go and attend.

#### Final exam at the end of the course

At the end of a semester, there will be a final exam of 1.5 hours duration for each course. (This will ensure exams can be conducted only on Sundays and exams for four courses completed in two sessions of 3 hours each throughout the program.)

There will be an eligibility criteria defined for every course to obtain the hall ticket for the final exam, announced at the beginning of the semester. If the above eligibility is not satisfied, students will not be allowed to write the Semester exam and will have to repeat the course.

#### In person Lab Sessions in IIT Madras

Some of the courses are accompanied by lab sessions to be done at home with the use of electronic kits as suggested. The cost of the kit is not included in the fee structure given in this document.

It is mandatory that students travel to IIT Madras campus to demonstrate the lab experiments specified and complete the lab exams in person at the campus. These are planned currently in the months of May-July and November-January and may change based on other constraints. The tentative duration for the in person component at IIT Madras is expected to be one week per lab course every semester.

#### **Online Proctored Programming Exams (OPPE)**

OPPEs are conducted for certain programming courses. Students can take the exam from their home, unless mentioned otherwise.

The duration and marks of OPPE varies from course to course. Generally it is a 1.5 or 2 hour exam.

#### **Course Participation Marks**

Course Participation Marks are for encouraging and incentivising the students to participate more in the activities of the course. These marks will be added **ONLY** for the students who pass the course and will only impact the course grade, **and not the pass criteria**.

Criteria for course participation marks: Marks will be applicable based on availability of practice/mock assignments in the course. It can vary from course to course and can be from 0-5.

Based on practice assignments - 5 marks - applicable to only Foundation & Diploma courses (wherever practice assignments are provided). A course may **not** have participation marks.

If the average of the marks obtained in all the practice assignments (including programming) until week 8 AND mock tests conducted before Quiz 1 & Quiz 2 >= 40/100, students will get 5 marks.

Note: If the course is not having Practice or Mock Assignments, then there will be no Course Participation marks will be given.

# Lab Handbook:

Kindly look into the lab handbook, which has been attached here <u>Lab Handbook</u>

# Pass criteria and Grades

#### **Grades:**

Total Course Score (T) considers all assessment components in every course as defined in the Grading document of that semester. A candidate is deemed to have passed a course if Total Course Score (T)  $\geq$  40/100. This criteria is the same for all learners in the course. An absolute grading system, as described in the following table, will be followed:

Condition satisfied by 'T' - Total Course Score (Out Of 100)	Sta tus	Let ter Gr ad e	Gra de poi nt
(T ≥ 90)	Pas s	S	10
(90 > T ≥ 80)	Pas s	А	9
(80 > T ≥ 70)	Pas s	В	8
(70 > T ≥ 60)	Pas s	С	7
(60 > T ≥ 50)	Pas s	D	6
(50 > T >= 40)	Pas s	E	4
(T < 40)	Fail	U	0
Average of the Weekly assignment score <40/100 or 0 quizzes attended - (Not eligible to write the final exam)	Fail	\$	0

To summarize, S,A,B,C,D,E - Pass grade; U- Fail grade, WA/WQ - Learner was not eligible to attempt the end term exam

#### **Supplementary Exam**

If student is absent in the End Term Exam (ET) alone, a supplementary exam is planned to be conducted at IIT Madras

Those who want to take supplementary exam should come to IIT Madras campus **Note**: This supplementary is not finalized. Students will be communicated about the details of the supplementary exam only if it is finalized.

#### I grade:

In I grade - there are three types:

If you are absent for ET alone with all other assessment components completed (quizzes, OPPEs, project, lab, weekly assignments) - grade will be pushed as I.

Options: You can register to take up the ET exam alone in the subsequent term. OPPE and quizzes will <u>not</u> be scheduled for you. All other marks for Final course score will be taken from the previous run.

If you have failed in the OPPE but wrote the ET exam and crossed the cutoff for T as given in the course grading policy, grade = I\_OP.

You can register to do the OPPE alone whereby if the course has one OPPE, that will be scheduled. If the course has 2 OPPEs, both will be scheduled for you. You can attempt the OPPE alone. All other mark components of Final course score will be taken from the previous run. ET and quizzes will not be scheduled for you.

If you have failed in the OPPE and absent for ET, then grade = I\_BOTH

You can register for ET and OPPEs alone. If the course has one OPPE, that will be scheduled. If the course has 2 OPPEs, both will be scheduled for you. You will attempt the ET and OPPEs. Quiz and GAA and other components will be taken from the previous run and not scheduled.

In all the above cases, you can also choose to repeat the entire course and not just do the ET/OPPE alone if you want to reattempt all assessment components.

#### **Summary Table for course grading**

Average of Graded assignment score	Attendance in Quizzes (as per course eligibility)	ET	Т	Grade	Result	Condition for course reg
< 40	Not attended	-	-	WA	Fail	Repeat the entire course
>= 40	Attended	Present	>=40	Depends on the marks	Pass	
>= 40	Attended	Absent	-	I	Fail	Option 1: Attend makeup exam at IIT Madras (*YTF) OR Option 2: Complete ET alone in the next term. GA and quiz marks will be carried over OR Option 3: Repeat the entire course
>= 40	Not attended	-	-	WQ	Fail	Repeat the entire course
>= 40	Attended	Present	< 40	U	Fail	Appear for the Supplementary exam OR Repeat the entire course

<sup>\*</sup> Make up exam and Supplementary exam are to be finalized

#### **Summary Table for Lab and OPPE related course**

	Lab	OPE1/ OPE2	ET	Т	Grade	Possibilities for student
1	Absent	Absent	Absent	-	U	Repeat the course.
2	Absent	Absent	Present	>=35	I_LOP	Complete OPE and Lab in next term; Both OPPEs will be scheduled. GA, quiz and ET marks will be carried over OR

						Repeat the entire course					
3				<35	U	Repeat the entire course					
4	Present	Absent	Present	>=40	I_OP	Complete OPE alone in next term; Both OPPEs will be scheduled. GA, quiz and ET marks will be carried over OR Repeat the entire course					
5				<40	U	Repeat the entire course					
6		Present	Present	>=40	I_LOP	Complete Lab and OPE in next term, Both OPPEs will be scheduled. GA, quiz and ET marks will be carried over OR Repeat the entire course					
7	Absent	score< 40/100		<40	U	Repeat the entire course					
8		(Fail)	Absent	-	U	Repeat the entire course					
4		Present	Present	>=40	I_OP	Complete OPE alone in next term, Both OPPEs will be scheduled. GA, quiz and ET marks will be carried over OR Repeat the entire course					
5	Present	score< 40/100 (Fail)							<40	U	Repeat the entire course
6			Absent	-	I_BOTH	Complete ET and OPE in next term, Both OPPEs will be scheduled. GA and quiz marks will be carried over OR Repeat the entire course					
7	Absent	Present Score > 40/100	Present	>=40	LL	Complete Lab alone in next term Or Repeat the entire course					
8			Present	<40	U	Repeat the entire course					
9	Absent	Present Score > 40/100	Absent	-	l_L_ET	Complete Lab and ET in next term; OPPE will NOT be scheduled. GA, quiz and OPPE marks will be carried over OR Repeat the entire course					

9	Present	Present Score > 40/100	Absent	1	-	Complete ET alone in next term; OPPE will NOT be scheduled. GA, quiz and OPPE marks will be carried over OR Repeat the entire course		
10			Present		Actual Grade	Grade as per the Total score T		
11	Present	Absent	Absent	-	I_OPET	Repeat OPPE and End Term Exam in next term Both OPPEs will be scheduled. GA, quiz and ET marks will be carried over or Repeat Entire course		
	Course Fee							

#### **Course Fee**

Repeating one component [OPPE/Lab/EndTerm] then the course fee will be Rs.2000

Repeating two components [OPPE+Lab,OPPE+EndTerm,Lab+EndTerm] then the course fee will be Rs.4000

Full course fee is applicable for Repeating the entire course

OPPE will not be applicable for the students who registered for repeating ET alone.

ET will not be applicable for the students who registered for repeating OPPE alone.

Students who registered for repeating OPPE & ET will have to appear for OPPE1, OPPE2 & ET.

Registered Category	OPPE
ET alone	No OPPE will be conducted
OPPE alone	Both OPPE will be conducted
ET + OPPE	Both OPPE and ET will be conducted

# Badges - for participation in Discourse forum

We will be looking at active engagement with Discourse in a term and provide badges for participation.

Badges will be given based on the number of hours a student spends on Discourse. A student is expected to spend a minimum of 1 hour per week per course in Discourse reading posts.

Student will get the following badges:

Read time of up to **four** hours per course in a term: Badge 1

(Applicable only after you get the BS student roll number)

# Foundation level courses

The following are  $\underline{\mbox{the Foundation level courses:}}$ 

Semest er	Level	Course Title	Credits
1	Foundation	English I	4
1	Foundation	Mathematics for Electronics I	4
1	Foundation	Electronic System Thinking and Circuits	4
1	Foundation	Electronic System Thinking and Circuits Lab	1
1	Foundation	Introduction to C Programming	2+3
2	Foundation	English II	4
2	Foundation	Introduction to the Linux Shell	5
2	Foundation	Digital Systems	4
2	Foundation	Electrical and Electronic Circuits	4
2	Foundation	Electronics Lab	3
3	Foundation	Embedded C Programming	4+2
3	Diploma	Math for Electronics II	4

3	Diploma	Signals and Systems	4+1
3	Diploma	Python programming	5

# 1. English - I

Quiz 1: July 7, 2024 Quiz 2: August 4, 2024 End term: September 1, 2024

Above to be attended in person at designated centers.

Prerequisites: None

Credits: Four

Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >=

40/100

AND

Attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam

Parameters for Final course Score calculation:

Final course Score calculation:

The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

#### Formula:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

### 2. Math for Electronics - I

Quiz 1: July 7, 2024 Quiz 2: August 4, 2024 End term: September 1, 2024

Above to be attended in person at designated centers.

Prerequisites: None Credits: Four

Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100

AND Attendance in one of the 2 guizzes

Eligibility to obtain the final course grade: Attending the end term exam Final course Score T calculation:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

#### Formula:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

### 3. Electronic Systems Thinking and Circuits

Above to be attended in person at designated centers.

Prerequisites: None Credits: Four Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100

**AND** 

Attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam Final course Score T calculation:

The **calculation of Final course Score T** for eligible students is as follows:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

#### Formula:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

### 3.1 Electronic Systems Thinking and Circuits Lab

In-campus Lab work: Students are required to visit IIT Madras for lab work.

Prerequisites: None Credits: One

Eligibility to obtain the final course grade: Attending the in-campus practical lab activity

# 4. Introduction to C Programming

Quiz 1: July 7, 2024 Quiz 2: No Quiz-2 End term: September 1, 2024

OPPE 1: July 21, 2024 OPPE 2: Aug 18, 2024 & Aug 25, 2024

Above to be attended in person at designated centers.

For Quiz 1, OPPE 1, OPPE 2 and End Term exam dates please refer to <u>Annexure</u> (OPPE 1 and OPPE 2: Students will be allocated one of the two slots on each date: YTD)

**Eligibility for OPPE 1:** OPPE 1 will be scheduled for ALL who enrolled to the course

**Eligibility for OPPE 2:** We will be having a Timed Assignment (LAB Assignment) (LAB Assignment) every week that is open three days in a week. Students have to mandatorily attempt this assignment in at least one of the 3 slots

If the Average of the scores of the best 3 out of the first 5 Timed Assignment (LAB Assignment) (LAB Assignment)s >= 40/100, then we will schedule the OPPE2 for you. If you do not satisfy this, we will not schedule OPPE2 for you.

**Prerequisites:** None **Credits:** Five

Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignments (objective and programming) scores >= 40/100 AND Attendance in one of the two OPPEs (OPPE1, OPPE2)

#### Eligibility to obtain the final course grade:

The conditions below should be satisfied.

Attending the end term exam AND

Score in one of the two programming exams (OPPE1, OPPE2) should be >= 40/100 - Minimum score to be obtained in one of the programming quizzes

#### Final course Score T calculation:

The calculation of Final course Score for eligible students is as follows:

GAA = Average score in Best 10 assignments out of all weekly graded assignments

WTA = Average of best 4 out of the first 6 Timed Assignment (LAB Assignment) (LAB Assignment) scores

Qz1 = score in Quiz 1 (0, if not attempted) - in center

OPPE1 = score in OPPE 1 (0, if not attempted) - programming exam 1
OPPE2 = score in OPPE 2 (0, if not attempted) - programming exam 2

F = score in final exam

#### Formula:

# T = 0.10GAA + 0.2Qz1 + 0.40F + max(0.15 OPPE1 + 0.15 OPPE2, 0.20 max(OPPE1,OPPE2)) + 0.15 WTA (capped to 100)

Maximum marks a student can get is 115 marks if both OPPEs are attended.

Else if one oppe is attended, evaluation is out of 105 marks

Proctored in person - 60 marks (Quiz+Final)

Proctored online - 30 or 20 marks (OPPE)

Non proctored timed - 15 marks (WTA - starts from week 5, with each week having 3 or 4 programs). Score in each week will be calculated as the average of marks obtained in all timed programming assignments given that week.

Non proctored non-timed - 10 marks (GAA)

### 5. English - II

Quiz 1: July 7, 2024 Quiz 2: August 4, 2024 End term: September 1, 2024

Above to be attended in person at designated centers.

**Prerequisites:** English I **Credits:** Four

Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >=

40/100

AND

Attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam Final course Score T calculation:

The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

#### Formula:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

### 6. Introduction to the Linux Shell

Quiz 1: July 7, 2024 Quiz 2: No Quiz-2 End term: September 1, 2024

OPPE 1: July 21, 2024 OPPE 2: Aug 18, 2024 & Aug 25, 2024

Above to be attended in person at designated centers.

Labs: June 15, June 29, July 13, July 27 and August 10 2024

OPPE and NPPE Dates and Timings has been updated in Annexures

Corequisites: Introduction to C Programming Credits: Five

#### Eligibility to write the final exam:

Average of the best 5 out of the first 9 weekly assessments (objective and programming) scores >= 40/100 and AND

Attending the OPPE

#### Eligibility to get the course grade:

Attending the end semester exam

Attending the programming exam, with a score  $\geq$  40/100

Attending the lab activities

Attendance in 3 out of 5 labs

Completing at least 40 % of tasks in all the labs."Best 3 out of 5 will be considered for grading."

The deadline for the first 3 labs is 28th July 2024, and the next 2 labs is 21th August 2024

GAA1 = Average of score in Best 9 out of all weekly graded assignments

GAA2 = Score in NPPE

Qz1[Week 1-4] = score in Quiz I (0, if not attempted)

OPE1[Week 1-4] = Score in online remote proctored programming exam

One additional attempt will be provided only if score < 40 in first attempt

F = score in End Term exam

VMT = score in VM Tasks (It has to be completed in the virtual machine provided)

Virtual Machine Tasks are the 10 tasks available in the <u>course VM</u> shared, named from assignment\_1 to assignment\_10.

#### Final course score:

 $PART_A = 0.06 GAA1 + 0.04 GAA2 + 0.2 Qz1 + 0.3 F$ 

PART\_B = 0.1 VMT + 0.5 LAB + 0.5 OPPE (capped to 100)

Final course score T = 0.6 PART\_A + 0.4 PART\_B

# 7. Digital Systems

Quiz 1: July 7, 2024 Quiz 2: August 4, 2024 End term: September 1, 2024

Above to be attended in person at designated centers.

Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100

AND

Attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam Final course Score T calculation:

The **calculation of Final course Score T** for eligible students is as follows:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

Lab = score based on demonstration of lab work (if applicable)

F = score in final exam

#### Formula:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

#### 8. Electrical and Electronic Circuits

Quiz 1: July 7, 2024 Quiz 2: August 4, 2024 End term: September 1, 2024

Above to be attended in person at designated centers.

Prerequisites: Math for Electronics I and Electronic Systems Thinking and Circuits

Credits: Four

#### Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100

AND

Attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

Lab = score based on demonstration of lab work, if applicable

F = score in final exam

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

#### 9. Electronics Lab

In-campus Lab work: Students are required to visit IIT Madras for lab work.

Corequisites: Electrical & Electronic Circuits and Digital Systems

Credits: Three

WE: Weekly Experiment submission

ID: In-person Demonstration during lab at IIT Madras

Eligibility to obtain the final course grade:

Minimum 40% in WE Attend the in-person lab at IIT Madras

The **calculation of Final course Score T** for eligible students is as follows:

T = 0.4 (WE) + 0.6 (ID)

# 10. Embedded C Programming

Quiz 1: July 7, 2024 Quiz 2: August 4, 2024 End term: September 1, 2024

Prerequisites: Introduction to C Programming Corequisites: Introduction to the Linux Shell

Credits: Six

#### Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100

AND

Attendance in one of the 2 guizzes

Eligibility to obtain the final course grade: Attending the end term exam

#### Final course Score T calculation:

The **calculation of Final course Score T** for eligible students is as follows:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

#### Formula:

T = 0.2GAA + max((0.5F + 0.2max(Qz1, Qz2)), (0.4F + 0.2Qz1 + 0.2Qz2))

#### 11. Math for Electronics - II.

Quiz 1: July 7, 2024 Quiz 2: August 4, 2024 End term: September 1, 2024

Above to be attended in person at designated centers.

**Prerequisites:** Math for Electronics I **Credits:** Four

Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100

AND Attendance in one of the 2 quizzes

# Eligibility to obtain the final course grade: Attending the end term exam Final course Score T calculation:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

#### Formula:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

### 12. Signals and Systems

Quiz 1: July 7, 2024 Quiz 2: August 4, 2024 End term: September 1, 2024

Above to be attended in person at designated centers.

Prerequisites: Electrical and Electronic Circuits Credits: Four

Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100

AND

Attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam Final course Score T calculation:

The **calculation of Final course Score T** for eligible students is as follows:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

#### Formula:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

### 13. Intro to python programming

Quiz 1: July 7th, 2024 No Quiz 2 for this course. End term: Sep 1st 2024

OPPE1: Sunday, July 21, 2024 (08:00 to 09:30 AM, 10:30 to 12:00 PM, 04:30 to 06:00 PM) OPPE2: Sunday, August 25, 2024 (10:00 AM - 11:30 AM, 01:30 PM - 03:00 PM, 04:30 PM - 06:00 PM) For Both OPPE1 & OPPE2, out of the 3 slots, one will be allocated from IITM. Please keep yourself free on the dates given.

# OPPE 1 will be scheduled for ALL who enrolled to the course Eligibility to appear for the OPPE 2:

If the Average of the scores of the best 5 out of the first 6 Weekly programming assignments (GrPA) >= 40/100

#### AND

Average of the best 5 out of the first 9 weekly assessments (objective and programming) scores >= 40/100

then we will schedule the OPPE2 for you. If you do not satisfy this, we will not schedule OPPE2 for you.

#### Eligibility to appear for the final exam is as follows:

Average of the best 5 out of the first 9 weekly assessments (objective and programming) scores >= 40/100

Eligibility to obtain the final course grade: Both the conditions below should be satisfied.

Attending the end term exam AND

Minimum score to be obtained in one of the programming exams (OPPE1, OPPE2) should be  $\geq$  40/100 -

#### The calculation of Final course Score for eligible students is as follows:

GAA1 = Average score in Best 10 objective assignments out of First 11 graded objective assignments

GAA2 = Average score in Best 10 programming assignments out of First 11 graded programming assignments

Qz1 = score in Quiz I (0, if not attempted) - in center

PE1 = score in OPPE1 (0, if not attempted) - programming exam 1

PE2 = score in OPPE2 (0, if not attempted) - programming exam 2

F = score in final exam

T = 0.1 GAA1 (objective) + 0.1GAA2 (programming) + 0.1Qz1+ 0.4F+ 0.25 max(PE1, PE2) + 0.15 min(PE1, PE2) — capped to 100

# **Annexure I**

### Term Calendar

Ma	y 2024 Calendar	
For Qualifier Student	Start Date	End Date
Qualifier Registration Form	Monday, Feb 26 2024	Sunday, May 26, 2024
Course and Program Orientation	Monday, May 20, 2024	Thursday, May 30, 2024
Qualifier Exam	Sunday, July 7, 2024	
Publishing Result for Qualifier Exam	Friday, July 12, 2024	
QF Course Registration and Reattempt Qualifier Window	Wednesday, July 17, 2024	Thursday, July 18, 2024
Reattempt Qualifier Exam	Sunday, August 4, 2024	
Publishing Result Qual _ Reattempt	Wednesday, August 14, 2024	
For Term Students	Start Date	End Date
Course Registration Window	Wednesday, May 15, 2024	Thursday, May 16, 2024
Drop Course form Window	Friday, June 21, 2024	Sunday, June 23, 2024
Term Start	Friday, May 31, 2024	
Quiz 1	Sunday, July 7, 2024	
Publishing results for Quiz 1	Monday, July 15, 2024	
Programming Quiz 1 (Day 1)	Sunday, July 21, 2024	Sunday, July 21, 2024
OPPE1 Result Release	Thursday, July 25, 2024	Tuesday, July 30, 2024
Quiz 2	Sunday, August 4, 2024	
Publishing results for Quiz 2	Monday, August 12, 2024	
Programming Quiz 2 (Day 1)	Sunday, August 18, 2024	
Programming Quiz 2 (Day 2)	Sunday, August 25, 2024	

OPPE2 Result Release	Thursday, August 22, 2024	Tuesday, August 27, 2024
End Term	Sunday, September 1, 2024	
Publishing Result for End Term	Monday, September 9, 2024	Saturday, September 14, 2024

Quiz 1	Quiz 2	End term exam	OPPE1	OPPE2 Day 1	OPPE2 Day2
7 July 2024, Sunday	4 August 2024, Sunday	1 Sep 2024, Sunday	July 21 2024	Aug 18 2024	Aug 25 2024
2pm-6pm*	2pm-6pm*	9am-12pm, 2pm-5pm			
In centers	In centers	In centers	Online remote proctored	Online remote proctored	Online remote proctored

(If required and, we will do a morning session for the quiz)

# **Assignment Dates**

	Content Release Dates	Assignment deadlines Foundation	Assignment deadlines Diploma
Week 1	Friday, May 31, 2024	Wednesday, June 12, 2024	Sunday, June 16, 2024
Week 2	Friday, June 7, 2024	Wednesday, June 19, 2024	Sunday, June 16, 2024
Week 3	Friday, June 14, 2024	Wednesday, June 26, 2024	Sunday, June 23, 2024
Week 4	Friday, June 21, 2024	Wednesday, July 3, 2024	Sunday, June 30, 2024
Week 5	Friday, June 28, 2024	Sunday, July 14, 2024	Sunday, July 14, 2024
Week 6	Friday, July 5, 2024	Wednesday, July 17, 2024	Monday, July 22, 2024
Week 7	Friday, July 12, 2024	Wednesday, July 24, 2024	Sunday, July 28, 2024
Week 8	Friday, July 19, 2024	Wednesday, July 31, 2024	Sunday, July 28, 2024
Week 9	Friday, July 26, 2024	Sunday, August 11, 2024	Sunday, August 11, 2024
Week 10	Friday, August 2, 2024	Wednesday, August 21, 2024	Tuesday, August 20, 2024
Week 11	Friday, August 9, 2024	Wednesday, August 21, 2024	Tuesday, August 20, 2024
Week 12	Friday, August 9, 2024	Wednesday, August 28, 2024	Wednesday, August 28, 2024

### **Quizzes, OPPEs, NPPEs and Exam Dates**

Quizzes in Centres: July 7, 2024 and August 4, 2024: 2 pm-6 pm (If required we might do a morning session for the quiz)

End Term Exam: September 1, 2024 9 am-12 noon & 2 pm-5 pm

**OPPE 1**: July 21st 2024

**OPPE 2**: August 18th & August 25th 2024

**NPPE1:** [Week 1-5]:July 17th 2024 **NPPE2:** [Week 1-7]: August 16th 2024

**Note**: The dates mentioned in this document might change and the same will be communicated to students if and when there are changes

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Student Handbook

BS Degree in Electronic Systems

A four-year degree from IIT Madras

IITM BS Degree Office, 3rd Floor, ICSR Building, IIT Madras, Chennai - 600036 support-es@onlinedegree.iitm.ac.in
Please read this
Dear Student,
This Student Handbook is intended to provide IIT Madras BS Electronic Systems Degree students with the information and policies they should be aware of, which may help them make the most of the opportunities offered in this program. It also gives you formal notification and explanation of the program's regulations, policies and procedures.
It is essential, and your responsibility, to read it and familiarize yourself with the content. It should be kept handy and referred to during your time with us.
This handbook may be revised time and again. While this student handbook was prepared on the basis of the best information available at the time of publication, all information, including policies and procedures are subject to change without notice or obligation.
We hope that your time as a student in this program is successful and enjoyable.
Thank you.
This document was last updated on 11 Sep 2023.
Table of Contents
A) Program Overview 6

1. Highlights of the program 6 2. Flexibility 7 3. Structure of the program 7 4. Fees for the entire program 8 5. Admission to the program 9 5.1 Entry through Qualifier Exam 9 5.2 Eligibility to apply for the Qualifier Exam 10 5.3 Qualifier Exam Fee 10 5.4 Admissions through Regular entry 5.5 Criteria for passing the Qualifier exam 12 5.6 Validity of the qualifier score 13 5.7 Communication about qualifier exam results 14 5.8 Reattempting the qualifier exam 14 5.9 Use of the Qualifier score as Quiz 1 score 15 6. Credit Clearing Capability 15 7. Continuing with the program 16 8. No Direct Entry into Diploma programme 16 9. Courses in various levels of program 17 10. Learning Process 18 11. BS Level: Elective Courses and Apprenticeship 19 11.1 Elective Courses 20

20

11.2 Open Elective Courses

11.3 NPTEL Courses for Elective and Open Elective Courses
11.4 Apprenticeship 21
12. Learner Life Cycle 21
13. Certificates and Mark transcripts 23
13.1 Design of Certificates 23
BS in Electronic Systems 23
Diploma in Electronic Systems 24
Foundation in Electronic Systems 24
13.2 Mark transcripts 25
14. Academic aspects 26
14.1 Academic calendar 26
Course content for online delivery 26
14.2 Timeline & Fees 27
14.3. Course content for online delivery 27
14.4. Evaluation and grading of courses in every term 27
14.5 Pass criteria for each course 29
14.6 Repeating a course 31
Registering for Courses: Semester-2 Onwards 33
Repeating a Course - WA, WQ, U or I grade 33
Repeating a Course for Improvement 33

Make Up Exams

14.7 Dropping a course

34

35

20

14.8 Learning paths 37
14.9 Prerequisite course requirements 37
Foundation courses 37
Diploma level courses 38
Degree level courses 39
15. Graduating with a BS degree 39
B) Software and Hardware Requirements - Mandatory System Specifications 40
Hardware 40
Software/Applications 41
Laboratory Kit 41
Internet Bandwidth 41
For OnlineProctored Examinations 41
System compatibility test 42
Other References 42
C) Houses and Clubs 43
D) Terms of Service 43
Introduction 43
Rules for Online Conduct 44
Strictly Prohibited Items 45
User Accounts 45
Entry Criteria 46
Your Right to use Content on the IIT Madras Study Site 46

Use FOR Personalization and Pedagogical Improvements 46

User Postings 47

Certificates / Degrees and Other Products & Services 47

Trademarks 49

Use of IIT MADRAS, IIT Names, Trademarks, AND Service Marks 49

Copyright Infringement 49

Disclaimers of Warranty / Limitations of Liabilities 50

Third-party Services; Links to Other Websites 50

Non-Liability 51

Indemnification 51

Additional Terms 51

E) Privacy Policy 53

Information that IIT Madras collects from you 53

Cookies and Tracking Technologies on the IIT Madras Study site 55

How your information is used 56

How your information is shared 57

How to manage your personal information 58

Storage & Security 60

Privacy Policy Updates 61

Contact Information 61

F) Discussion Forum Etiquette 62

Discussions on Course Content 62

What should not be posted on the forum 62 On Tone and Courtesy in Writing 63 Reporting a Post 63 Post Moderation Policy 63 G) Honor Code 64 Honour Code Pledge 64 Violations 64 Changing the Honour Code 65 H) Code of Conduct 65 Be respectful of others 65 Treat People Fairly 65 Refrain from Retaliation 66 Comply with Applicable Laws 66 General 66 I) Academic Malpractices 66 For rude behavior 67 Malpractices and corresponding Punishments 67 J) Non-Academic Malpractices 70 Misconduct and corresponding Punishments 70 Cyberbullying 72

ANNEXURE

73

List of accepted class 12 equivalents

73

BS in Electronic Systems - from IIT Madras

\_\_\_\_\_

#### A) Program Overview

IIT Madras has launched the BS in Electronic Systems in the month of March 2023. This is a non-campus program where the course contents are delivered online and can be studied from anywhere, while the monthly quizzes and final semester exams will have to be attended in-person at designated centres.

The lab courses will be hybrid where students will have to do experiments at home based on the process videos shared and mandatorily come in person to IIT Madras to demonstrate the same and complete the lab course requirements. These visits will be twice a year generally between May-July and Nov-Jan with the duration of visit being about 1-2 weeks.

Depending on the number of courses completed, learners can earn

Foundational level certificate in Electronic Systems
Diploma in Electronic Systems
BS degree in Electronic Systems

#### 1. Highlights of the program

Courses are taught by faculty of IIT Madras/ other reputed institutes as well as experts from the industry.

Unlike many competitive exams which work on the philosophy of elimination and selection and admit a very limited number of learners into various programs based on their performance relative to that of others, in this program there are specific qualifying criteria, and a significantly large number of learners can enter.

The candidate applying for the program should have passed Class 12 (or equivalent) with Mathematics and Physics as part of Class 12. There is no age limit to join the program. There are no restrictions on geographical location. The in-person visits for lab courses are mandatory and students who apply should be prepared for this travel.

#### 2. Flexibility

There are three exit points, with students being able to exit with either the foundational certificate or diploma or the degree. Students can choose their pace of study every semester.

Being predominantly an online program, there is no geographical barrier to learning from this program. However, learners only need to travel to exam centres for the quizzes and final exams. Students should come to IIT Madras for lab sessions twice a year depending on the courses taken during the term.

Important: It is important to note that qualified students who clear each stage will receive the certificate corresponding to that stage alone. The sample certificates are shown in section Certificates and Mark transcripts

So, for example, after the Qualifier, the student should be aware that he/she is being admitted only to the Foundation level courses, and not to a degree program. The diplomas or degrees are obtained by the student only when the requisite number of credits are accrued by completing the courses prescribed. Admission to any level does not automatically entitle the student to exit the program with the Diploma or the degree.

#### 3. Structure of the program

The BS in Electronic Systems program comprises three levels:

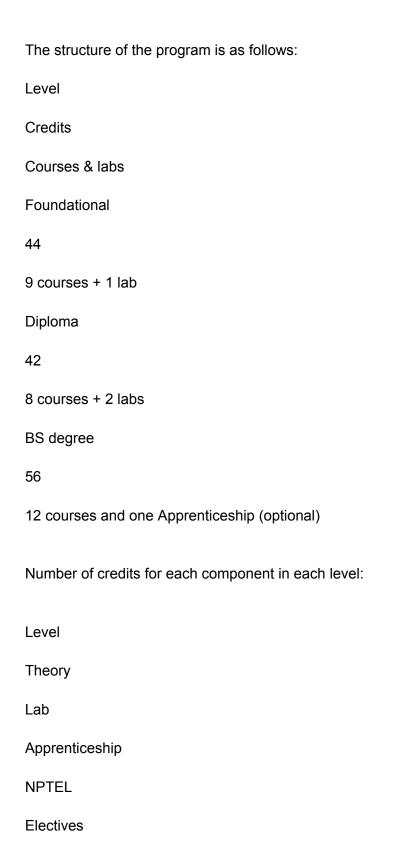
Foundation
Diploma and
BS degree

Each level comprises a set of courses (both theory and laboratory) and each theory course is divided into weeks. Generally a 4 credit course consists of 12 weeks, with pre-recorded videos every week. Students must learn by watching those videos and reading any materials provided or suggested by the course team.

#### Credit system:

The credits here are based on the UGC system of counting 14 hours of learner engagement as one credit. One credit mentioned here would be equivalent to 3 credits in the current (new) IITM Credit system.

The number of credits required to graduate with the BS is 142.



Total fees to Earn the Foundation, Diploma & BS degree Foundation Rs 2000 / credit Rs 1000 / credit Rs. 72,000 Rs. 8,000 Rs. 80,000 Diploma Rs. 4000 / credit Rs. 1,68,000 Rs. 2,48,000 BS Rs. 6000 / credit Rs. 3,36,000 Rs. 5,84,000 \* General Category. For students belonging to SC/ST/PwD categories and those with family income < 5 Lakhs per Annum (LPA), additional fee scholarships from IITM are available. Institution fee advance: Category of student Institution fee advance

SC or ST or PwD with > 40% disability certificate

50%

EWS or OBC-NCL category with annual family income between 1-5 LPA

50%

SC or ST AND PwD with >40% disability certificate

75%

SC or ST or PwD with > 40% disability or EWS or OBC-NCL category AND annual family income less than 1 LPA

75%

For candidates who are outside India and studying in the program: Facilitation fee for exams is in addition to the above for candidates writing exams overseas - as fixed up with the local exam partner there.

The fee will be revisited periodically and revised if necessary.

Lab work: For labs, in-person visits to IIT Madras are mandatory for lab courses. Also students are expected to obtain access to the lab kit recommended by IIT Madras to be able to perform experiments of lab courses at home. The details of the kit along with the costing will be provided to the students who register.

- 5. Admission to the program
- 5.1 Entry through Qualifier Exam

To enter the Foundation level, applicants have to pass the Qualifier Exam. The Qualifier Exam is a 4-hour exam to be attended in person.

The Foundation courses allow for interested applicants with a variety of educational backgrounds to be trained in the basics (Maths for Electronics 1, Electronic System Thinking and Circuits, Introduction to C Programming and English 1) required to take up the Diploma level of Electronic Systems program.

Entry: Via the Qualifier Exam into the Foundation level

Exit 1: Foundation course certificate Exit 2: Diploma in Electronic Systems Exit 3: BS in Electronic Systems

#### Qualifier Exam:

At the end of the four weeks of content, the qualifier exam will be conducted for eligible candidates based on the content covered in the four weeks of study. The qualifier exam is a 4-hour exam for the four subjects combined, to be attended in person at designated exam centers.

## 5.2 Eligibility to apply for the Qualifier Exam

Anyone who has passed Class 12 (or equivalent) with Physics and Mathematics in class 12 can apply. Those who qualify can join the program immediately. View list of accepted class 12 equivalents.

For Class XII passed students without Maths & Physics - Students passing Maths and Physics separately in NIOS or any equivalent are permitted to apply for the program. School students who have appeared for their Class 11 final exams (with Physics and Mathematics as their subjects of study) or completed Class 11 exams can apply. Those who qualify can join the program only after passing Class 12.

Anyone in one of the two categories above can apply irrespective of age, any other academic background, any role or geographical location can apply. No additional eligibility other than the ones mentioned here are required to apply for the qualifier process or join the foundational level courses after clearing the qualifying exam.

The candidate has to pay the fees for the Qualifier exam - currently set as Rs 6000/- (non refundable) for General category with suitable waivers for candidates from the SC/ST, EWS and PwD with 40% disability backgrounds.

Currently there is no waiver for any other group of students.

This fee is non-refundable once the last date for cancellations has passed.

5.3 Qualifier Exam Fee Application fee

Qualifier to Foundation level

General category / EWS / OBC-NCL

Rs.6000

PwD (>= 40% disability) / SC / ST category

Rs.3000

PwD (>= 40% disability) AND SC / ST category

Rs.1500

#### Note:

For students opting to write Qualifier Exam in an Exam Centre outside India, an exam facilitation Fee will apply in addition to application fee

The qualifier fee will not be refunded once the last date for cancellation has passed. 5.4 Admissions through Regular entry

All regular entry applicants must go through the Qualifier Process to earn admission to the Foundation Level. The week 1 content is available to all candidates to sample on the website: https://study.iitm.ac.in/es/ and view.

The candidate has to fill the application form available on the website https://study.iitm.ac.in/es/ and pay the fees for the Qualifier exam - currently set as Rs 6000/- (non refundable) for General category with suitable waivers for candidates from the SC/ST, EWS and PwD with 40% disability backgrounds. Currently there is no waiver for any other group of students. This fee is non-refundable once the last date for cancellations has passed.

## Qualifier Preparation:

Once the learner registers for the qualifier exam, access to 4 weeks of content for the four Foundation level courses - Mathematics 1, Electronic System Thinking and Circuits, Introduction to C Programming and English 1 - will be provided when the semester starts. The content is released week wise with an assignment for each of the four weeks in each subject. The content will be made live with an announcement on the portal, and an alert sent through email.

Every week an assignment must be submitted for grading in each course within the deadline that is specified. Each assignment will be graded out of 100 and any assignment that is not attempted will be marked as 0.

Eligibility to appear for the qualifier exam (regular entry):

In each course, the average of the best two out of the first three weekly assignment scores will be calculated.

Only those who get the minimum required average assignment scores in all four courses (as given below) will be allowed to appear for the Qualifier Exam and will be issued the hall ticket.

Student Type

Minimum Average Assignment Score required in each course

General Learner

40%

SC / ST / PwD with 40% disability

30%

PwD with 40% disability & SC / ST

30%

OBC-NCL / EWS

35%

At the end of the first four weeks of the semester, the qualifier exam will be conducted for eligible candidates based on the content covered in the four weeks of study. The qualifier exam is a 4-hour exam for the four subjects combined, to be attended in person at designated exam centers.

Note:

Relaxations in pass criteria indicated for various categories of learners is applicable ONLY for the qualifier process. There will be no relaxations in terms of grades / pass criteria once registered into the program.

## 5.5 Criteria for passing the Qualifier exam

In the qualifier exam comprising four subjects, the learner should obtain marks >= individual subject cut-off as shown below. The total of all subject marks should be greater than the total cut-off. The cutoff marks are clearly specified for the different categories of learners in the table below.

Minimum required Qualifier Exam Score in each course
Minimum required Total Qualifier Exam Score
General Learner
40%
50%
SC/ ST/ PwD with 40% disability
30%
40%
Pwd with 40% disability and SC/ ST
30%
40%
OBC-NCL / EWS
35%
45%

The following points must be noted:

When the results are released, the qualifier exam marks will be displayed within the login on the portal along with an email alert sent to the candidates about this.

The fees paid to attempt the Qualifier exam will not be refunded in either of the two situations - for those who were absent for the qualifier exam and for those who did not pass it.

5.6 Validity of the qualifier score

For students who attempt the qualifier exam while in school, doing their std XII, the qualifier marks will be valid for four semesters to continue with the foundation level.

For example, if students attempt the qualifier in July 2023, completing their std XII in May 2024, their qualifier scores will be valid to join till the semester of January 2025.

For all others, the qualifier marks will be valid for the two semesters that come after the qualifier exam date (the continuing semester and the next one) for the learner to register to the Foundation level. For eg: If the candidate attempts the qualifier in July 2023, their qualifier scores will be valid to continue with the July 2023 semester and the semester of January 2024.

This score will be invalid after the period mentioned and the learner will have to go through the entire qualifier process including the one month of weekly assignments and retaking the qualifier exam, if they wish to enroll in the program.

How many courses can a student register for?

Though everyone who passes the Qualifier Exam will be allowed to register for Foundation Level, there will be limitations on the number of courses a learner will be allowed to register for in their first term based on the Average Qualifier Exam Score (M).

Marks M (as defined above)

Maximum number of courses that learner is permitted to register in any term

 $0 \le M \le 50$ 

2

50 <= M< 70

3

M >= 70

4

#### 5.7 Communication about qualifier exam results

Those who have qualified as per the qualifier process will be intimated through email. Students can also check the qualifier status in their login on the portal. An admission letter will be generated and provided to each qualified candidate.

5.8 Reattempting the qualifier exam

There is NO limit on the number of attempts by any candidate for the qualification process if they did not pass.

Once they have qualified, they will not be permitted to apply again until their score is valid. After this they will be eligible to reapply again.

There are two attempts within any semester currently. At the end of 4 weeks and at the end of 8 weeks, qualifier exams are being conducted.

Eligible for first qualifier exam but failed or was absent

A candidate who was eligible to write the qualifier exam but was absent or failed in the first attempt will be eligible to re-attempt the qualifier exam in the same semester without having to repeat the assignments.

The fee for the second attempt will be as follows:

General Category / OBC-NCL/EWS Applicant

₹2000

SC / ST Category / PwD (>= 40% disability )

₹1000

SC / ST Category Applicant who is ALSO PwD (>= 40% disability )

₹500

For candidates who have not passed the first attempt and reattempt within the same semester, the best of the two scores in each subject of the qualifier exam will be considered for deciding the result of the Qualifier exam.

If an applicant was not eligible to receive the hall ticket for the qualifier exam in the first attempt:

Candidates who were not eligible to write qualifier exam can only attempt in the next semester and have to apply as a fresh candidate, paying the full fees as per the fee norms applicable (and additional exam facilitation fee in case of candidates outside India) They will have to redo the four weeks of course work and weekly graded assignments and become eligible to get the hall ticket for the qualifier exam as per the minimum marks required in each subject as mentioned earlier.

5.9 Use of the Qualifier score as Quiz 1 score

A learner who has qualified and opts to continue with some subjects in the same semester:

the qualifier exam score will be considered as Quiz 1 score assignment scores in the subjects registered after the qualifier exam will be used for any calculations involving these scores

If the learners register for the subjects in the subsequent semester, the qualifier score will not be used as Quiz 1 score. They will have to appear for Quiz 1 at the exam centre which will be considered for the final course score calculations.

## JEE based entry:

A student who has qualified to attempt JEE Advanced in the current year is deemed to have directly qualified and can register for a maximum of four courses in the Foundation level and start the program.

For eg: if students who have qualified to write the JEE Advanced exam in 2023 can apply to the BS-ES program in July 2023 or Jan 2024, they will be treated as having qualified and allowed to register for courses of Foundation level.

Such students will first register to the program paying the registration fees of Rs 6000/- with suitable waivers for students in the category of SC/ST/PwD with >40% disability and then once the documents are verified and their registration is approved, they will proceed to pay the fees for courses they choose to register for.

#### 6. Credit Clearing Capability

There is a limit on the number of courses that the learner is permitted to register in a term and it is calculated as shown below.

Term 1: decided by qualifier marks

Term 2: decided by average of marks of all courses taken in Term 1 in which the learner has passed

Term n (n>2): M = average marks of courses passed in the previous two terms Term n-1 and Term n-2 (This will be calculated using marks of subjects in which the candidate has

passed, not those which he/she has not passed or is not completed yet); (n-1 and n-2 terms must be terms where the learner status is Active - defined in section Learner Life Cycle

Marks M (as defined above)

Maximum number of courses that learner is permitted to register in any term

 $0 \le M \le 50$ 

2

50 <= M< 70

3

M >= 70

4

The credit clearing capability CCC will be decided as follows:

If a learner has passed at least one course in term n-1, then the CCC of term n will be calculated based on the marks as given in the above table.

If a learner has failed all courses the learner has appeared for in term n-1, CCC of next term n will be 2.

If a learner is absent for the final exam of all courses, thus not completing their courses and not getting grades, CCC of next term = CCC of the learner's last term CCC is kept as 4 by default for everyone in the Diploma level.

7. Continuing with the program

Learners who are continuing with the program will go through the following steps to sign up for the courses:

Within the registration window, learners will select the courses they want to take in the coming semesters with the maximum being four theory courses.

Learners go through the steps of picking two cities among the choices provided for their guizzes and exams for that term.

They have the freedom to choose a different set of cities than the ones they opted for in the previous semesters.

Also they can choose a different set of cities for every quiz/final exam while registering for the courses so that accordingly booking may be done with the Exam vendor for slots in these cities.

Learners pay only for the number of credits they are signing up for. Registration will be approved only if the documents are verified. Only after registration, students can proceed to pay the fees for courses they choose to register for.

Learners can register to courses for which the prerequisite is completed. e.g. in order to sign up for Math-2, the learner must have cleared Math-1

8. No Direct Entry into Diploma programme Students cannot register for Diploma directly. All students who wish to join for the program must start from Foundation level only.
View Admission to the program section to know how to join the program at the Foundation level.
9. Courses in various levels of program
The courses in each level is given below:
No.
Sem
Level
Course Title
Credits
1.1
1
Foundation
English I
4
1.2
1
Foundation
Mathematics I

```
4
1.3
1
Foundation
Electronic System Thinking and Circuits
4
1.3.1
1
Foundation
Electronic System Thinking and Circuits Lab
1
1.4
1
Foundation
Introduction to C Programming
2+3
2.1
2
Foundation
English II
4
```

2.2

2
Foundation
Introduction to the Linux Shell
5
2.3
2
Foundation
Digital Systems
4
2.4
2
Foundation
Electrical and Electronic Circuits
4
2.5
2
Foundation
Electronics Lab
3
3.1
3

Foundation

# Embedded C Programming 4+2 3.2 3 Diploma Mathematics for Electronics II 4 3.3 3 Diploma Signals and Systems 4+1 4.1 4 Diploma Analog Electronic Systems 4 4.2 4 Diploma Analog Electronics Lab

4.3
4
Diploma
Python Programming
5
4.4
4
Diploma
Digital Systems Design
4+2
5.1
5
Diploma
Digital Signal Processing
4+1
5.2
5
Diploma
Embedded Linux on System on Programmable Chips
2+2
5.3
5

Diploma
Sensors and Applications
3
5.4
5
Diploma
Sensors Lab
3
5.5
5
Degree
Elective 1
4
6.1
6
Degree
Electronic Product Design
4
6.2
6
Degree

Electromagnetic Fields and Transmission Lines

4
6.3
6
Degree
Control Engineering
4
6.4
6
Degree
Elective II
4
6.5
6
Degree
Elective III
4
7.1
7
Degree
Elective IV
4
7.2

7
Degree
Open Elective
4
7.3
7
Degree
Open Elective
4
7.4
7
Degree
Open Elective
4
7.5
7
Degree
Open Elective
4
8.1
8
Degree

Apprenticeship (optional)/Electives

8

8.2

8

Degree

**Humanities Elective** 

4

Registration for Diploma courses:

Only those students who complete courses 1.1-2.5 will be permitted to proceed with registration of courses 3.2 and higher. Students who complete 1.1-3.1 will be issued the Foundational level certificate.

Registration for BS degree courses:

Only those students who complete courses 1.1-4.4 will be permitted to register for courses 5.5 and higher. Students who complete 1.1-5.4 will be issued the provisional Diploma in Electronic Systems if they choose to continue with the program.

# 10. Learning Process

The content that is released in every course includes the following:

Videos by faculty
Activity questions - based on every video
Practice assignment - questions, pdf solution and video solution
Graded assignment - questions, solution after due date
Text transcripts and notes
Reference books
Mock test before the qualifier exam
Discussion forum and live sessions - to aid the learning

Apart from Assignments, the following assessment components will be available for each course:

Quiz 1

Quiz 2

**End Term Exam** 

In addition to the above, some courses will also have the following as part of the assessment:

In-person lab work Mock End Term Exam

The following is the learning process for students joining the program:

Each course has weekly content which comprise video lectures. Students must go through those videos and any other course materials and learn from them.

Course content may also have Activity questions. Answering these questions is not compulsory, but highly recommended. These activity questions are based on each video. Courses will also have practice assignments. These are also ungraded, but highly recommended to students, as these practice assignments will help them to check their understanding of the concepts taught.

Each course will have assignments every week which are graded. The number of questions in the assignment varies from course to course. These assignments have to be submitted online. Students must submit their assignments before the deadline Students can read the transcripts provided for each video.

There will be a live session for every course. Students can get their doubts clarified through these live sessions.

Students will be provided with a discussion forum where they can ask questions and post comments. It is highly recommended that students make use of this facility to clear their doubts

11. BS Level: Elective Courses and Apprenticeship

Learners have to complete 56 credits at the degree level for obtaining the BS degree in Electronic Systems. It comprises core courses, department electives, open electives, apprenticeship and humanities elective.

BS Degree level: Core and Electives and Apprenticeship

1

Core (Mandatory)

Three courses:	
Electromagnetic Fields and Transmission Lines Electronic Product Design Control Engineering 12	
2	
Elective Courses:	
Four courses - Max 16 credits - List of courses will be	made available in due course of time.
There will be provision for transfer from NPTEL with a maximum credits that can be transferred	certain number of credits as
16	
3	
Open Electives	
Four courses - Max 16 credits - List of courses will be	nade available in due course of time.
There will be provision for transfer from NPTEL with a maximum credits that can be transferred	certain number of credits as
16	
4	
Humanities Elective	
4	
5	
Apprenticeship	
8	

#### 11.1 Elective Courses

The elective courses, each of 4 credits, will be offered as part of the BS degree program at the BS degree level as department core/electives. List of courses will be made available in due course of time.

Note: The list of courses will be subject to periodic revision.

## 11.2 Open Elective Courses

The courses, each of 4 credits, will be offered as part of the BS degree program at the BS degree level as open electives. List of courses will be made available in due course of time.

Note: The list of courses will be subject to periodic revision.

## 11.3 NPTEL Courses for Elective and Open Elective Courses

The NPTEL courses can be credited towards elective courses and open elective courses. Any course can be credited only once in this program. Also, the same NPTEL course cannot be credited twice - for another academic program, say within your college and this BS program. It should be credited only in one degree program. The provision for transfer from NPTEL will be for a certain number of credits as maximum credits that can be transferred

List of courses, the process to be followed, the fees and other details will be made available in due course of time.

Note: The list of courses will be subject to periodic revision.

#### 11.4 Apprenticeship

The program provides the students in the BS level of the program to pursue an apprenticeship with companies and research projects and earn up to eight credits in this level. Doing an apprenticeship is optional.

The steps involved in apprenticeship, the duration, the number of courses that can be taken, the academic credits and the cost of apprenticeship per credit will be communicated in due course of time.

#### 12. Learner Life Cycle

Once a learner clears the qualifier, he/she will be eligible to register for the Foundation level. Using their personal email id, they register to the courses and make the payment. After

approval of the uploaded documents, the learner is given a roll\_number@es.study.iitm.ac.in email id.

Post that all interactions on the portal right from login to accessing the learner dashboard and courses will be via this email id.

There will be five statuses for any learner in the program : On the rolls/Active, On Academic Probation, Struck off the rolls, Alumnus, Quit the program.

On the rolls / Active - When a learner is registered in any semester for one or more courses after paying the course fees, the status will be "On the rolls" or Active.

On academic probation/ Not registering to any course in a semester:

After joining the program, a learner may skip up to two semesters consecutively without taking any courses. In the two semesters where the learner does not register for any course, the learner status will be marked as "On Academic Probation". The learner email ID will still be kept alive while the learner is on academic probation.

The student can actively inform the program office about not registering to courses by paying the "Registration keep alive fee (RKA)" of Rs 1000/- per semester. In case of registering for courses in the next semester, the learners have to only pay the course fees. The learner may not pay the RKA and have it as pending to be paid. Pending RKA will include 10% extra over regular RKA when re-registering back.

To register to courses in the next semester if not paid the RKA: The learner will have to pay the pending dues = (which will be Rs 1100/- or Rs 2200/- (Rs 1000 RKA +10% as penalty for each semester where no courses are registered). The learner has to select the courses and pay the course fees. Once they do this, the learner status is changed to "On the rolls". Struck off the rolls: If a learner with status "On Academic Probation" for two consecutive semesters does not register for courses for the third consecutive semester, the learner's status is changed to "Struck off the rolls". The official email id is suspended. Readmission after striking off the roles:

Once struck off the rolls, to reactivate the registration, they will have to apply through a separate process as defined:

If the RKA for the previous three semesters has already been paid, they have to request for reactivating the Email ID on payment of Re-admission fee of Rs. 10000. Once done, they can register for the courses in the upcoming term.

If the RKA for the previous three semesters has not been paid, the learner has to apply to activate his / her account by paying the pending dues which will be Rs. 13,300= Rs.10000 (Readmission fee) + Rs 3300/- (Rs 1000 RKA x 3 semesters + Rs 300 (10% as penalty)). On receipt of the payment, the official Email ID is activated again and they are permitted to register using this ID. Once they do this, the status is changed to "On the rolls".

Any learner who is struck off the rolls two times, is removed from the program.

Quitting the program:

There will also be an option inside the candidate dashboard which says "I quit the program". Once the learner applies for this midway through a level, we suspend the official email account and activate the personal email account to access the dashboard.

Readmission after Quitting the program

If they want to recontinue, they pay the Readmission fee of Rs.10000/- get their email id reactivated and can register to next term using this. Status will be changed to "Quit the program".

Alumnus: Learners who complete the entire program (BS) will be awarded the "Alumnus" status. Once they graduate, their official Email ID will be suspended and their personal email account will be given access to the dashboard.

Someone completing a level and quitting the program will have status as "Foundation level certified" and "ES Diploma certified". But will not be awarded "Alumnus" status.

Note: The amounts mentioned are tentative and awaiting approval from IITM's authorities.

- 13. Certificates and Mark transcripts
- 13.1 Design of Certificates

The design has been finalized for the three levels of certificates, as shown on the website.

BS in Electronic Systems

Diploma in Electronic Systems

# Foundation in Electronic Systems

#### 13.2 Mark transcripts

There will be two types of mark cards that will be made available.

# Semester wise Progress card

This document will list all the courses taken by the learner semester wise.

The values for every course will be course code, course name, level, grade obtained.

Note that the transcript will show all attempts and grades obtained in each of the attempts.

#### Grade Card

This will have the courses at each level listed only once. The best score obtained among all attempts for each course is what will be shown here.

GPA will be calculated for the courses in a particular semester of the program.

#### GPA=(GPi\*Ci)/Ci

Where GP = grade point of a course and Ci is the number of credits assigned to that course and Ci is the total number of credits of all courses in the semester, including those with U or W or I grades.

The CGPA will also be computed for all unique courses completed until this point in time with the best grade being considered in case a course is attempted multiple times.

Procedure to apply for official Transcript & Bonafide Certificate:

Students who are interested in applying for a transcript / bonafide certificate should follow these steps. Note that these certificates will be issued every Thursday. Students have to plan suitably and contact us.

Send an email to support-es@study.iitm.ac.in obtain a Google form link We will accept the Google form responses received till 12.00 PM IST every Thursday for that week and will issue the certificate.

Responses received after 12:00 PM IST will be processed only on next Thursday, the following week.

14. Academic aspects

14.1 Academic calendar

There will be two semesters every year. They will start in January and September respectively.

All courses that are introduced in a semester will be offered in every subsequent semester.

Course content for online delivery

The recorded content which is released every week will be for a total of about 2-4 hours, split into multiple lectures which includes the theory and tutorial videos.

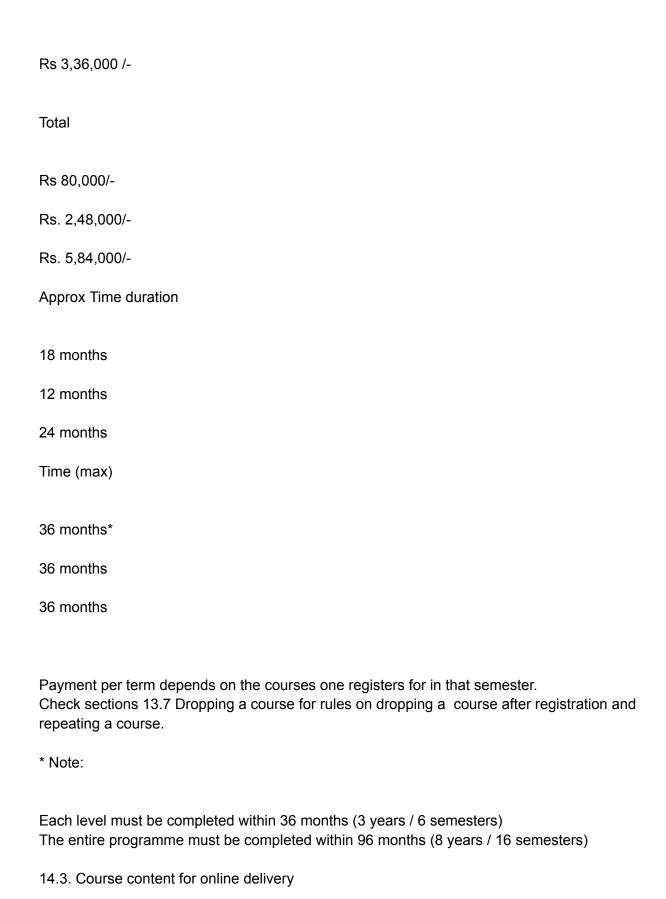
All videos are copyrighted to IIT Madras but will be available on YouTube as a public playlist for anyone to access and view.

All courses of 4 credits will be of duration 12 weeks.

Self test assessments for every video lecture, a practice assignment for the week with solutions will also be released apart from text transcripts and any related notes.

The weekly graded assignment will also be released along with the above content.

14.2 Timeline & Fees
Application fee
Foundation
Diploma
BS
Regular entry
Rs 6000/-
Rs 80,000/-
Rs 1,68,000/-



The recorded content which is released every week will be for a total of about 2-4 hours, split into multiple lectures which includes the theory and tutorial videos.

All videos are copyrighted to IIT Madras but will be available on YouTube as a public playlist for anyone to access and view.

All courses of 4 credits will be of duration 12 weeks.

Self test assessments for every video lecture, a practice assignment for the week with solutions will also be released apart from text transcripts and any related notes.

The weekly graded assignment will also be released along with the above content.

14.4. Evaluation and grading of courses in every term

Each course has multiple types of assessments - online weekly assignments, monthly proctored guizzes and an end semester exam (in-person).

#### Online assignments:

A 12 week course will have one or more weekly assignments to be submitted online within the due date specified.

The average score of the best five out of the first nine weekly assignments given during the course run should be >= 40/100 to be eligible to write the final exam and get the hall ticket for the same.

Score in any unattempted assignment will be counted as 0.

Depending on the course, the average of weekly assignment scores may also contribute to the total course score and course grade.

## Two proctored Quizzes

Two quizzes will be conducted at the end of Weeks 4 and 8 based on the content of Weeks 1-4 and 1-8 respectively.

These guizzes must be attempted in person in the city chosen

Will be a single session exam with 4 hrs to attempt four subjects, 3 hours to attempt three subjects and 2 hours to attempt one or two subjects.

The Qualifier score will be counted as Quiz 1 score for the courses registered in the Foundation level, continuing in the same semester as the qualifier exam.

The score of a quiz not attempted will be taken as 0. No make-up quiz will be provided. Attending one of the 2 quizzes will be a mandatory condition to be eligible to appear for the final exam, unless stated otherwise.

#### Final exam at the end of the course

At the end of a semester, there will be a final exam of 1.5 hours duration for each course. (This will ensure exams can be conducted only on Sundays and exams for four courses completed in two sessions of 3 hours each throughout the program.)

There will be an eligibility criteria defined for every course to obtain the hall ticket for the final exam, announced at the beginning of the semester.

If the above eligibility is not satisfied, students will not be allowed to write the Semester exam and will have to repeat the course.

Lab Sessions

Some of the courses are accompanied by lab sessions

It is mandatory for students taking hardware lab courses to visit IIT Madras for guided lab work during summer and winter

Option to choose slots for 1-2 weeks will be provided

14.5 Pass criteria for each course

Total Course Score (T) will be the sum of all assessment components in every course as defined in the Grading document of that semester.

A candidate is deemed to have passed a course if Total Course Score (T) >= 40/100

This criteria is the same for all learners in the course.

An absolute grading system, as described in the following table, will be followed:

Condition satisfied by

'T' - Total Course Score (Out Of 100)

Status

Letter Grade

Grade point

 $(T \ge 90)$ 

Pass

S

10

 $(90 > T \ge 80)$ 

Pass

Α

9

$$(80 > T \ge 70)$$

Pass

В

8

Pass

С

7

$$(60 > T \ge 50)$$

Pass

D

6

Pass

Ε

4

Fail

U

0

```
Weekly average assignment score <40/100
or 0 quizzes attended - (Not eligible to write the final exam)
Fail
WA/WQ
0
    ET - End semester exam
    GA - Average of weekly Graded assignment scores
    OPPE - Online proctored programming exams
Summary Table for course grading in case of absent/ failed
Average of the Weekly Graded assignment score
Attendance in Quizzes (as per course eligibility)
ΕT
Т
Grade
Condition for course reg
< 40
Not attended
```

-
WA
Repeat the entire course
>= 40
Attended
Present
>=40
Depends on the marks
>= 40
Attended
Absent
-
I .
Option 1: Complete ET alone in the next term. GA and quiz marks will be carried over
OR
Option 2: Repeat the entire course
>= 40
Not attended
-
-
WQ
Repeat the entire course

```
>= 40
Attended
Present
< 40
U
Repeat the entire course
Summary Table for 'I' Grade
Condition satisfied by
'T' - Total Course Score (Out Of 100)
Status
Letter Grade
Grade point
Absent in ET alone
Option 1: Complete ET alone in next term;
OPPE will NOT be scheduled.
GA, quiz and OPPE marks will be carried over
OR
Option 2: Repeat the entire course
Incomplete
```

Absent in both ET & OPPE Option 1: Complete ET and OPE in next term, Both OPPEs will be scheduled. GA and quiz marks will be carried over OR Option 2: Repeat the entire course Incomplete I BOTH Absent / Fail in OPPE Option1: Complete OPE alone in next term, Both OPPEs will be scheduled. GA, quiz and ET marks will be carried over OR Option 2: Repeat the entire course Incomplete I\_OP 14.6 Repeating a course For improvement A learner can repeat a course for improvement in grades any number of times. The fee for

repeating the course for improvement will be twice the regular course fee and the learner will have to submit all the weekly assignments, appear for the quizzes and final exams. The highest score amongst all attempts for a course will be used for calculating the CGPA.

Note: It is recommended that learners try and progress with new courses instead of repeating courses for improvement, unless a learner deems it absolutely necessary or needs to improve their learning of a course. All course material of completed courses are available to the learner throughout the course.

If learner was not eligible to attempt the semester exam (grade=WA/WQ) or if the learner did not attend the Quiz (Grade = U)

If average assignment score < 40/100 (WA) or no quiz attended, then the learner has to repeat the entire course. This includes submission of assignments and redoing all the subsequent quizzes and the semester exam. Fees for repeating the course is the same as the course fees.

If the learner was absent for the final exam alone (grade = I): The learner has two options: Reappear for the final term exam alone - Makeup exam: They can attend only the end term exam whenever it is conducted in the subsequent term.

The fee to repeat an end term exam will be Rs.4000 for each course of the foundational level and Rs.8000 for each course of the diploma / degree levels.

A learner can appear for the makeup exam only once. The score from this exam will be used to calculate Total score T and the student will get the grade corresponding to this score.

#### **OPTION 1:**

The makeup exam may be conducted at only IIT Madras campus on the date mentioned in the academic calendar. This will be within 4 weeks of the end-semester exam so that you can complete this before the registration to courses for the next semester.

For students who appear for the makeup exam, if the Total score T calculated using this end-sem score <40, the student will get a U grade and has to repeat the entire course in subsequent semesters, paying the course fees prescribed.

If the student is absent for this makeup exam, they can choose option 2.

#### OPTION 2:

If a student who was absent for the final exam cannot come to IITM campus to take the makeup exam or is absent for the makeup exam at IITM campus, they can register for the makeup exam again along with the end semester exams for courses in the next semester. The total number of exams that a student can register for is 4 in a semester (includes new/repeat/improvement courses and makeup exams).

The marks for other assessment components will be carried over from the course offering they registered for. The grading pattern used will also be as defined for the corresponding offering.

If the student is absent for this again, they have to repeat the entire course in subsequent semesters, paying the course fees prescribed.

If a student who has been absent for the final exam does not register for the first or second makeup exam, they will have to repeat the entire course.

Repeat the entire course:

Students can choose not to take up the makeup exams but repeat the entire course too.

The fee to repeat the course will be the same as the regular course fees.

The learner must complete all assignments, invigilated quizzes and the end term exam. Marks will not be carried forward from any of the assessment components of the previous run.

Registering for the courses will be counted as one of the courses permitted as CCC of the learner

If the learner does not pass the course (Grade = U): If the students was eligible to write the final exam, appeared for it and still got a U grade, the learner has two options: OPTION 1: Appear for the Supplementary exam:

Supplementary exams will be given only for the end-semester exam and not for the quizzes or any other assessments.

The fee to appear for this supplementary exam will be Rs.4000 for each course of the foundational level and Rs. 8000 for each course of the diploma / degree levels. Students have to register by paying this fee for every subject they wish to register for.

The supplementary exam may be conducted only at IIT Madras campus on the date mentioned in the academic calendar.

A learner can appear for the supplementary exam only once. The score from this exam will be used to calculate Total score T and the student will get the grade corresponding to this score.

If the student is absent for this supplementary exam or Total score T calculated using this end-sem score <40, the student has to repeat the entire course in subsequent semesters, paying the course fees prescribed.

### OPTION 2: Repeat the entire course:

Students can choose to not register and attempt the supplementary exam but repeat the entire course.

The fee to repeat the course will be the same as the regular course fees.

The learner must complete all assignments, invigilated quizzes and the end term exam.

Note:

Learners repeating a course for any reason must do so within the time and term limits:

Each level must be completed within 36 months (3 years / 6 semesters)

The entire program must be completed within 96 months (8 years / 16 semesters).

Registering for Courses: Semester-2 Onwards

Maximum number of final exams (full course+makeup exams) <= 4

Maximum number of new + repeat full course (if failed/absent if reqd/improvement) <= CCC

Registering for new courses is subject to fulfillment of all rules and prerequisites.

If passed all/some courses then CCC is calculated on the average of passed courses.

If failed in all courses, then CCC is set to 2.

If absent for all courses then CCC of the previous term is carried forward.

Make up exam will be permitted as an option only once in the subsequent term.

Repeating a Course - WA, WQ, U or I grade

Applicable for courses with WA, WQ, U or I grade.

You can choose to repeat courses in a single term or across multiple terms. You can also register for new courses in the term. The total number of courses must be within the CCC limit. Learners with an Incomplete (I) grade in a course can take a Make Up Exam instead of repeating the course.

Repeating a Course for Improvement Applicable for courses with S, A, B, C, D or E grade.

You can choose to repeat courses to improve the grade in the course. The highest grade will be recorded in the transcript. The total number of courses must be within the CCC limit. Course fee Repeat for Improvement courses will be double the normal fee. Improvement courses can be registered at any level. Eg: Foundation course improvement can be registered at diploma level.

Note: It is recommended that learners try and progress with new courses instead of repeating courses for improvement, unless a learner deems it absolutely necessary or needs to improve their learning of a course. All course material of completed courses are available to the learner throughout the course.

Make Up Exams

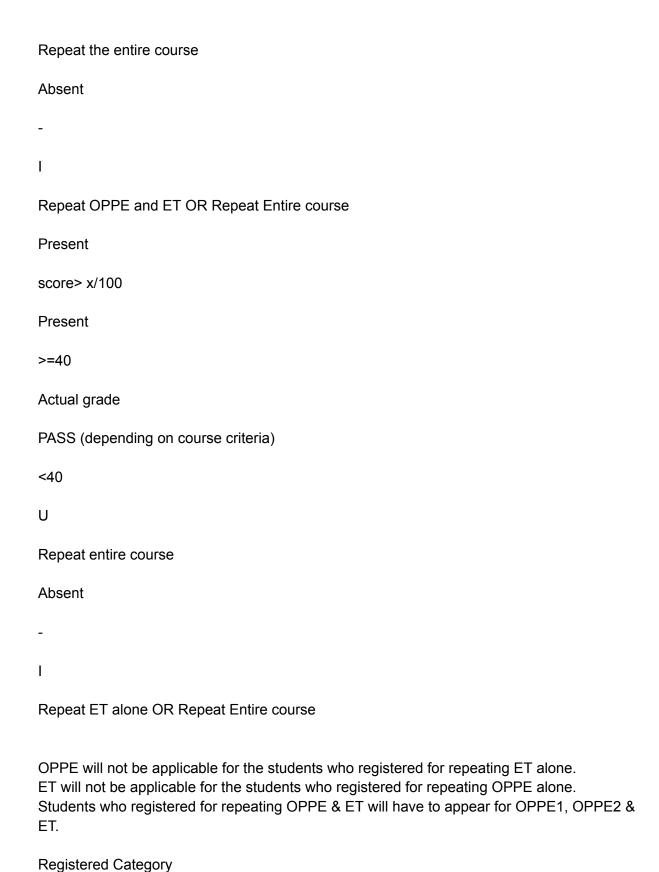
Applicable for courses with I grade.

You can choose to take a Makeup Exam for a course with Incomplete (I) grade. Learners will only be required to reappear for the Final Exam for that course. The Makeup Exam does not count towards CCC, but a student can appear for a maximum of FOUR final exams in a term. If you have already registered for 4 courses, you do not have any more final exam slots available.

Note: The grading pattern for make-up exams will be as follows: the pattern used will be as per the formula used in the term the course work was done and not as per the term the makeup exam was taken.
Quick Reckoner Table
COURSE PASS STATUS
New Course Allowed?
Repeat Course?
Take the Make Up Exam?
Passed all
Yes
Not recommended but available
Failed any/all
Yes
Yes

Absent for all final exams	
Yes	
Yes	
Passed + Absent	
Yes	
Yes	
Failed + Absent	
Yes	
Yes	
Yes	
Repeating OPPE:	
OPE1/OPE2	
ET	
Т	
Grade	
Condition for OPPE/course reg	
Absent	

Absent
-
U
Repeat the entire course
Absent
Present
>=35
I
Complete OPE alone in next term, GA, quiz and ET marks will be carried over OR
Repeat the entire course
<35
U
Repeat the entire course
Present
score< x/100
Present
>=40
I
Complete OPE alone in next term, GA, quiz and ET marks will be carried over OR
Repeat the entire course
<40
U



OPPE

ET alone

No OPPE will be conducted

OPPE alone

Both OPPE will be conducted

ET + OPPE

Both OPPE will be conducted

### 14.7 Dropping a course

(This is not applicable for the students who are continuing after qualifier in the same term)

Once the registration window closes in any term, adding courses will not be allowed. Dropping a course will be allowed within 4 weeks of the term start date and not beyond. Rs.4000 will be deducted if a Foundation level course is dropped and Rs.8000 will be deducted if a Diploma/Degree level course is dropped.

If the learner decides to drop out of the program completely using the "I quit the program" option, the course fee paid minus the deduction will be refunded to the learner and the learner will be removed from the program, canceling his official email id access. The status will also be changed to "Quit the program".

If the learner drops one/a few of the courses registered to in a term, the refund will be made as given in the table below but the email id will be kept active so that he/she can continue with other ongoing courses and the program. Status will be "Active".

If the learner opts to drop all courses registered in a term, the refund will be done as per the table given below and the email id will be kept active so that the learner can come in and register in the next term. But this will be counted as a term with 0 courses. Status will be changed to "Academic probation".

The fee receipt will be generated post these 4 weeks after term start when drop is permitted so that all the courses and fees are tallied and confirmed.

Learners writing exams outside India would have paid Exam facilitation Fee while registering for the courses. For such learners: If they drop from all courses in a term, 100% of the facilitation fee for Quiz 1 will be retained while 50% of the facilitation fee for quizzes 2 and final exam will be refunded.

Level
Paid
Retained by IITM as Admin charges
Refund
Foundation
12000
4000
8000
10000
4000
6000
8000
4000
4000
6000
4000
2000
4000
4000

Diploma
24000
8000
16000
20000
8000
12000
16000
8000
8000
12000
8000
4000
Degree
24000
8000
16000
Please note. The amount to be refunded will be added to your student wallet and NOT

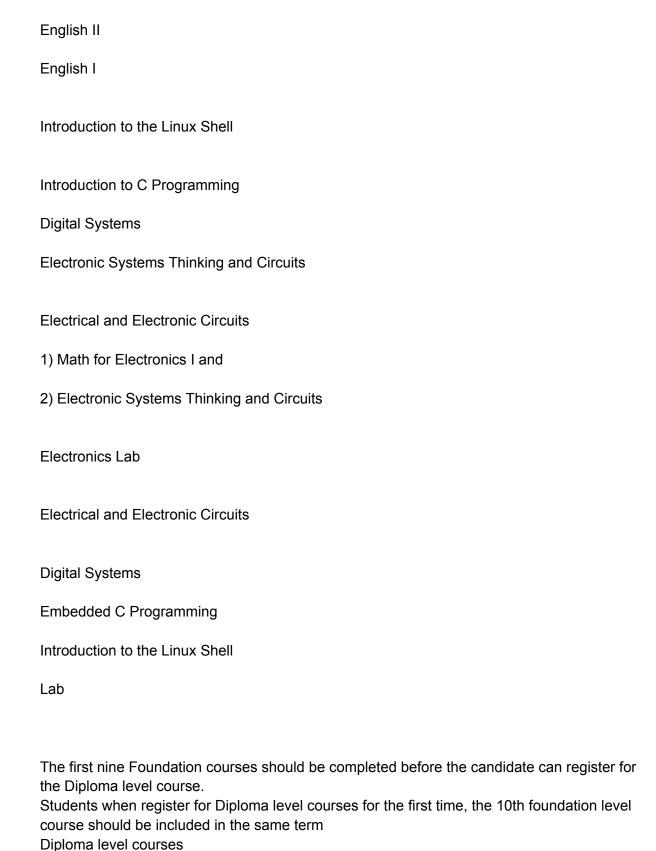
Please note, The amount to be refunded will be added to your student wallet and NOT refunded to the bank account. This amount can be used when you register for courses in the next term and deducted from the fees to be paid then.

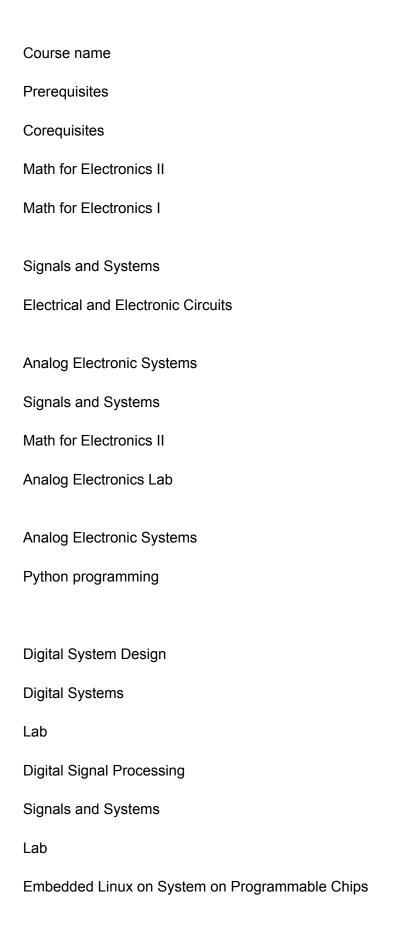
14.8 Learning paths
Here are some suggested learning paths

Foundation course certificate Diploma in Electronic Systems BS Degree in Electronic Systems

Sem
Foundation
Diploma
Year 1
Sem 1
4
Sem 2
4+1 lab course
Year 2
Sem 3
1
2
Sem 4
3+1 lab course Year 3
Sem 5

3+1 lab course
Sem 6
Note: The learning path for the BS degree level will be mentioned in the due course of time.
14.9 Prerequisite course requirements Foundation courses
Course name
Prerequisites
Corequisites
English I
-
Math for Electronics I
Electronic Systems Thinking and Circuits (ESTC)
- -
Electronic Systems Thinking and Circuits Lab
ESTC
Introduction to C Programming





2. Digital System Design
Sensors and Applications
Analog Electronic Systems
Sensors Lab
Sensors and Applications
Without completing all the 10 Foundation courses and the first six Diploma level courses, one cannot proceed to register for Year 3 Degree level courses.
That is, only those students who complete courses 1.1-4.4 will be permitted to register for courses 5.5 and higher. Students who complete 1.1-5.4 will be issued the provisional Diploma in Electronic Systems if they choose to continue with the program.
Degree level courses Course name
Prerequisites
Corequisites
Elective I
Electromagnetic Fields and Transmission Lines
Math for Electronics II
Electronic Product Design

1. Embedded C Programming

Sensors and Applications;
2. Electromagnetic Fields and Transmission Lines
Control Engineering
Control Engineering
Signals and Systems
Elective II
Elective III
Elective IV
Open Elective
Open Elective
Open Elective
Open Elective
Apprenticeship
Humanities elective

15. Graduating with a BS degree The total number of credits to be earned in the BS level is 56. The BS level comprises 12 courses and one optional Apprenticeship. Students should earn a total of 142 credits through all levels to get the BS Degree.
The courses are split as follows:
Type of course
Number of credits
Core courses
Three courses with four credits each
3x4 = 12 credits
Apprenticeship
(optional)
8 credits
Electives, Open Elective and Humanities Elective
Nine courses with four credits each.
9x4 = 36 credits
Only those students who complete courses 1.1-4.4 will be permitted to register for courses

B) Software and Hardware Requirements - Mandatory System Specifications

5.5 and higher.

The following are the essential requirements that are recommended to pursue the BS Degree program from IIT Madras[1]. Please note that there will be updates in some of the specifications with changes happening in technology.

#### Hardware

To enroll and study in the program, every student is required to have a laptop or desktop with the minimum configuration being as follows:

RAM Size - 8 GB or higher (The ability to install more memory is desirable).

Processor - Intel 8th Generation or AMD 4th Generation or upwards or its equivalent (The latest processor configuration is always recommended)

Storage - Minimum of 500 GB, Desirable of 1 TB. Having an SSD storage is desirable. Screen size and resolution - Minimum of 13" for laptop and Minimum of 15" for desktop with 1080p

Webcamera, a mic and speaker or an earphone/headphone with mic.

Software/Applications

Operating System - Minimum requirement of Windows 10 or Ubuntu LTS Version 20.04 (or any equivalent) or Mac OS Mojave. Having the capability of dual boot is desirable. If there is no capability for dual boot, then the operating system must support virtualization software like VirtualBox using which Ubuntu 20.04 can be emulated. The System Commands course in Semester 4 will be taught primarily on Ubuntu 20.04.

Browser - Latest version of Chrome with Google Account signed in

Basic familiarity with Google Suite of tools (Docs, Sheets and Slides), specifically collaboration features.

Any other software that is specified within the course

Laboratory Kit

A laboratory kit is required to perform experiments as part of the lab courses

In-campus Lab work: Students are required to visit IIT Madras for lab work.

This kit has to be purchased separately from IIT Madras.

The cost for it will be finalized and announced to the students. The cost of this kit is not covered as part of the course fees prescribed.

The Electronic kit will be a learning tool that will be used over the course of several terms, especially in the hardware related courses that have a lab component e.g. Digital systems, Electrical and Electronic Circuits etc. It can be used to measure and source currents and voltages to functionally test the circuits that you will build in the lab courses. It is a USB powered instrument that can be used as a function generator and oscilloscope. We expect that it will support Windows and Linux environments.

Internet Bandwidth

Minimum of 2 MBPS connection is required to attend sessions without disruptions. However we strongly recommend broadband connections with much higher bandwidth for the best learning experience.

For OnlineProctored Examinations
Browser - Latest version of Chrome is desirable

Mobile with a front camera and good internet connection (at least 4G) Mic and speaker to be able to speak to and listen to the person at the other end Any applications as required to be installed for the interactions/examinations System compatibility test

All students have to mandatorily attend the system compatibility test and ensure that the system you have conforms to the above requirements and student has to participate in this on the dates mentioned by the Admin team to get this completed.

#### Other References

Some more helpful links that will help you in understanding possible system configurations:

https://towardsdatascience.com/20-necessary-requirements-of-a-perfect-laptop-for-data-science-and-machine-learning-tasks-7d0c59c3cb63

https://www.practicaldatascience.org/html/buying\_datascience\_computer.html

https://www.umass.edu/it/support/hardware/recommended-minimum-computer-configuration s-windows

https://www.du.edu/it/support/how-to/students/laptops

https://wmich.edu/cs/laptop-requirements

# C) Houses and Clubs

To enhance student life, the program office facilitates houses and clubs managed by students of the program. All students in the program will be divided into 12 Houses named after the forests in India. Each house accommodates nearly various groups of around 20 students each where the group members are from the same city or neighboring cities and house members are from across the country.

Based on exam city preference given, students opting for the same city will be divided into groups. If a city has fewer candidates, it will be clubbed with the next nearby city in the same state.

Leaders, Mentors & Elections: In a House, Groups elect their Group Leaders and the Group Leaders in turn elect their Secretary, Deputy Secretary and Web Admin among themselves. It is the responsibility of the Mentors, who are above 25 years of age and who are identified by the House Council, to conduct free & fair elections. They also guide the elected members of the House Council.

Upper House Council: Secretaries and Deputy Secretaries of all 12 houses constitute the Upper House Council that governs all houses. The Mentoring Committee, made up of one

mentor from each house, along with the UHC and BS Degree team work together in defining policy for house guidelines.

The houses and groups will adhere to the rules, regulations, guidelines decided by the program office. A separate communication mode will be used for Houses and clubs. Members from the BS Degree team will be a part of all groups and communities.

D) Terms of Service Introduction Welcome to IIT Madras (IITM) BS Degree Program.

Please read these Terms of Service ("TOS") and Honor Code prior to registering for an account on study.iitm.ac.in or using any portion of the IIT Madras online degree website or study site or mobile applications (collectively, the "IIT Madras Study Site" which consists of all content and pages located within the study.iitm.ac.in web domain and all related mobile applications), including accessing any course material, chat rooms, or other electronic services.

These TOS and the Honor Code are agreements (the "Agreements") between you and IIT Madras. By using this site, you accept and agree to be legally bound by the Agreements, whether or not you are a registered user.

Please also read the Privacy Policy for the IIT Madras study.iitm.ac.in Site before you use any portion of this Site. The Privacy Policy describes how your personal data is collected and processed when you use this Site. If you do not understand or do not wish to be bound by the terms of the Agreements or Privacy Policy, you should not use the Site.

IIT Madras reserves the right to modify these TOS at any time without advance notice. Any changes to these TOS will be effective immediately upon posting on this page, with an updated effective date. By accessing the IIT Madras https://study.iitm.ac.in/ Site after any changes have been made, you signify your agreement on a prospective basis to the modified TOS and all of the changes. Be sure to return to this page periodically to ensure familiarity with the most current version of these TOS.

Any version of these TOS in a language other than English is provided for convenience and you understand and agree that the English language version will control if there is any conflict.

Rules for Online Conduct

You agree that you are responsible for your own use of the IIT Madras Study Site and for your User Postings. "User Postings" means all content submitted, posted, published, or distributed on the IIT Madras Study Site by you or other users of the IIT Madras Study Site, including but not limited to all forum posts, wiki edits, notes, questions, comments, videos, and file uploads. You agree that you will use the IIT Madras Study Site in compliance with these Agreements, and all applicable local, state, national and international laws, rules and regulations, including copyright laws, any laws regarding the transmission of technical data exported from your country of residence, and applicable laws.

As a condition of your use of the IIT Madras Study Site, you will not use the IIT Madras Study Site in any manner intended to damage, disable, overburden, or impair any IIT Madras server or the network(s) connected to any IIT Madras server or to interfere with any other party's use and enjoyment of the IIT Madras Study Site. You may not attempt to gain unauthorized access to the IIT Madras Study Site, other accounts, computer systems, or networks connected to any IIT Madras server through hacking, password mining, or any other means. You may not obtain or attempt to obtain any materials or information stored on the IIT Madras Study Site, its servers, or associated computers through any means not intentionally made available through the IIT Madras Study Site. If you are a registered user, you will not share your password or let anyone else access or compromise your account.

Furthermore, you agree not to scrape, or otherwise download in bulk, any IIT Madras Study Site content, including but not limited to a list or directory of users on the system, User Postings or user information, online textbooks, course materials, or trademarks and logos. You agree not to misrepresent or attempt to misrepresent your identity while using the IIT Madras Study Site (although you are welcome and encouraged to use an anonymous username in the forums and to act in a manner that keeps your identity concealed).

## Strictly Prohibited Items

The following items are strictly prohibited on the IIT Madras Study Site:

Content that defames, harasses or threatens others:

Content that discusses illegal activities with the intent to commit them;

Content that infringes another's intellectual property, including, but not limited to, copyrights or trademarks:

Profane, pornographic, obscene, indecent or unlawful content;

Advertising or any form of commercial solicitation;

Content related to partisan political activities;

Viruses, trojan horses, worms, time bombs, corrupted files, malware, spyware, or any other similar software that may damage the operation of another's computer or property; and Content that contains intentionally inaccurate information or that is posted with the intent of misleading others (this list, collectively, "Strictly Prohibited Items").

You may not submit, post, publish, share, or otherwise distribute any of the above strictly prohibited items on or via the IIT Madras Study Site.

## **User Accounts**

In order to create a user account, you must provide your full name, and an email address. You agree that you will never divulge or share access or access information for your user account with any third party for any reason. In accessing specific courses inside the portal, you may be prompted to enter additional optional information (e.g., your age group, your current role, etc.). You represent that all information provided by you is accurate and current. You agree to maintain and update your information to keep it accurate and current.

You also understand and agree that your profile details will be shared with the IIT Madras BS Degree Program course instructors.

Apart from the information provided online you may be required to provide in application forms or as required from time to time hard copies of certificates, identity cards or any other details as deemed necessary. You may also be required to produce the originals at any point for verification during the program. You agree to provide all such information in an accurate and true manner.

We care about the confidentiality and security of your personal information. Please see our Privacy Policy for more information about the collection and use of data on the IIT Madras Study Site.

# **Entry Criteria**

IIT Madras may have qualifier exams and other entry criteria at its sole discretion. IIT Madras BS Degree Program's criteria for Eligibility to Apply will be as stated in our website.

IIT Madras may require the candidates to produce relevant certificates as proof of eligibility, at any point of time during the tenure of the candidate's participation in the program. If it is found at any time that the information provided is false or certificates as requested have not been provided, IITM at its sole discretion may terminate the candidate from the program or restrict the candidate from accessing the material or providing the examination or may not issue the certificate for the program. Candidates are hereby understanding, agreeing and acknowledging this. The rules and regulations relating to the program will also be posted at the website at onlinedegree.iitm.ac.in. If there is any forgery or misrepresentation, IIT Madras may take independent action.

## Your Right to use Content on the IIT Madras Study Site

Unless indicated as being in the public domain, the content on the IIT Madras Study Site is protected by Indian and foreign copyright laws. Unless otherwise expressly stated on the IIT Madras Study Site, the texts, exams, videos, images, and other instructional materials provided with the courses and programs offered on the IIT Madras Study Site are for your personal use in connection with those courses and programs only. Certain reference documents, digital textbooks, articles, and other information on the IIT Madras Study Site are used with the permission of third parties, and use of that information is subject to certain rules and conditions, which will be posted along with the information. By using the IIT

Madras Study Site, you agree to abide by all such rules and conditions. You agree to retain all copyright and other notices on any content you obtain from the IIT Madras Study Site. All rights in the IIT Madras Study Site and its content, if not expressly granted, are reserved.

# Use FOR Personalization and Pedagogical Improvements

Our goal is to provide current and future visitors to the IIT Madras Study Site with the best possible educational experience. To further this goal, we sometimes present different users with different versions of course materials and software. We do this to personalize the experience to the individual learner (to assess the learner's level of ability and learning style, and present materials best suited to the learner), to improve our understanding of the learning process, and to evaluate and improve the effectiveness of our course materials, payment models, platform features, and offerings. We may publish or otherwise publicize results from this process, but, unless otherwise permitted under the Privacy Policy, those publications or public disclosures will not include your personal information.

# User Postings USER POSTINGS REPRESENTATIONS AND WARRANTIES

By submitting or distributing your User Postings, you affirm, represent, and warrant (1) that you have the necessary rights, licenses, consents, and/or permissions to reproduce and publish the User Postings and to authorize IIT Madras and its users to reproduce, modify, publish, and otherwise use and distribute your User Postings in a manner consistent with the licenses granted by you below, and (2) that neither your submission of your User Postings nor the exercise of the licenses granted below will infringe or violate the rights of any third party. You, and not IIT Madras, are solely responsible for your User Postings and the consequences of posting or publishing them.

#### LICENSE GRANT TO IIT MADRAS

By submitting or distributing your User Postings, you hereby grant to IIT Madras (as described below) a worldwide, non-exclusive, transferable, assignable, sub licensable, fully paid-up, royalty-free, perpetual, irrevocable right and license to host, transfer, display, perform, reproduce, modify, distribute, redistribute, relicense, and otherwise use, make available, and exploit your User Postings, in whole or in part, in any form and in any media formats and through any media channels (now known or hereafter developed)

Certificates / Degrees and Other Products & Services GENERAL

From time to time, IIT Madras Study Program may offer services and products for a fee (for example, course certificates, degree) based on the eligibility criteria that IITM may determine from time to time. For anything that you choose to purchase on the IIT Madras Study Site, you agree to pay all applicable fees when due. As described in the Privacy Policy, the processing of your payment information is done by a third-party payment vendor, and you

will be routed to a secure payment flow controlled by that vendor to complete the payment transaction. Once your payment transaction is completed, confirmation will be displayed on an IIT Madras Study page, and you will receive a confirmation email with your name, order number, and the payment amount. Please retain this email for your records as this information will be required if you seek a refund from IIT Madras.

#### **CERTIFICATES**

IIT Madras Study Site may offer Verified Certificates of Achievement for courses (a "Certificate") or certificates for programs (for example, a Foundational Level or Diploma Level certificate or a Degree Certificate) for learners who, in IIT Madras's judgment, have satisfactorily demonstrated mastery of the course or program material. Certificates will be issued by IIT Madras Study Program and the decision whether a certificate will be awarded to a given learner will be solely within the discretion of IIT Madras.

Subject to the foregoing, you will be required to pay a fee and complete the ID verification process for Verified Certificates.

In order to authenticate your identity for a Verified Certificate, you may be prompted to take a photo of yourself, as well as a photo of an acceptable form of photo ID, and upload your digital signature. Although these items are collected by IIT Madras in accordance with these TOS and the Privacy Policy, you should be aware that the actual authentication of your identity is performed by an IIT Madras third-party service provider and this information will be used only for the purpose of verifying your identity. Acceptable forms of photo ID's are:

Government or State-issued driver's license

**Passport** 

National ID card

State or Province ID card (including cards issued by motor vehicle agencies) In order to be accepted by IIT Madras, your photo ID must:

Contain your full name exactly (excluding hyphens, accents, and spaces);

Contain a relatively current photograph of yourself;

Be an original document; photocopied documents cannot be accepted; and Be current and valid; expired documents cannot be accepted.

If you do not possess a photo ID meeting the criteria described above, IIT Madras will be unable to provide you with a Verified Certificate.

#### NO OTHER ENROLLMENT

Solely as a result of enrolling in or completing a course or program provided by IIT Madras you will not be entitled to use any of the resources beyond the online courses or programs provided on the IIT Madras Study Site and will not be eligible to receive student privileges or

benefits provided to students enrolled in other degree or other credit- or credential-bearing programs of the IIT Madras.

#### Trademarks

Use of IIT MADRAS, IIT Names, Trademarks, AND Service Marks

The "IIT Madras," "IIT" names, logos and seals are trademarks ("Trademarks") of the respective entities. Likewise, the names, logos, and seals are Trademarks owned by IIT Madras. You may not use any of these Trademarks, or any variations thereof, without the owner's prior written consent. You may not use any of these Trademarks, or any variations thereof, for promotional purposes, or in any way that deliberately or inadvertently claims, suggests or, in the owner's sole judgment, gives the appearance or impression of a relationship with or endorsement by the owner.

All Trademarks not owned by IIT Madras that appear on the IIT Madras Study Site or on or through the services made available on or through the IIT Madras Study Site, if any, are the property of their respective owners.

Nothing contained on the IIT Madras Study Site should be construed as granting, by implication, estoppel, or otherwise, any license or right to use any Trademark displayed on the IIT Madras Study Site without the written permission of the owner of the applicable Trademark.

# Copyright Infringement

Copyright owners who believe their material has been infringed on the IIT Madras Study Site should contact IIT Madras's designated copyright agent at support@onlinedgree.iitm.ac.in or at --Address of Copyright Agent-- Attention: IIT Madras DMCA Agent/General Counsel.

### Communication must include:

Identification of the copyrighted work, or, in the case of multiple works at the same location, a representative list of such works at that site.

Identification of the material that is claimed to be infringing or to be the subject of infringing activity. You must include sufficient information for us to locate the material (e.g., URL, IP address, computer name).

Information for us to be able to contact the complaining party (e.g., email address, phone number).

A statement that the complaining party believes that the use of the material has not been authorized by the copyright owner or an authorized agent.

A statement that the information in the notification is accurate and that the complaining party is authorized to act on behalf of the copyright owner.

Disclaimers of Warranty / Limitations of Liabilities

THE IIT MADRAS STUDY SITE AND ANY INFORMATION, CONTENT OR SERVICES MADE AVAILABLE ON OR THROUGH THE IIT MADRAS STUDY SITE ARE PROVIDED

"AS IS" AND "AS AVAILABLE" WITHOUT WARRANTY OF ANY KIND (EXPRESS. IMPLIED OR OTHERWISE), INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT. EXCEPT IN SO FAR AS ANY SUCH IMPLIED WARRANTIES MAY NOT BE DISCLAIMED UNDER APPLICABLE LAW. IIT MADRAS DOES NOT WARRANT THAT THE IIT MADRAS STUDY SITE WILL OPERATE IN AN UNINTERRUPTED OR ERROR-FREE MANNER, THAT THE IIT MADRAS STUDY SITE IS FREE OF VIRUSES OR OTHER HARMFUL COMPONENTS, OR THAT THE COURSES OR CONTENT PROVIDED WILL MEET YOUR NEEDS OR EXPECTATIONS. IIT MADRAS ALSO MAKES NO WARRANTY ABOUT THE ACCURACY, COMPLETENESS, TIMELINESS, OR QUALITY OF THE IIT MADRAS STUDY SITE OR ANY COURSES OR CONTENT, OR THAT ANY PARTICULAR COURSES OR CONTENT WILL CONTINUE TO BE MADE AVAILABLE. USE OF THE IIT MADRAS STUDY SITE, AND THE CONTENT AND SERVICES OBTAINED FROM OR THROUGH THE IIT MADRAS STUDY SITE, IS AT YOUR OWN RISK. YOUR ACCESS TO OR DOWNLOAD OF INFORMATION. MATERIALS, OR DATA THROUGH THE IIT MADRAS STUDY SITE OR ANY REFERENCE SITES IS AT YOUR OWN DISCRETION AND RISK, AND YOU WILL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO YOUR PROPERTY (INCLUDING YOUR COMPUTER SYSTEM) OR LOSS OF DATA THAT RESULTS FROM THE DOWNLOAD OR USE OF SUCH MATERIAL OR DATA, UNLESS OTHERWISE EXPRESSLY PROVIDED FOR IN THE PRIVACY POLICY.

IIT Madras does it its best to ensure that all information on the Website is accurate. If you find any inaccuracies on the website, please let IIT Madras know by sending an email to support@onlinedegree.iitm.ac.in and we will take steps to look into the matter and correct, where we agree, as soon as practicable.

#### Third-party Services: Links to Other Websites

The IIT Madras Study Site and individual courses may be integrated with third-party services or include hyperlinks to websites maintained or controlled by third parties. IIT Madras and the IIT Madras Participants are not responsible for and do not routinely screen, approve, review or endorse the contents of or use of any of the products or services that may be offered by such third parties. If you decide to access any third-party services or linked third-party websites, you do so at your own risk.

## Non-Liability

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, YOU AGREE THAT NEITHER IIT MADRAS NOR ANY OF THE IIT MADRAS PARTICIPANTS WILL BE LIABLE TO YOU FOR ANY LOSS OR DAMAGES, EITHER ACTUAL OR CONSEQUENTIAL, ARISING OUT OF OR RELATING TO THESE TERMS OF SERVICE, OR YOUR (OR ANY THIRD PARTY'S) USE OF OR INABILITY TO USE THE IIT MADRAS STUDY SITE, OR YOUR PLACEMENT OF CONTENT ON THE IIT MADRAS STUDY SITE, OR YOUR RELIANCE UPON INFORMATION OBTAINED FROM OR THROUGH THE IIT MADRAS STUDY SITE, WHETHER YOUR CLAIM IS BASED IN CONTRACT, TORT, STATUTORY

OR OTHER LAW. IN PARTICULAR, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, NEITHER IIT MADRAS NOR ANY OF THE IIT MADRAS PARTICIPANTS WILL HAVE ANY LIABILITY FOR ANY CONSEQUENTIAL, INDIRECT, PUNITIVE, SPECIAL, EXEMPLARY, OR INCIDENTAL DAMAGES, WHETHER FORESEEABLE OR UNFORESEEABLE AND WHETHER OR NOT IIT MADRAS OR ANY OF THE IIT MADRAS PARTICIPANTS HAS BEEN NEGLIGENT OR OTHERWISE AT FAULT (INCLUDING, BUT NOT LIMITED TO, CLAIMS FOR DEFAMATION, ERRORS, LOSS OF PROFITS, LOSS OF DATA, OR INTERRUPTION IN AVAILABILITY OF DATA).

CERTAIN LAWS DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES OR THE EXCLUSION OR LIMITATION OF CERTAIN DAMAGES. IF THESE LAWS APPLY TO YOU, SOME OR ALL OF THE ABOVE DISCLAIMERS, EXCLUSIONS, OR LIMITATIONS MAY NOT APPLY TO YOU, AND YOU MIGHT HAVE ADDITIONAL RIGHTS.

#### Indemnification

You agree to defend, hold harmless, and indemnify IIT Madras and their respective subsidiaries, affiliates, officers, faculty, students, fellows, governing board members, agents and employees from and against any third-party claims, actions, or demands arising out of, resulting from or in any way related to your use of the IIT Madras Study Site, including any liability or expense arising from any and all claims, losses, damages (actual and consequential), suits, judgments, litigation costs, and attorneys' fees, of every kind and nature. In such a case, IIT Madras or the applicable IIT Madras Participant will provide you with written notice of such claim, suit, or action.

#### Additional Terms

TERMINATION RIGHTS; DISCONTINUATION OF COURSES AND CONTENT.

You agree that IIT Madras, in its sole discretion, may terminate your use of the IIT Madras Study Site or your participation in it, for any reason or no reason, upon notice to you. It is IIT Madras's policy to terminate in appropriate circumstances the accounts of users of the IIT Madras Study Site who are repeat copyright infringers. IIT Madras and the IIT Madras Participants reserve the right at any time in their sole discretion to cancel, delay, reschedule or alter the format of any course offered through IIT Madras, or to cease providing any part or all of the IIT Madras Study Site content or related services, and you agree that neither IIT Madras nor any of the IIT Madras Participants will have any liability to you for such an action. If you no longer desire to participate in the IIT Madras Study Site, you may terminate your participation at any time. The rights granted to you hereunder will terminate upon any termination of your right to use the IIT Madras Study Site, but the other provisions of the Agreements will survive any such termination.

#### **ENTIRE AGREEMENT**

The Agreements constitute the entire agreement between you and IIT Madras with respect to your use of the IIT Madras Study Site, superseding any prior agreements between you and IIT Madras regarding your use of the IIT Madras Study Site.

#### WAIVER AND SEVERABILITY

The failure of IIT Madras to exercise or enforce any right or provision of the Agreements shall not constitute a waiver of such right or provision. If any provision of the Agreements is found by a court of competent jurisdiction to be invalid, the parties nevertheless agree that the court should endeavor to give effect to the parties' intentions as reflected in the provision and the other provisions of the Agreements shall remain in full force and effect.

#### CHOICE OF LAW/FORUM SELECTION

You agree that the Agreements and any claim or dispute arising out of or relating to the Agreements or any content or service obtained from or through the IIT Madras Study Site will be governed by the laws of the Union of India, excluding its conflicts of law provisions. You agree that all such claims and disputes will be heard and resolved exclusively in the state high court located in and serving Chennai, Tamil Nadu, India. You consent to the personal jurisdiction of those courts over you for this purpose, and you waive and agree not to assert any objection to such proceedings in those courts (including any defense or objection of lack of proper jurisdiction or venue or inconvenience of forum).

## E) Privacy Policy

This Privacy Policy applies to information that IIT Madras collects through the IIT Madras Study site when you interact with IIT Madras, with other users, and generally with the IIT Madras Study site - study.iitm.ac.in.

Your information is received and controlled by IIT Madras according to this Privacy Policy when you sign up for a IIT Madras account or otherwise use the IIT Madras Study site.

IIT Madras is solely and independently responsible for its own privacy practices.

IIT Madras cares about the confidentiality and security of your information. So, if you do not accept the terms of this Privacy Policy, then please do not access, browse, or register in the IIT Madras Study site or register for any courses. If you choose not to provide certain information required to provide you with various products and services offered on the IIT Madras Study site, then you may not be able to establish a user account or obtain those products or services.

This Privacy Policy is organized as follows:

- 1. Information that IIT Madras collects from you (including Personal Information)
- 2. Cookies and Tracking Technologies on the IIT Madras Study site
- 3. How your information is used
- 4. How your information is shared
- 5. How to manage your Personal Information
- 6. Storage & Security
- 7. Privacy Policy updates
- 8. Contact information

Information that IIT Madras collects from you (including Personal Information)

IIT Madras directly collects information when you:

sign up for an IIT Madras Study user account register and participate in online courses

send email messages to IIT Madras Study support (including messages to learner support) participate in user surveys; and

participate in public forums, webinars, and other interactive experiences on the IIT Madras Study site. IIT Madras also indirectly collects usage information about your visit to the IIT Madras Study site, as explained in the section below titled 'Cookies and Tracking Technologies'.

IIT Madras does not itself collect or store financial account numbers or identification issued by a governmental entity, employer, or other authority. Instead, if you choose to make a payment on the IIT Madras Study site, for example to register for Proctored Exams, you will be directed to IIT Madras's third-party payment processor and IIT Madras's third-party ID verification service provider. If you do not wish to submit the required authentication or payment information, then you will not be able to register for an IIT Madras BS Degree exam and earn a certificate/degree.

IIT Madras requires your Personal Information in circumstances when you:

Sign up in IIT Madras Study Website (name, email address) Register in an IIT Madras Study course Participate in proctored exams or other course facilitation processes (so that IIT Madras's third-party vendor can monitor and assess the integrity of your course activity); or Earn a Certificate/ Degree (the certificate will have your name on it).

To the extent that IIT Madras associates the information that IIT Madras collects directly or indirectly with an individual (for example, you), the association is based on Personal Information in your account profile.

You may voluntarily choose to share additional Personal Information on the IIT Madras Study site. For example:

In applying for financial assistance; or

when participating in a course, forum, webinar, or other interactive experience on the IIT Madras Study site (noting that in some cases, this information is shared with a third party that provides tools or other assistance for the IIT Madras Study site or a course).

IIT Madras encourages you to use discretion before voluntarily sharing additional Personal Information on the IIT Madras Study site. (If you later choose to delete your IIT Madras account, deletion of your Personal Information will be subject to the process and limits outlined below.)

Cookies and Tracking Technologies on the IIT Madras Study site

IIT Madras Study Portal uses Cookies and other common Tracking Technologies on the IIT Madras Study site and in email communications to help IIT Madras better understand your use and needs of the IIT Madras Study site, current and future IIT Madras-related products and services, and how IIT Madras can improve.

For example:

Based on your cookie settings, IIT Madras may track information indicating, among other things, which pages of the IIT Madras Study site were visited, the order in which they were visited, when they were visited, and which hyperlinks and other user interface controls were used

IIT Madras may log the IP address, operating system, and browser software (including mobile use and device type when you use IIT Madras native mobile apps) you used when accessing the IIT Madras Study site, and IIT Madras may be able to determine from an IP address your Internet Service Provider and the geographic location of your point of connectivity; and

IIT Madras may track and collect information from emails that IIT Madras sends to you, for example, whether you opened the email or clicked on any links from the email.

IIT Madras may also partner with third parties to help us track and understand your activity on the IIT Madras Study site, how you interact with IIT Madras's social media, and how you find or may be referred to the IIT Madras Study site.

IIT Madras may use Cookies and other Tracking Technologies for the following purposes: when necessary for system administration, security, and integrity to ensure the IIT Madras Study site works properly for you. Without these technologies, the IIT Madras Study site may not function correctly

to enable analytics, performance and functionality, to help IIT Madras gather information about how visitors use the IIT Madras Study site and monitor IIT Madras Study site performance, and to enhance your experience by recognizing and remembering whether you have visited the IIT Madras Study site before and may have any personal preferences; and

to support marketing by enabling IIT Madras to deliver content relevant to your interests on the IIT Madras Study site and third-party sites based on how you interact with IIT Madras advertisements or content. IIT Madras may use "first-party" cookies, which means cookies served by IIT Madras and also "third-party" cookies, which means cookies served by third parties that help IIT Madras track this information.

You have some options for managing Cookies and other Tracking Technologies. These include:

Modifying your browser settings: You should be able to control how and whether your web browser accepts Cookies by adjusting its privacy and security settings. The "help" feature of the menu bar on most browsers will tell you how to stop accepting new Cookies, how to receive notification of new Cookies, and how to disable existing Cookies. If you reject IIT Madras's Cookies, many functions and conveniences of the IIT Madras Study site may not work properly.

Opting-out of certain third-party tracking and advertising: Some of the third parties used by IIT Madras for Cookies and Tracking Technologies offer the ability to opt-out from their tracking by following processes described on their websites. IIT Madras is not responsible for the effectiveness of any third-party opt-out options.

How your information is used

IIT Madras may use information, including Personal Information, to carry out the following purposes:

Operate and improve the IIT Madras Study site – This includes creating and improving features that support the IIT Madras community and enable IIT Madras Study site usage at scale. This also includes personalizing the IIT Madras Study site, so that your learning experience is tailored to your interests and needs.

Create, administer, provide, and teach courses – This includes creating and improving the delivery of online courses and programs on IIT Madras. This also includes personalizing

courses, so your learning experience is tailored to your interests and needs, and assessing your performance and awarding certificates/degrees.

Offer and improve products and services – This includes enabling you to navigate the IIT Madras Study site, to register and participate in courses on the IIT Madras Study site, to learn effectively in such courses, and to purchase or obtain products and services on the IIT Madras Study site such as registering for Proctored Exams.

Develop and maintain the security and performance of the IIT Madras Study site – This includes tracking IIT Madras Study site outages and creating software solutions, detecting violations of the Honor Code and Terms of Service, and monitoring uses, misuses, and potential misuses of the IIT Madras Study site.

Communicate with you – This includes answering your course and platform questions, notifying you of course and IIT Madras Study site maintenance and updates, marketing to you about course offerings, programs, news, and related products and services of IIT Madras or IIT Madras affiliates, and as permitted under applicable law, sending you communications about products or services of selected business partners that may be of interest to you.

Support scientific research – This includes collaborating to enable and conduct research about how learners access and master course materials online, with the goal of improving course outcomes.

Track IIT Madras Study site usage against goals and mission – This includes performing analytics to evaluate access to and performance in courses and course-related products and services and to report aggregate usage information (not Personal Information) to business partners and external audiences.

Exercise, enforce, and comply with legal rights and obligations – This includes responding to court orders, or other legal process; and investigating, preventing, or taking action regarding illegal activities, suspected fraud, security or technical issues, or to protect the rights, property, or safety of IIT Madras, or others, and as otherwise required by applicable law.

IIT Madras may also seek your consent for additional uses of information, including Personal Information, and will use it only for the purpose described to you. All use of Personal Information is subject to applicable law.

How your information is shared

IIT Madras may share information, including Personal Information, with third parties for the following purposes:

With service providers, contractors, and other third parties that help carry out the uses described above – IIT Madras requires third parties to: (1) abide by this Privacy Policy and applicable law; (2) handle Personal Information in a confidential manner and maintain adequate security; and (3) use Personal Information only as needed to fulfill the relevant purpose(s). In some cases, the IIT Madras Study site and individual courses are integrated with third-party services or contain links to websites published by third parties, including other content providers as well as service providers. These third parties are responsible for

their own privacy practices, so you should pay attention anytime you are redirected to a third-party website and be sure to review its privacy policy.

With other learners in courses that you take and with other visitors to the IIT Madras Study site, to create an interactive learning environment, support class participation, and share course information – this includes sharing comments, coursework, or other information or content that you submit to a portion of the IIT Madras Study site designed for viewing by other class members or for public communication. This also includes providing opportunities for you to communicate with other users who may have similar interests or educational goals, for instance, recommending specific study partners or connecting potential student mentees and mentors. In such cases, IIT Madras may use all information collected about you to determine who might be interested in communicating with you, but will only provide others your username (for clarity, no disclosure of your real name or email address). With employers, government programs, institutions, or other enterprises that sponsor your registration in a course for training or other educational purposes – If an entity pays for or otherwise sponsors your Verified Certificate or course participation, IIT Madras will share information with the entity as needed to confirm your registration, participation, progress, and completion status in that course.

With affiliates of IIT Madras, or with successors in the event of a reorganization, for their use consistent with this Privacy Policy.

IIT Madras may also seek your consent for additional disclosures of information, including Personal Information, and will share it only as described to you. In addition, IIT Madras may share with the public and with third parties, including but not limited to researchers and business partners, information and Personal Information that is de-identified or aggregated in a manner that does not personally identify you.

How to manage your personal information

You can manage your Personal Information through learner features on the IIT Madras Study site and requests to the IIT Madras learner support team. IIT Madras will provide support to the extent required by applicable law and more broadly when possible, as a courtesy in our sole discretion. IIT Madras will notify you in the event that IIT Madras is unable to meet a request that is not legally required.

## Access and correct your Personal Information

Much of your Personal Information is available in your IIT Madras Study profile. Your name and other identifiable profile information is editable through the profile settings in your account except as noted below. Your account dashboard lists all current and archived courses in which you have registered and may include links to any Certificates/Degrees you may have earned. Please contact IIT Madras Study learner support to access and update this or other information.

#### **EXCEPTIONS**

Registered Email Addresses cannot ever be changed. This is an IIT Madras system restriction. Because email address identify you in courses and elsewhere on the IIT Madras Study site.

IIT Madras does not track or index every time or every place on the IIT Madras Study site when or where a learner may volunteer Personal Information, so IIT Madras will not be able to help you locate or manage all such instances. IIT Madras encourages you to use discretion before volunteering Personal Information on the IIT Madras Study site.

## RESTRICT OR OBJECT TO THE PROCESSING OF PERSONAL INFORMATION

If you want to manage emails and other communications to you, you may update your preferences in the respective IIT Madras Study course profile, follow the steps that may be described in links at the bottom of email messages, or contact IIT Madras Study learner support. You may object to, or request that IIT Madras stop, its use of your Personal Information for other purposes by contacting the IIT Madras Study learner support team. Please note that if you choose to restrict IIT Madras's ability to process Personal Information, and the processing is otherwise required to provide you with various services and products offered on the IIT Madras Study site, you may not be able to establish an IIT Madras Study user account or register for a course, and IIT Madras may not be able to provide you with those services or products.

## Delete account and Personal Information

To request deletion of your IIT Madras Study account and Personal Information, you should write to the learner support team. Because deletion on the IIT Madras system is a permanent action and cannot be reversed, IIT Madras may ask you to complete a process that aims to confirm your authority to manage the IIT Madras Study account affected by your request.

You can however unsubscribe from all the existing mailing lists by clicking on the "Unsubscribe" option provided in the Progress section of each course.

#### **EXCEPTIONS**

Unsubscription will not apply to historical activity logs or archives unless and until these logs and data naturally "age-off" the IIT Madras BS Degree system.

IIT Madras does not track or index every time or every place on the IIT Madras Study site when or where a learner may volunteer Personal Information, so IIT Madras will not be able to help you locate or manage all such instances. IIT Madras encourages you to use discretion before voluntarily sharing your Personal Information on the IIT Madras Study site. IIT Madras will archive course data (in a manner and to the extent permitted under applicable law) to serve its mission to enable scientific research on cognitive science and education.

IIT Madras cannot always delete records of past interactions and transactions. For example, records relating to previous exam registrations on the IIT Madras Study site must be retained for financial reporting, audit, and compliance reasons.

IIT Madras will retain and use Personal Information as necessary to comply with its legal obligations, resolve disputes, enforce its agreements, and as otherwise permitted by applicable law.

**Data Retention** 

IIT Madras will retain your Personal Information for as long as your account is active or as needed to provide you with services; to maintain a record of your transactions for financial reporting, audit, and compliance purposes; and to comply with IIT Madras's legal obligations, resolve disputes, enforce its agreements, and as otherwise permitted by applicable law. Upon your request that IIT Madras deactivate your account and delete your information, IIT Madras will follow the process described above, including without limitation, archiving your course data (in a manner and to the extent permitted under applicable law) to serve its mission to enable scientific research on cognitive science and education.

# Storage & Security

IIT Madras stores information, including Personal Information, on its own servers and also on servers of companies that IIT Madras hires to provide services. In each case, information may be stored in India and in countries where IIT Madras's service providers operate and the privacy laws of India shall be applicable.

IIT Madras controls its own copy of information collected through the IIT Madras Study site and may have an information security program designed to protect information in its possession or control. This may be done through a variety of privacy and security policies, processes, and procedures. IIT Madras may use administrative, physical, and technical safeguards that reasonably and appropriately protect the confidentiality, integrity, and availability of the information that it collects, receives, stores, or transmits. Nonetheless, no method of transmission over the Internet, or method of electronic storage, is 100% secure; and therefore, IIT Madras cannot guarantee its absolute security. While IIT Madras will work hard to ensure the integrity and security of its network and systems, IIT Madras cannot guarantee that its security measures will prevent "hackers" or other unauthorized persons from illegally accessing or obtaining information.

If IIT Madras learns of a security breach involving its copy of your Personal Information, IIT Madras may attempt to notify you electronically so that you may take appropriate protective steps. By using the IIT Madras Study site or providing Personal Information to IIT Madras, you agree that IIT Madras can communicate with you electronically regarding security, privacy, and administrative issues relating to your use of the IIT Madras Study site. If a security systems breach occurs, IIT Madras may post a notice on the IIT Madras Study site

and may send an email to you at the email address associated with your IIT Madras BS Degree account.

# Privacy Policy Updates

This Privacy Policy will be reviewed and updated from time to time. When changes are made, the Privacy Policy will be labeled as "Revised (date)," indicating that you should review the new terms, which will be effective immediately upon posting on this page, with an updated effective date. By accessing the IIT Madras Study site after any changes have been made, you accept the modified Privacy Policy and any changes contained therein. In case you miss the notification referenced above, be sure to return to this page periodically to ensure familiarity with the most current version of this Privacy Policy.

#### Contact Information

If you have privacy concerns, have disclosed data you would prefer to keep private, or would like to access the Personal Information that IIT Madras maintains about you, please contact us at support@onlinedegree.iitm.ac.in.

# F) Discussion Forum Etiquette

Discussion Forum is a place for both learners and the course team to interact and clarify the queries related to the course content. To maintain a clean and supportive environment, it is important that every participant in the forum strictly maintains an etiquette while posting or responding in the discussion forum. A set of general discussion forum etiquettes are given below. Please read through them to understand more about appropriate and acceptable use of IITM BSc Discussion Forums.

# Discussions on Course Content

Limit your discussions to the "Unit(s)/Lesson(s)" that they are related to. Doing so ensures that the discussions are clustered around the most specific content; this also enables easier searching of the various threads being posted.

If your posting is directly related to something in the course content, you may wish to provide more details so that others can find or trace it easily. For example, you may want to cite from a particular video, which diagram/slide, timing details, reading materials etc.

Treat the questions and comments from your fellow learners seriously. Think about the issues they have raised, offer your own thoughts, research and propose your solutions to the problems they have posed.

Before you create a new post, review the existing threads to see if there are already highly similar or identical postings. If a post already exists and has not been answered, use the Upvote button (for Discussions). Once the post gets answered, you can remove the Upvote

What should not be posted on the forum

Avoid writing about any topic that is not related to the content such as the videos, assignments questions etc.

Any discussions on graded assignments before end of due date for these assignments. Any queries regarding administrative issues such as grading policy, exams, exam centre related, etc should be addressed only to support@onlinedegree.iitm.ac.in and not written on the discussion forum.

Such posts will be removed by the moderators of the forum.

## On Tone and Courtesy in Writing

The "tone" is a very important part of electronic communication. When you read your message out loud, does it sound the way you would speak to another student in the classroom? If no, then please rewrite the post.

Before publishing your comment, make sure that the grammar and spelling of the text to be published are correct. Do not write comments in all capital letters. Use capital letters only where appropriate.

Respect the opinions of your classmates. If you feel the need to disagree, do so respectfully and acknowledge the valid points in your classmate's argument. Acknowledge that others are entitled to have their own perspective on the issue. This will help both you and your peers to grow intellectually.

Refrain from inappropriate language derogatory remarks or personal attacks in the course forum.

Humor can be difficult to convey in text. So make sure everyone realizes when you are trying to be funny. It is easy for messages to be misinterpreted since there are no physical gestures or voice inflections that accompany the text.

Think through and re-read your comments before you post them.

Remember that English is not the primary language of many students. Avoid the use of slang or abbreviations.

Write responses in your own words and give credit when referencing the work or ideas of others'.

Reporting a Post

If you see an inappropriate post, please alert the course team by right clicking on the post and flagging this is (see screenshot below) or forward the same to support-es@study.iitm.ac.in

Fig: Reporting a post to course team

#### Post Moderation Policy

Any content that the Forum administrators deem malicious in nature or insulting toward people will be removed immediately. Forum administrators reserve the right to determine

what is and is not acceptable content. Serial Violators will be given a warning and if found repeating the mistake may also be banned from the discussion forum of the course either for a short period of time or for the duration of the course.

Contact: support-es@study.iitm.ac.in

# G) Honor Code

In order to participate in the IIT Madras BS degree programme, you must agree to the Honor Code given below and any additional terms specific to a course or program. This Honor Code, and any additional terms, will be posted on our website - onlinedegree.iitm.ac.in.

Honour Code Pledge

By registering in an IIT Madras BS Degree programme, I agree that I will:

Complete all tests and assignments on my own, unless collaboration on an assignment is explicitly permitted.

Maintain only one user account, unless IIT Madras has approved the use of a separate user account in connection with an employer-sponsored or university-sponsored program. Not let anyone else use my username and/or password.

Not engage in any activity that would dishonestly improve my results, or improve or hurt the results of others.

Not engage in any activity that will cause grief or harm to the Study websites/portals or study materials, including activities like hacking or accessing restricted materials.

Not post answers to problems that are being used to assess learner performance either inside the course forums or on any other website.

Not resubmit or submit work (in identical or similar form) for multiple assignments without prior explicit approval.

Not submit false or altered or fabricated admission documents including signatures or certificates of enrollment or standing, registration forms, and medical certifications.

If you are found in violation of the Terms of Service or Honor Code, you may be subject to one or more of the following actions:

Receiving a zero or no credit for an assignment;

Having any certificate/degree earned in the course or programme withheld or revoked;

Being unenrolled from a course or programme; or

Termination of your use of the IIT Madras Study Site.

Additional actions may be taken at the sole discretion of IIT Madras.

No refunds will be issued in the case of any corrective action for such violations.

Honor Code violations will be determined at the sole discretion of IIT Madras. You will be notified if a determination has been made that you have violated this Honor Code and you will be informed of the corresponding action that will be taken as a result of the violation.

## Changing the Honour Code

Please note that we review and may make changes to this Honor Code from time to time. Any changes to this Honor Code will be effective immediately upon posting on onlinedegree.iitm.ac.in page, with an updated effective date. By accessing the IIT Madras Study Site after any changes have been made, you signify your agreement on a prospective basis to the modified Honor Code and any changes contained therein. Be sure to return to this page periodically to ensure familiarity with the most current version of this Honor Code.

## H) Code of Conduct

We, the students of IIT Madras BS DEGREE PROGRAMME hold our work and activities in the promotion of online education with very high regard. For this purpose, we will maintain the highest standards of integrity, responsible behavior, and ethical and professional conduct. We agree to be bound by the following rules:

## Be respectful of others

We will respect others, including IIT Madras BS DEGREE PROGRAMME students and employees, and will act in a professional manner while participating in its activities. We will respect the privacy of others and the protection of their personal information and data.

#### Treat People Fairly

We will not engage in harassment of any kind, including sexual harassment, or bullying behavior whether in person, via cybertechnology or otherwise.

We will not discriminate against any person because of characteristics protected by law (e.g., age, ancestry, color, disability or handicap, national origin, race, religion, gender, sexual or affectional orientation, gender identity, gender expression, appearance, matriculation, political affiliation, marital status, social or professional status). Refrain from Retaliation

We will not retaliate against any IIT Madras BS DEGREE PROGRAMME student, employee or other person who reports an act of misconduct, or who reports any violation of this Code of Conduct.

We will not retaliate against any person who makes IIT Madras BS DEGREE PROGRAMME aware of the violation of any laws, rules or regulations in connection with IIT Madras BS DEGREE PROGRAMME activities.

#### Comply with Applicable Laws

By submitting or distributing your User Postings, you hereby grant to IIT Madras (as described below) a worldwide, non-exclusive, transferable, assignable, sub licensable, fully paid-up, royalty-free, perpetual, irrevocable right and license to host, transfer, display, perform, reproduce, modify, distribute, redistribute, relicense, and otherwise use, make

available, and exploit your User Postings, in whole or in part, in any form and in any media formats and through any media channels (now known or hereafter developed)

#### General

We will comply with all applicable laws, rules and regulations governing IIT Madras BS DEGREE PROGRAMME's business conduct and all relevant procedures established by IIT Madras BS DEGREE PROGRAMME whenever and wherever we are participating in IIT Madras BS DEGREE PROGRAMME activities, including but not limited to the following:

Avoiding real or perceived conflicts of interest whenever possible, and disclosing them to affected parties when they do exist.

Protecting confidential information belonging to IIT Madras BS DEGREE PROGRAMME and personal information belonging to IIT Madras BS DEGREE PROGRAMME students, employees and other persons.

Not misusing or infringing the intellectual property of others.

I) Academic Malpractices

It is brought to the notice of all the students the following graded punishments approved by the Senate will be imposed on those who indulge in Academic Malpractices – unfair means during all examinations and assignments:

## For rude behavior

Severe warning shall be issued to a student who is found to display rude behaviour towards fellow students / invigilators / proctors/ support staff/ personnel of other agencies involved in the exam process.

The student is liable to be expelled from the examination center or disconnected from the Google Meet.

Malpractices and corresponding Punishments

Nature of Malpractice

Recommended Punishment

1.

Communicating with fellow students through any means to compromise the integrity of the exams.

The erring student(s) shall be awarded 'U' grade in the course concerned and 30 hours of community service.

2.

Possessing incriminating\* materials inside the examination room/center

(or)

Possessing the answer scripts of another candidate to compromise the integrity of the exams.

(or)

Sharing answers/answer scripts to another student or group of students to compromise the integrity of the exams.

(or)

Exchange of answer scripts among students to compromise the integrity of the exams.

(or)

Individual referral of material/device, discussion with other students or anyone to compromise the integrity of the exams.

The Steering Committee shall have the discretion to recommend one of the following punishments.

The erring student(s) shall be awarded 'U' grade in the course concerned and one grade less in all the other courses of the term in which the student has scored "D grade & above" and 30 hours of community service. In case of 'E' or 'U' grade obtained, then the same grade to be retained in the concerned term and 50 hours of community service.

(or)

The concerned student(s) shall be awarded `U' grade in all the courses in the concerned term.

3.

Involved in malpractice in the examination for the second time, in a premeditated manner.

The concerned student

Shall be awarded 'U' grade in all courses, in the concerned term

8

Shall be debarred from registering for courses and taking examinations in the subsequent term.

4.
Impersonation in the examination
The concerned student
Shall be awarded 'U' grade in all courses, in the concerned term.
& Shall be debarred from registering for courses and taking examinations in the next two subsequent terms. 5.
a) Plagiarism in graded assignments for the first time
b) Repeated Plagiarism
'0' marks for copied assignment &
10 % of marks deducted in the other assignments of the course
'U' Grade in the course 6.
Plagiarism/ Data Manipulation in documents related to projects, research activities, etc.
Steering committee will decide on suitable punishment.
For lower level of offense Recommended Punishment:
'U' grade in the relevant course.
For severe level of offense Recommended Punishment:
'U' grade in all courses of the term.
7.
Forging of any document
Expulsion from the programme.

(\* incriminating materials including but not limited to written/printed material; unauthorized additional sheets without or with write-ups, bits, scribbles on scales / handkerchief / on the body / abuse of calculator / organizer / cell phone/ etc.)

(\*incriminating materials during online remote proctored exams including but not limited to accessing of sites not permitted, changing tabs, continuously getting logged out or getting disconnected and reconnecting, referring books, talking to someone, keeping things other than white sheet, computer, pen and calculator on the desk, keeping things under the desk, not having video on in the mobile phone, candidate not matching the photo in the student Database, unnecessary typing going on in the keyboard, not responding to the proctor, asking multiple breaks, people moving about behind the candidate, etc.)

## J) Non-Academic Malpractices

It is brought to the notice of all the learners that the following graded punishments approved by the Senate will be imposed on those who conduct themselves in an unacceptable manner while interacting with fellow learners, support staff or instructors. The nature of infractions listed in this document is not exhaustive. The disciplinary committee will consider other violations on a case-to-case basis.

Misconduct and corresponding Punishments

Nature of Misconduct

Recommended Punishment

1.

Rude behaviour towards fellow learners, support staff or instructors.

Based on the nature and severity of the violation, the committee can recommend one of the following punitive measures.

The concerned learner will be issued severe warning and put on probation. (or) The student's CCC will be reduced by 1/2/3/4 in the subsequent term.

2.

Impersonation on Social Media or other public forums

Based on the nature and severity of the violation, the committee can recommend one of the following punitive measures.

The concerned learner will be issued severe warning and put on probation. (or) The student's CCC will be reduced by 1/2/3/4 in the subsequent term.(or) The student will be debarred from participating in internship and placement processes (or) The student will be rusticated from the programme.

3.

Spreading false or misleading information about the programme/Institute and their operations

Based on the nature and severity of the violation, the committee can recommend one of the following punitive measures.

The concerned learner will be issued severe warning and put on probation. (or) The student's CCC will be reduced by 1/2/3/4 in the subsequent term.(or) The student will be debarred from participating in internship and placement processes. 4.

Bypassing the available grievance redressal mechanisms from the programme/Institutes and sharing unsubstantiated posts about the programme or the Institute on Social Media or other public forums

For repeated offences

Based on the nature and severity of the violation, the committee can recommend one of the following punitive measures.

The concerned learner will be issued severe warning and put on probation. (or) The student's CCC will be reduced by 1/2/3/4 in the subsequent term.(or) The student will be debarred from participating in internship and placement processes. 5.

Cyberbullying\* or intimidation of any kind

\*Any aggressive, intentional act or behavior that is carried out by an individual or a group, using electronic forms of contact, repeatedly and overtime against another person/group.

Based on the nature and severity of the violation, the committee can recommend one of the following punitive measures.

The concerned learner will be issued severe warning and put on probation. (or)

The student's CCC will be reduced by 1/2/3/4 in the subsequent term.(or)
The student will be debarred from participating in internship and placement processes (or)
The student will be rusticated from the programme.
6.

Disseminating programme specific information shared with learners on Social Media or any other public forums

Repeated offence

Based on the nature and severity of the violation, the committee can recommend one of the following punitive measures.

The concerned learner will be issued severe warning and put on probation. (or) The student's CCC will be reduced by 1/2/3/4 in the subsequent term.(or) The student will be debarred from participating in internship and placement processes

Cyberbullying

What is 'Cyberbullying'?

Any aggressive, intentional act or behavior that is carried out by an individual or a group, using electronic forms of contact, repeatedly and overtime against another person/group.

What do Cyberbullies do?

Cyberbullies tend to resort to repeated aggressive behavior with intent to humiliate, scare, anger, or shame the targeted person/group.

Examples of cyberbullying include, but are not limited to:

Spreading lies about or posting embarrassing photos of someone on social media; Trolling or circulating memes that are aimed at another person Impersonating someone and sending mean messages to others on their behalf; Hacking personal accounts;

Flaming, which is the use of vulgar or insensitive language to attack someone; Sending abusive, threatening, hurtful or inappropriate messages to harass someone; Sharing someone's private messages or picture or threatening/blackmailing to do so; Threatening someone to commit an act of violence or threats of pornography; Stalking someone and sending targeted messages etc.

#### **ANNEXURE**

List of accepted class 12 equivalents

A Diploma recognised by AICTE or a state board of technical education of at least 3 year duration.

Any Public School / Board / University examination in India or in any foreign country recognised as equivalent to the 10+2 system by the Association of Indian Universities (AIU). Final examination of the two-year course of the Joint Services Wing of the National Defence Academy.

General Certificate Education (GCE) examination (London / Cambridge / Sri Lanka) at the Advanced (A) level.

High School Certificate Examination of the Cambridge University or International Baccalaureate Diploma of the International Baccalaureate Office, Geneva.

Higher Secondary Certificate vocational examination.

Intermediate or two-year Pre-University examination conducted by a recognised Board / University.

Senior Secondary School Examination conducted by the National Institute of Open Schooling with a minimum of five subjects.

List of exam cities

----- End of Document -----

[1] Last updated: Aug 5, 2021

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May 2024 ES Grading document (Student)

Updated automatically every 5 minutes



# BS in Electronic Systems IIT Madras

# **Grading Document**

## **Table of Contents**

Introduction

May 2024 term - Important Dates

Assessments, Evaluation and Grading

Lab Handbook:

Pass criteria and Grades

Badges - for participation in Discourse forum

Foundation level courses

- 1. English I
- 2. Math for Electronics I
- 3. Electronic Systems Thinking and Circuits
- 3.1 Electronic Systems Thinking and Circuits Lab
- 4. Introduction to C Programming
- 5. English II
- 6. Introduction to the Linux Shell
- 7. Digital Systems
- 8. Electrical and Electronic Circuits
- 9. Electronics Lab
- 10. Embedded C Programming
- 11. Math for Electronics II
- 12. Signals and Systems
- 13. Intro to python programming

## Annexure I

Term Calendar

**Assignment Dates** 

Quizzes, OPPEs, NPPEs and Exam Dates

## Introduction

This document provides detailed information about evaluation and grading of courses of BS in Electronic Systems Degree program from IIT Madras. The information includes details of each course such as number of credits, eligibility to write the final exam, eligibility to obtain the final course grade, parameters considered for calculating final score and calculation of final score.

The BS in Electronic Systems Degree program comprises three levels - Foundation, Diploma and BS Degree. The Foundation and Diploma level consists of ten courses each and BS Degree level consists of 12 courses. The BS program has 142 credits in total with 44 credits in Foundation, 42 credits in Diploma and 56 credits in Degree level.

Each course has multiple types of assessments - online weekly assignments, quizzes and an end term (semester) exam. The weekly assignments are generally non-proctored whereas quizzes and end term exams are proctored and are conducted at designated exam centres.

Students are advised to go through this grading document carefully. Students can contact the support team for any queries related to this document.

May 2024

term -

**Important** 

**Dates** 

Quizzes

in

Centres:

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24

Qui

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20

24

**End Term** 

(Sem)

Exam:

September

1, 2024

# Assessments, Evaluation and Grading

Evaluation and grading varies from course to course. Generally, most courses have the following types of assessments: weekly assignments, proctored quizzes, an in-person end term (sem) exam, online proctored programming exam, and lab work. However, some courses may have special types of assessments depending on the type of the course. Please note that the assessments, evaluation and grading varies from course to course.

Details of the types of assessments are mentioned below:

## Online assignments:

A 12 week course will have one or more weekly assignments to be submitted **online** within the due date specified.

Generally, the average score of the best five out of the first nine weekly assignments given during the course run should be >= 40/100 to be eligible to write the final exam and get the hall ticket for the same.

Score in any unattempted assignment will be counted as 0.

Depending on the course, the average of weekly assignment scores may contribute to the total course score and course grade.

## **Two proctored Quizzes**

Two quizzes will be conducted after the end of Weeks 4 and 8 based on the content of Weeks 1-4 and 1-8 respectively.

These guizzes must be attempted in person in the city chosen

There will be a single session exam with 4 hours to attempt four subjects, 3 hours to attempt three subjects and 2 hours to attempt one or two subjects.

The Qualifier score will be counted as Quiz 1 score for the courses registered immediately after the qualifier exam in the same semester.

The score of a quiz not attempted will be taken as 0. No make-up quiz will be provided.

Attending one of the two quizzes will be a mandatory condition to be eligible to appear for the final exam, unless stated otherwise.

These Quizzes are conducted in designated exam centers where students have to physically go and attend.

#### Final exam at the end of the course

At the end of a semester, there will be a final exam of 1.5 hours duration for each course. (This will ensure exams can be conducted only on Sundays and exams for four courses completed in two sessions of 3 hours each throughout the program.)

There will be an eligibility criteria defined for every course to obtain the hall ticket for the final exam, announced at the beginning of the semester. If the above eligibility is not satisfied, students will not be allowed to write the Semester exam and will have to repeat the course.

## In person Lab Sessions in IIT Madras

Some of the courses are accompanied by lab sessions to be done at home with the use of electronic kits as suggested. The cost of the kit is not included in the fee structure given in this document.

It is mandatory that students travel to IIT Madras campus to demonstrate the lab experiments specified and complete the lab exams in person at the campus. These are planned currently in the months of May-July and November-January and may change based on other constraints. The tentative duration for the in person component at IIT Madras is expected to be one week per lab course every semester.

## **Online Proctored Programming Exams (OPPE)**

OPPEs are conducted for certain programming courses. Students can take the exam from their home, unless mentioned otherwise.

The duration and marks of OPPE varies from course to course. Generally it is a 1.5 or 2 hour exam.

## **Course Participation Marks**

Course Participation Marks are for encouraging and incentivising the students to participate more in the activities of the course. These marks will be added

**ONLY** for the students who pass the course and will only impact the course grade, **and not the pass criteria**.

Criteria for course participation marks: Marks will be applicable based on availability of practice/mock assignments in the course. It can vary from course to course and can be from 0-5.

Based on practice assignments - 5 marks - applicable to only Foundation & Diploma courses (wherever practice assignments are provided). A course may **not** have participation marks.

If the average of the marks obtained in all the practice assignments (including programming) until week 8 AND mock tests conducted before Quiz 1 & Quiz 2 >= 40/100, students will get 5 marks.

Note: If the course is not having Practice or Mock Assignments, then there will be no Course Participation marks will be given.

## Lab Handbook:

Kindly look into the lab handbook, which has been attached here <u>Lab Handbook</u>

## Pass criteria and Grades

## **Grades:**

Total Course Score (T) considers all assessment components in every course as defined in the Grading document of that semester. A candidate is deemed to have passed a course if Total Course Score (T)  $\geq$  40/100. This criteria is the same for all learners in the course. An absolute grading system, as described in the following table, will be followed:

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isfi	!	r	

ed by 'T' - Tot al Co urs e Sc ore (O ut Of 10 0)		G r a d e	
(T ≥ 90)	:	S	
(90 > T ≥ 80)		A	
(80 > T ≥ 70)		В	
(70 > T ≥ 60)	:	C	
(60 > T ≥ 50)		D	
(50 > T >= 40)		E	
(T < 40)		U	

Av	V	
era	Α	
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To summarize, S,A,B,C,D,E - Pass grade; U- Fail grade, WA/WQ - Learner was not eligible to attempt the end term exam

## **Supplementary Exam**

If student is absent in the End Term Exam (ET) alone, a supplementary exam is planned to be conducted at IIT Madras

Those who want to take supplementary exam should come to IIT Madras campus **Note**: This supplementary is not finalized. Students will be communicated about the details of the supplementary exam only if it is finalized.

## I grade:

In I grade - there are three types:

If you are absent for ET alone with all other assessment components completed (quizzes, OPPEs, project, lab, weekly assignments) - grade will be pushed as I.

Options: You can register to take up the ET exam alone in the subsequent term. OPPE and quizzes will <u>not</u> be scheduled for you. All other marks for Final course score will be taken from the previous run.

If you have failed in the OPPE but wrote the ET exam and crossed the cutoff for T as given in the course grading policy, grade = I OP.

You can register to do the OPPE alone whereby if the course has one OPPE, that will be scheduled. If the course has 2 OPPEs, both will be scheduled for you. You can attempt the OPPE alone. All other mark components of Final course score will be taken from the previous run. ET and quizzes will not be scheduled for you.

If you have failed in the OPPE and absent for ET, then grade = I\_BOTH You can register for ET and OPPEs alone. If the course has one OPPE, that will be

scheduled. If the course has 2 OPPEs, both will be scheduled for you. You will attempt the ET and OPPEs. Quiz and GAA and other components will be taken from the previous run and not scheduled.

In all the above cases, you can also choose to repeat the entire course and not just do the ET/OPPE alone if you want to reattempt all assessment components.

## **Summary Table for course grading**

Average of Graded assignment score	Attendance in Quizzes (as per course eligibility)	ET	Т	Grade	Result	Condition for course reg
< 40	Not attended	-	-	WA	Fail	Repeat the entire course
>= 40	Attended	Present	>=40	Depends on the marks	Pass	
>= 40	Attended	Absent	-	l	Fail	Option 1: Attend makeup exam at IIT Madras (*YTF) OR Option 2: Complete ET alone in the next term. GA and quiz marks will be carried over OR Option 3: Repeat the entire course

>= 40	Not attended	-	-	WQ	Fail	Repeat the entire course
>= 40	Attended	Present	< 40	J	Fail	Appear for the Supplementar y exam OR Repeat the entire course

<sup>\*</sup> Make up exam and Supplementary exam are to be finalized

Summary Table for Lab and OPPE related course

	Lab	OPE1/ OPE2	ET	Т	Grade	Possibilitie s for student
1	Absen t	Absent	Absen t	ı	U	Repeat the course.
2	Absen t	Absent	Prese nt	>=3 5	I_LOP	Complete OPE and Lab in next term; Both OPPEs will be scheduled. GA, quiz and ET marks will be carried over OR Repeat the entire course
3				<35	U	Repeat the entire course
4	Prese nt	Absent	Prese nt	>=4 0	I_OP	Complete OPE alone in next term; Both OPPEs will be scheduled. GA, quiz and ET marks will be carried over OR Repeat the entire course
5				<40	U	Repeat the entire course

6	Absen t	Present score< 40/100 (Fail)	Prese nt	>=4 0	I_LOP	Complete Lab and OPE in next term, Both OPPEs will be scheduled. GA, quiz and ET marks will be carried over OR Repeat the entire course					
7				<40	U	Repeat the entire course					
8								Absen t	-	U	Repeat the entire course
4		Present	Prese nt	>=4 0	I_OP	Complete OPE alone in next term, Both OPPEs will be scheduled. GA, quiz and ET marks will be carried over OR Repeat the entire course					
5	Prese nt	score< 40/100 <mark>(Fail)</mark>		<40	U	Repeat the entire course					
6		(, dii)	Absen t	-	I_BOTH	Complete ET and OPE in next term, Both OPPEs will be scheduled. GA and quiz marks will be carried over OR Repeat the entire course					

7	Absen t	Present Score > 40/100	Prese nt	>=4 0	I_L	Complete Lab alone in next term Or Repeat the entire course
8			Prese nt	<40	U	Repeat the entire course
9	Absen t	Present Score > 40/100	Absen t	-	I_L_ET	Complete Lab and ET in next term; OPPE will NOT be scheduled. GA, quiz and OPPE marks will be carried over OR Repeat the entire course
9	Prese nt	Present Score > 40/100	Absen t	-	I	Complete ET alone in next term; OPPE will NOT be scheduled. GA, quiz and OPPE marks will be carried over OR Repeat the entire course
1			Prese nt		Actual Grade	Grade as per the Total score T
1	Prese nt	Absent	Absen t	-	I_OPET	Repeat OPPE and End Term Exam in next term Both OPPEs will be scheduled. GA, quiz and ET marks will be carried over or Repeat Entire course

#### **Course Fee**

Repeating one component [OPPE/Lab/EndTerm] then the course fee will be Rs.2000

## Repeating two components

[OPPE+Lab,OPPE+EndTerm,Lab+EndTerm] then the course fee will be Rs.4000

Full course fee is applicable for Repeating the entire course

OPPE will not be applicable for the students who registered for repeating ET alone.

ET will not be applicable for the students who registered for repeating OPPE alone.

Students who registered for repeating OPPE & ET will have to appear for OPPE1, OPPE2 & ET.

Regis tered Categ ory	OPP E
ET alone	No OPP E will be cond ucted
OPPE alone	Both OPP E will be cond ucted
ET + OPPE	Both OPP E and ET will be cond ucted

## Badges - for participation in Discourse forum

We will be looking at active engagement with Discourse in a term and provide badges for participation.

Badges will be given based on the number of hours a student spends on Discourse. A student is expected to spend a minimum of 1 hour per week per course in Discourse reading posts.

Student will get the following badges:

Read time of up to **four** hours per course in a term: Badge 1 Read time of up to **eight** hours per course in a term: Badge 2 Read time of up to **twelve** hours per course or more: Badge 3

(Applicable only after you get the BS student roll number)

# Foundation level courses

The following are the Foundation level courses:

Seme ster	Level	Course Title	Cre dits
1	Founda tion	English I	4
1	Founda tion	Mathema tics for Electroni cs I	4
1	Founda tion	Electroni c System Thinking and Circuits	4
1	Founda tion	Electroni c System Thinking and Circuits Lab	1
1	Founda tion	Introducti on to C Program ming	2+3
2	Founda tion	English II	4

2	Founda tion	Introducti on to the Linux Shell	5
2	Founda tion	Digital Systems	4
2	Founda tion	Electrical and Electroni c Circuits	4
2	Founda tion	Electroni cs Lab	3
3	Founda tion	Embedde d C Program ming	4+2
3	Diplom a	Math for Electroni cs II	4
3	Diplom a	Signals and Systems	4+1
3	Diplom a	Python program ming	5

# 1. English - I

Above to be attended in person at designated centers.

Prerequisites: None

Credits: Four

Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100

AND

Attendance in one of the 2 guizzes

Eligibility to obtain the final course grade: Attending the end term exam

## Parameters for Final course Score calculation:

#### Final course Score calculation:

The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

#### Formula:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

## Math for Electronics - I

Quiz 1: July 7, 2024 Quiz 2: August 4, 2024 End term: September 1, 2024

Above to be attended in person at designated centers.

**Prerequisites:** None **Credits:** Four

Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100

AND Attendance in one of the 2 guizzes

Eligibility to obtain the final course grade: Attending the end term exam Final course Score T calculation:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

## Formula:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

## 3. Electronic Systems Thinking and Circuits

Quiz 1: July 7, 2024 Quiz 2: August 4, 2024 End term: September 1, 2024

Above to be attended in person at designated centers.

Prerequisites: None Credits: Four Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment

scores >= 40/100

**AND** 

Attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam Final course Score T calculation:

The **calculation of Final course Score T** for eligible students is as follows:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

## Formula:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

## 3.1 Electronic Systems Thinking and Circuits Lab

In-campus Lab work: Students are required to visit IIT Madras for lab work.

Prerequisites: None Credits: One

Eligibility to obtain the final course grade: Attending the in-campus practical lab activity Final course Score T calculation: 1(Attendance) \* ((0.5\*experiment)+(0.5 \* Report))

## 4. Introduction to C Programming

Quiz 1: July 7, 2024 Quiz 2: No Quiz-2 End term: September 1, 2024

OPPE 1: July 21, 2024 OPPE 2: Aug 18, 2024 & Aug 25, 2024

Above to be attended in person at designated centers.

For Quiz 1, OPPE 1, OPPE 2 and End Term exam dates please refer to Annexure (OPPE 1 and OPPE 2: Students will be allocated one of the two slots on each date: YTD)

**Eligibility for OPPE 1:** OPPE 1 will be scheduled for ALL who enrolled to the course

**Eligibility for OPPE 2:** We will be having a Timed Assignment (LAB Assignment) (LAB Assignment) every week that is open three days in a week. Students have to mandatorily attempt this assignment in at least one of the 3 slots

If the Average of the scores of the best 3 out of the first 5 Timed Assignment (LAB Assignment) (LAB Assignment)s >= 40/100, then we will schedule the OPPE2 for you. If you do not satisfy this, we will not schedule OPPE2 for you.

Prerequisites: None Credits: Five

Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignments (objective and programming) scores >= 40/100 AND Attendance in one of the two OPPEs (OPPE1, OPPE2)

## Eligibility to obtain the final course grade:

The conditions below should be satisfied.

Attending the end term exam AND Score in one of the two programming exams (OPPE1, OPPE2) should be >= 40/100 - Minimum score to be obtained in one of the programming quizzes

#### **Final course Score T calculation:**

The calculation of Final course Score for eligible students is as follows:

GAA = Average score in Best 10 assignments out of all weekly graded assignments

WTA = Average of best 4 out of the first 6 Timed Assignment (LAB Assignment) (LAB Assignment) scores

Qz1 = score in Quiz 1 (0, if not attempted) - in center

OPPE1 = score in OPPE 1 (0, if not attempted) - programming exam 1 OPPE2 = score in OPPE 2 (0, if not attempted) - programming exam 2

F = score in final exam

## Formula:

T = 0.10GAA + 0.2Qz1 + 0.40F + max(0.15 OPPE1 + 0.15 OPPE2, 0.20 max(OPPE1,OPPE2)) + 0.15 WTA (capped to 100)

Maximum marks a student can get is 115 marks if both OPPEs are attended.

Else if one oppe is attended, evaluation is out of 105 marks

Proctored in person - 60 marks (Quiz+Final)

Proctored online - 30 or 20 marks (OPPE)

Non proctored timed - 15 marks (WTA - starts from week 5, with each week having 3 or 4 programs). Score in each week will be calculated as the average of marks obtained in all timed programming assignments given that week.

Non proctored non-timed - 10 marks (GAA)

## 5. English - II

Above to be attended in person at designated centers.

Prerequisites: English I Credits: Four

Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >=

40/100

AND

Attendance in one of the 2 guizzes

Eligibility to obtain the final course grade: Attending the end term exam Final course Score T calculation:

The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

#### Formula:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

## 6. Introduction to the Linux Shell

Quiz 1: July 7, 2024 Quiz 2: No Quiz-2 End term: September 1, 2024

OPPE 1: July 21, 2024 OPPE 2: Aug 18, 2024 & Aug 25, 2024

Above to be attended in person at designated centers.

Labs: June 15, June 29, July 13, July 27 and August 10 2024

OPPE and NPPE Dates and Timings has been updated in **Annexures** 

Corequisites: Introduction to C Programming Credits: Five

## Eligibility to write the final exam:

Average of the best 5 out of the first 9 weekly assessments (objective and programming) scores >= 40/100 and AND

## Attending the OPPE

## Eligibility to get the course grade:

Attending the end semester exam

Attending the programming exam, with a score >= 40/100

Attending the lab activities

Attendance in 3 out of 5 labs

Completing at least 40 % of tasks in all the labs."Best 3 out of 5 will be considered for grading."

The deadline for the first 3 labs is 28th July 2024, and the next 2 labs is 21th August 2024

GAA1 = Average of score in Best 9 out of all weekly graded assignments

GAA2 = Score in NPPE

Qz1[Week 1-4] = score in Quiz I (0, if not attempted)

OPE1[Week 1-4] = Score in online remote proctored programming exam

One additional attempt will be provided only if score < 40 in first attempt

F = score in End Term exam

VMT = score in VM Tasks (It has to be completed in the virtual machine provided)

Virtual Machine Tasks are the 10 tasks available in the <u>course VM</u> shared, named from assignment\_1 to assignment\_10.

#### Final course score:

PART A = 0.06 GAA1 + 0.04 GAA2 + 0.2 Qz1 + 0.3 F

PART\_B = 0.1 VMT + 0.5 LAB + 0.5 OPPE (capped to 100)

Final course score T = 0.6 PART\_A + 0.4 PART\_B

## 7. Digital Systems

Quiz 1: July 7, 2024 Quiz 2: August 4, 2024 End term: September 1, 2024

Above to be attended in person at designated centers.

Prerequisites: Electronic Systems Thinking and Circuits Credits: Four

Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment

scores >= 40/100

**AND** 

Attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam Final course Score T calculation:

The **calculation of Final course Score T** for eligible students is as follows:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

Lab = score based on demonstration of lab work (if applicable)

F = score in final exam

#### Formula:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

## 8. Electrical and Electronic Circuits

Quiz 1: July 7, 2024 Quiz 2: August 4, 2024 End term: September 1, 2024

Above to be attended in person at designated centers.

Prerequisites: Math for Electronics I and Electronic Systems Thinking and Circuits

Credits: Four

## Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100

AND

Attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

Lab = score based on demonstration of lab work, if applicable

F = score in final exam

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

## 9. Electronics Lab

In-campus Lab work: Students are required to visit IIT Madras for lab work.

Corequisites: Electrical & Electronic Circuits and Digital Systems

Credits: Three

WE: Weekly Experiment submission

ID: In-person Demonstration during lab at IIT Madras

Eligibility to obtain the final course grade:

Minimum 40% in WE

Attend the in-person lab at IIT Madras

The **calculation of Final course Score T** for eligible students is as follows:

T = 0.4 (WE) + 0.6 (ID)

## 10. Embedded C Programming

Quiz 1: July 7, 2024 Quiz 2: August 4, 2024 End term: September 1, 2024

Prerequisites: Introduction to C Programming Corequisites: Introduction to the Linux Shell

Credits: Six

## Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >= 40/100

**AND** 

Attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam

#### Final course Score T calculation:

The **calculation of Final course Score T** for eligible students is as follows:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

## Formula:

T = 0.2GAA + max((0.5F + 0.2max(Qz1, Qz2)), (0.4F + 0.2Qz1 + 0.2Qz2))

## 11. Math for Electronics - II

Above to be attended in person at designated centers.

Prerequisites: Math for Electronics I Credits: Four

Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment scores >=

40/100

AND Attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam Final course Score T calculation:

GAA = Average score in Best 10 assignments out of first 11 weekly graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

### Formula:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

## 12. Signals and Systems

Quiz 1: July 7, 2024 Quiz 2: August 4, 2024 End term: September 1, 2024

Above to be attended in person at designated centers.

**Prerequisites:** Electrical and Electronic Circuits Credits: Four

Eligibility to write the final exam:

Average of the best 5 out of the first 9 weeks of weekly assignment

scores >= 40/100

AND

Attendance in one of the 2 quizzes

Eligibility to obtain the final course grade: Attending the end term exam Final course Score T calculation:

The calculation of Final course Score T for eligible students is as follows:

GAA = Average score in Best 10 assignments out of first 11 weekly

graded assignments

Qz1 = score in Quiz I (0, if not attempted)

Qz2 = score in Quiz II (0, if not attempted)

F = score in final exam

#### Formula:

T = 0.1GAA + max (0.6F + 0.2max(Qz1, Qz2), 0.4F + 0.2Qz1 + 0.3Qz2)

## 13. Intro to python programming

Quiz 1: July 7th, 2024 No Quiz2 for this course. End term: Sep 1st 2024

OPPE1: Sunday, July 21, 2024 (08:00 to 09:30 AM, 10:30 to 12:00 PM, 04:30 to 06:00 PM)

OPPE2: Sunday, August 25, 2024 (10:00 AM - 11:30 AM, 01:30 PM - 03:00 PM, 04:30 PM - 06:00 PM)

For Both OPPE1 & OPPE2, out of the 3 slots, one will be allocated from IITM. Please keep

yourself free on the dates given.

## OPPE 1 will be scheduled for ALL who enrolled to the course Eligibility to appear for the OPPE 2:

If the Average of the scores of the best 5 out of the first 6 Weekly programming assignments (GrPA) >= 40/100

## **AND**

Average of the best 5 out of the first 9 weekly assessments (objective and programming) scores >= 40/100

then we will schedule the OPPE2 for you. If you do not satisfy this, we will not schedule OPPE2 for you.

## Eligibility to appear for the final exam is as follows:

Average of the best 5 out of the first 9 weekly assessments (objective and programming) scores >= 40/100

Eligibility to obtain the final course grade: Both the conditions below should be satisfied.

Attending the end term exam AND

Minimum score to be obtained in one of the programming exams (OPPE1, OPPE2) should be  $\geq$  40/100 -

## The calculation of Final course Score for eligible students is as follows:

GAA1 = Average score in Best 10 objective assignments out of First 11 graded objective assignments

GAA2 = Average score in Best 10 programming assignments out of First 11 graded programming assignments

Qz1 = score in Quiz I (0, if not attempted) - in center

PE1 = score in OPPE1 (0, if not attempted) - programming exam 1

PE2 = score in OPPE2 (0, if not attempted) - programming exam 2

F = score in final exam

T = 0.1 GAA1 (objective) + 0.1GAA2 (programming) + 0.1Qz1+ 0.4F+ 0.25 max(PE1, PE2) + 0.15 min(PE1, PE2) — capped to 100

## Annexure I

## **Term Calendar**

May 2024 Calendar			
For			
Qualifier			
Student	<b>Start Date</b>	<b>End Date</b>	

Qualifier	Monday,	Sunday,
Registration	Feb 26	May 26,
Form	2024	2024
Course and	Monday,	Thursday,
Program	May 20,	May 30,
Orientation	2024	2024
Qualifier Exam	Sunday, July 7, 2024	
Publishing		
Result for		
Qualifier	Friday, July	
Exam	12, 2024	
QF Course		
Registration		
and		
Reattempt	Wednesday,	Thursday,
Qualifier	July 17,	July 18,
Window	2024	2024
Reattempt	Sunday,	
Qualifier	August 4,	
Exam	2024	
Publishing	Wednesday,	
Result Qual	August 14,	
result & aut		
Reattempt	2024	
Reattempt		
Reattempt For Term		
		End Date
For Term	2024 Start Date	
For Term Students	2024	End Date Thursday, May 16,
For Term Students Course	2024  Start Date  Wednesday,	Thursday,
For Term Students Course Registration Window	Start Date Wednesday, May 15, 2024	Thursday, May 16, 2024
For Term Students Course Registration	Start Date Wednesday, May 15, 2024 Friday,	Thursday, May 16,
For Term Students  Course Registration Window  Drop Course	Start Date Wednesday, May 15, 2024	Thursday, May 16, 2024 Sunday,
For Term Students  Course Registration Window  Drop Course form	Start Date Wednesday, May 15, 2024 Friday, June 21, 2024	Thursday, May 16, 2024 Sunday, June 23,
For Term Students  Course Registration Window  Drop Course form	Start Date Wednesday, May 15, 2024 Friday, June 21, 2024 Friday,	Thursday, May 16, 2024 Sunday, June 23,
For Term Students  Course Registration Window  Drop Course form	Start Date Wednesday, May 15, 2024 Friday, June 21, 2024	Thursday, May 16, 2024 Sunday, June 23,

	Sunday, July 7,	
Quiz 1	2024	
Publishing	Monday,	
results for	July 15,	
Quiz 1	2024	
Programming	Sunday,	Sunday,
Quiz 1 (Day	July 21,	July 21,
1)	2024	2024
OPPE1	Thursday,	Tuesday,
Result	July 25,	July 30,
Release	2024	2024
	Sunday,	
	August 4,	
Quiz 2	2024	
Publishing	Monday,	
results for	August 12,	
Quiz 2	2024	
Programming	Sunday	
Quiz 2 (Day	August 18,	
1)	2024	
Programming	Sunday	
Quiz 2 (Day	August 25,	
2)	2024	
OPPE2	Thursday,	Tuesday,
Result	August 22,	August
Release	2024	27, 2024
	Sunday,	
	September September	
End Term	1, 2024	
Publishing	Monday,	Saturday,
Result for	September September	September September
End Term	9, 2024	14, 2024
	,	, -

Quiz 1	Quiz 2	term	OPPE 2 Day	OPPE 2 Day2
		exam	1	

7 July 2024, Sunday	4 August 2024, Sunday	1 Sep 2024, Sunday	July 21 2024	Aug 18 2024	Aug 25 2024
2pm-6 pm*	2pm-6 pm*	9am-1 2pm, 2pm-5 pm			
In centers	In centers	In centers	Online remote proctored	Online remote proctored	Online remote proctored

(If required and, we will do a morning session for the quiz)

# **Assignment Dates**

	Content Release Dates	Assignmen t deadlines Foundation	Assignmen t deadlines Diploma
Week 1	Friday, May 31, 2024	Wednesday, June 12, 2024	Sunday, June 16, 2024
Week 2	Friday, June 7, 2024	Wednesday, June 19, 2024	Sunday, June 16, 2024
Week 3	Friday, June 14, 2024	Wednesday, June 26, 2024	Sunday, June 23, 2024
Week 4	Friday, June 21, 2024	Wednesday, July 3, 2024	Sunday, June 30, 2024
Week 5	Friday, June 28, 2024	Sunday, July 14, 2024	Sunday, July 14, 2024
Week 6	Friday, July 5, 2024	Wednesday, July 17, 2024	Monday, July 22, 2024

Week 7	Friday, July 12, 2024	Wednesday, July 24, 2024	Sunday, July 28, 2024
Week 8	Friday, July 19, 2024	Wednesday, July 31, 2024	Sunday, July 28, 2024
Week 9	Friday, July 26, 2024	Sunday, August 11, 2024	Sunday, August 11, 2024
Week 10	Friday, August 2, 2024	Wednesday, August 21, 2024	Tuesday, August 20, 2024
Week 11	Friday, August 9, 2024	Wednesday, August 21, 2024	Tuesday, August 20, 2024
Week 12	Friday, August 9, 2024	Wednesday, August 28, 2024	Wednesday, August 28, 2024

## **Quizzes, OPPEs, NPPEs and Exam Dates**

Quizzes in Centres: July 7, 2024 and August 4, 2024: 2 pm-6 pm (If required we might do a morning session for the quiz)

End Term Exam: September 1, 2024 9 am-12 noon & 2 pm-5 pm

**OPPE 1**: July 21st 2024

OPPE 2: August 18th & August 25th 2024

**NPPE1:** [Week 1-5]:July 17th 2024 **NPPE2:** [Week 1-7]: August 16th 2024

**Note**: The dates mentioned in this document might change and the same will be communicated to students if and when there are changes

- 1. What is "BS in Data Science & Applications"?
- "BS in Data Science & Applications" is a program offered by IIT Madras. It focuses on teaching people about data science, which involves collecting, analyzing, and interpreting large sets of data to make informed decisions.

## 2. What is IIT Madras?

- IIT Madras stands for the Indian Institute of Technology Madras. It's a prestigious institution in India known for its high-quality education in science, engineering, and technology.

- 3. What does it mean that the course contents are delivered online?
- "Delivered online" means that the course material, like lectures, assignments, and readings, are accessible over the internet. Students can study these materials from anywhere with an internet connection.
- 4. Why do learners have to attend monthly quizzes and final exams in person?
- Learners have to attend quizzes and exams in person to ensure fairness and prevent cheating. It also allows instructors to monitor students' progress and provide support if needed.
- 5. What are the different certificates and degrees that learners can earn in this program?
- Depending on the number of courses completed, learners can earn different certificates and degrees. These include a Foundation level certificate, a Diploma in Programming, a Diploma in Data Science, a BSc degree in Programming and Data Science, or a BS degree in Data Science and Applications.
- 6. What is a "Foundation level certificate"?
- A "Foundation level certificate" is awarded to learners who complete a certain set of introductory courses. It demonstrates basic understanding and knowledge in the field.
- 7. What is a "Diploma in Programming"?
- A "Diploma in Programming" is a credential indicating proficiency in computer programming languages and techniques.
- 8. What is a "Diploma in Data Science"?
- A "Diploma in Data Science" is a credential indicating proficiency in data analysis, machine learning, and other data science techniques.
- 9. Can someone earn both diplomas?
  - Yes, learners can earn both diplomas if they complete the required courses for each.
- 10. What is a "BSc degree"?
- A "BSc degree" stands for Bachelor of Science degree. It is a higher education qualification awarded upon completion of an undergraduate program in a scientific field.
- 11. Can you explain what "BS degree in Data Science and Applications" means?
- A "BS degree in Data Science and Applications" is a Bachelor of Science degree focused specifically on data science. It signifies that the recipient has completed a comprehensive program covering various aspects of data science and its applications in real-world scenarios.
- 1. \*\*Who teaches the courses in the program?\*\*
- The courses in the program are taught by faculty from IIT Madras, other reputed institutes, as well as experts from the industry.

- 2. \*\*How does the admission process in this program differ from other competitive exams?\*\*
- Unlike many competitive admission exams, which admit a limited number of learners based on their performance relative to others, this program has specific qualifying criteria, and a significantly large number of learners can enter.
- 3. \*\*Can you join this program regardless of your educational background?\*\*
- Yes, learners from any background, including engineering, sciences, humanities, arts, medicine, law, etc., can attempt and join this program.
- 4. \*\*Are there any restrictions based on age or location for joining this program?\*\*
- There are no limitations based on the age of the learner or their geographical location for joining this program.
  - \*\*How many entry and exit points does the program have?\*\*
    - There are two entry and four exit points in the program.
  - 2. \*\*What are the options for learners upon exiting the program?\*\*
  - Learners can exit with either course certificates, diplomas, or degrees.
    - 3. \*\*Can learners choose their own pace of study?\*\*
    - Yes, learners can choose their pace of study every term.
  - 4. \*\*What is the requirement for learners in terms of attending exams?\*\*
    - Learners need to travel to exam centers for exams each term.
      - 5. \*\*Is admission required for this program?\*\*
  - No, this program is not based on an admission process. Qualified learners can attempt respective stages of the program.
    - 6. \*\*What happens after each stage of the program?\*\*
  - After each stage of the program, learners receive the certificate corresponding to that stage alone.
    - 7. \*\*Can you explain how learners progress through the program to obtain diplomas or degrees?\*\*
- Learners progress through the program by completing the courses prescribed and satisfying any other mandatory criteria to accrue the requisite number of credits for diplomas or degrees.
  - 8. \*\*Does admission to any level guarantee obtaining a diploma or degree?\*\*
  - No, admission to any level does not automatically entitle the learner to exit the program with a diploma or degree.
- 1. \*\*What is the definition of credit in the program?\*\*

- Credits are based on the UGC system, where 14 hours of learner engagement equals 1 credit. In this program, 1 credit mentioned is equivalent to 3 credits in the current IITM campus Credit system.
- 2. \*\*How many credits are required to graduate with the BSc degree and the BS degree?\*\*
  - The BSc degree requires 114 credits, while the BS degree requires 142 credits.
- 3. \*\*What courses are included in Level 1: The Foundation level, and how many credits does it comprise?\*\*
- The Foundation level comprises 8 courses: English 1, English 2, Mathematics 1, Mathematics 2, Statistics 1, Statistics 2, Computational Thinking, and Introduction to Python. It comprises 32 credits.
- 4. \*\*What are the components of Level 2: Diploma level, and how many credits does it comprise?\*\*
- The Diploma level includes 2 Diplomas: Diploma in Programming and Diploma in Data Science. Each diploma comprises 6 courses (23 credits) and 2 project courses (4 credits), totaling 54 credits.
- 5. \*\*Can you provide details about the Diploma in Programming and the Diploma in Data Science?\*\*
- The Diploma in Programming includes courses like Database Management Systems, Programming Data Structures and Algorithms using Python, Java Programming, etc. The Diploma in Data Science includes courses like Machine Learning Foundations, Business Data Management, Tools in Data Science, etc.
- 6. \*\*What happens if a student falls short of the required credits in the Diploma level?\*\*
- Students falling short of the 54 credits in the Diploma level may need to do additional courses in the BSc level to make up for the deficit in credits.
- 7. \*\*What are the courses included in Level 3: BSc Degree level, and how many credits does it comprise?\*\*
- The BSc Degree level comprises a total of 28 credits, including mandatory core pairs and a mandatory course on Strategies for Professional Growth.
- 8. \*\*Are there any mandatory courses at the BSc Degree level?\*\*
- Yes, there are mandatory core pairs and a mandatory course on Strategies for Professional Growth at the BSc Degree level.
- 9. \*\*What are the courses included in Level 4: BS Degree level, and how many credits does it comprise?\*\*
- Level 4 comprises a total of 28 credits, with options for Apprenticeship and mandatory courses in programming and data science streams.

- 10. \*\*Can you explain the option of Apprenticeship and how many credits can be earned from it?\*\*
- Apprenticeship is optional and split into two courses: one for a 4-month internship and another for a term of apprenticeship continued from months 5-8. One can earn 0/4/8/12 credits from Apprenticeship.

### Admission to the programme

### Regular Entry into Foundation level

- 1. \*\*How can applicants enter the Foundation level of the program?\*\*
  - Applicants can enter the Foundation level by passing the Qualifier exam.
- 2. \*\*What are the possible exits from the Foundation level?\*\*
- Exits from the Foundation level include receiving a Foundation course certificate, earning a Diploma in Programming/Data Science or both, obtaining a BSc Degree in Programming and Data Science from IIT Madras, or achieving a BS in Data Science and Applications from IIT Madras.
- 3. \*\*What are the eligibility criteria to apply for the Qualifier Exam?\*\*
  - Minimum eligibility requires having studied Mathematics and English in Class 10.
- 4. \*\*Can you explain who can apply for the Qualifier Exam?\*\*
- Anyone who has passed Class 12 or equivalent can apply, regardless of age or academic background. School students who have appeared for their Class 11 final exams can also apply.
- 5. \*\*What is the fee for the Qualifier exam, and are there any waivers available?\*\*
- The fee for the Qualifier exam is currently set at Rs 3000/- for the General category, with waivers available for candidates from the SC/ST and PwD backgrounds with 40% disability.
- 6. \*\*Is the Qualifier exam fee refundable?\*\*
  - No, the fee for the Qualifier exam will not be refunded once paid.
- 7. \*\*What is the preparation process for the Qualifier exam?\*\*

- All regular entry applicants must go through a 4-week Qualifier Process to earn admission to the Foundation Level. Content for four Foundation level courses will be provided week by week, including videos, tutorials, practice/graded assignments, and text transcripts.
- 8. \*\*How is eligibility to appear for the Qualifier exam determined?\*\*
- Eligibility is determined based on the average assignment scores in each course. Only those who meet the minimum required average assignment scores in all four courses will be allowed to appear for the Qualifier Exam.
- 9. \*\*What is the minimum average assignment score required for different categories of learners?\*\*
- The minimum average assignment score required varies for different categories of learners, ranging from 30% to 40%.
- 10. \*\*Are there any relaxations in pass criteria for the qualifier process?\*\*
- Yes, relaxations in pass criteria are applicable only for the qualifier process for various categories of learners. There will be no relaxations in terms of grades/pass criteria once registered into the program.
- 11. How long is the Qualifier Process?
  - The Qualifier Process lasts for 4 weeks.
- 12. What content is provided during the Qualifier Process?
- During the Qualifier Process, content for four Foundation level courses is provided, including videos, tutorials, practice/graded assignments, and text transcripts.
- 13. What is the format of the Qualifier exam?
- The Qualifier exam is conducted at the end of the 4-week Qualifier Process and is based on the content covered during that time.
- 14. How are assignments graded during the Qualifier Process?
- Assignments are graded out of 100, and the average of the best two out of the three assignments is calculated for each subject.
- 15. Can you explain the pass criteria for different categories of learners during the Qualifier Process?
- The pass criteria vary for different categories of learners, with minimum average assignment scores required ranging from 30% to 40%.
- 16. What happens if a student does not meet the minimum average assignment score required for all four courses?
- Students must meet the minimum average assignment score in all four courses to be allowed to appear for the Qualifier Exam. If they do not meet this requirement, they may not be eligible to proceed further in the program.

- 17. Are there any exceptions to the pass criteria once a student is registered in the program?
- No, there are no exceptions to the pass criteria once a student is registered in the program. The relaxed pass criteria apply only for the Qualifier Process.
- 18. How can students access the week 1 content for the Qualifier Process?
- Week 1 content for the Qualifier Process is available for all candidates to sample on the program website when they fill out the Qualifier exam form.
- 19. Can students access the Qualifier exam form and other relevant information on the program website?
- Yes, students can access the Qualifier exam form and other relevant information on the program website: study.iitm.ac.in/ds.
- 20. Is there any additional eligibility required to apply for the Qualifier process or join the foundational level courses after clearing the qualifying exam?
- No, there is no additional eligibility required to apply for the Qualifier process or join the foundational level courses after clearing the qualifying exam.
- 21. What is the purpose of the Qualifier exam?
  - The Qualifier exam serves as a gateway for entry into the Foundation level of the program.
- 22. Can students access the content for all four Foundation level courses during the Qualifier Process?
- Yes, students can access the content for all four Foundation level courses during the Qualifier Process.
- 23. Are there any prerequisites for applying to the Qualifier Exam?
  - The only prerequisites are having studied Mathematics and English in Class 10.
- 24. How is the Qualifier exam fee structured for different categories of learners?
- The Qualifier exam fee is currently set at Rs 3000/- for the General category, with waivers available for candidates from the SC/ST and PwD backgrounds with 40% disability.
- 25. Can students from different educational backgrounds apply for the Qualifier exam?
- Yes, students from various educational backgrounds are eligible to apply for the Qualifier exam.
- 26. What is the significance of the four Foundation level courses?
- The Foundation level courses provide the basics required to take up the Diploma level of Programming & Data Science courses.

- 27. Are students allowed to resubmit assignments during the Qualifier Process?
- There is no mention of resubmission of assignments during the Qualifier Process. Typically, students submit assignments once, and the average of the best two out of the three assignments is considered.
- 28. How are students notified about the release of content during the Qualifier Process?
- Content release during the Qualifier Process is announced on the program portal, and students receive email alerts.
- 29. Can students access the week 1 content before filling out the Qualifier exam form?
- Yes, students can access the week 1 content before filling out the Qualifier exam form on the program website.
- 30. Is there a deadline for submitting assignments during the Qualifier Process?
- While not explicitly mentioned, it's implied that assignments must be submitted weekly during the Qualifier Process.
- 31. How are hall tickets for the Qualifier Exam distributed?
- Hall tickets are released only for candidates who become eligible to take the in-person proctored Qualifier Exam.
- 32. What are the criteria for passing the qualifier exam?
- To pass the qualifier exam, learners must obtain marks equal to or above the individual subject cut-off, and the total marks for all subjects must exceed the total cut-off.
- 33. How is the validity of the qualifier score determined?
- The qualifier marks are valid for the 3 terms following the qualifier exam date for learners to register for the Foundation level. After this period, learners must retake the qualifier exam if they wish to join the program.
- 34. How are candidates informed about qualifier exam results?
- Candidates who qualify receive communication via email, WhatsApp, and within their login on the portal. An admission letter is also generated for each qualified candidate.
- 35. Is there an opportunity for a second attempt at the qualifier exam?
- Yes, candidates who were absent or failed in the first attempt have the option for a second attempt. The re-attempt application opens immediately after qualifier results are announced.
- 36. What are the options for candidates who did not become eligible for the qualifier exam?
- Candidates who did not become eligible for the qualifier exam can attempt again in subsequent terms by paying the full fees. They must redo the 4 weeks of coursework and weekly graded assignments.
- 37. What are the options to register for courses once qualified?

- Candidates who qualify in the first attempt within a term can register for courses and continue completing them in the same term or in the next 2 terms until the qualifier score is valid. Candidates who qualify in the second attempt within a term can only register from the subsequent term until the qualifier score is valid.
- 38. How are qualifier exam scores and assignment scores considered in a learner's first term following the qualifier exam?
- In a learner's first term immediately following the qualifier exam, the qualifier exam scores and assignment scores in the subjects registered will be considered as Quiz 1 score and the first 4 assignment scores of the corresponding subjects.
- 39. What happens if a candidate misses the qualifier exam?
- If a candidate misses the qualifier exam, they must wait for the next opportunity to attempt it. They will not be eligible to apply again until their score is valid for the next 3 subsequent terms.
- 40. Can candidates request a refund of the Qualifier exam fee if they miss the exam?
- No, the fees paid to attempt the Qualifier exam will not be refunded for candidates who missed writing the qualifier exam.
- 41. How many attempts are allowed for the Qualifier exam within a term?
- There are two attempts allowed within any term. Qualifier exams are conducted at the end of 4 weeks and at the end of 8 weeks.
- 42. Are candidates required to repeat the assignments if they are eligible for a reattempt of the Qualifier exam within the same term?
- No, candidates eligible for a reattempt of the Qualifier exam within the same term do not need to repeat the assignments as they have already become eligible.
- 43. What fees are applicable for candidates outside India applying for a reattempt of the Qualifier exam?
- Candidates outside India must pay the full fees applicable for their category, along with an additional exam facilitation fee.
- 44. Is there a limit on the number of times a candidate can attempt the qualifier process?
- No, there are no limits on the number of times a candidate can attempt the qualifier process. Candidates can attempt again in subsequent terms as long as they pay the applicable fees.
- 45. Can candidates who qualify in the first attempt within a term register for courses immediately?
- Yes, candidates who qualify in the first attempt within a term have the option to register for courses and continue completing them in the same term.
- 46. What scores are considered for candidates in their first term following the qualifier exam?

- In a candidate's first term immediately following the qualifier exam, the qualifier exam scores and assignment scores are considered as Quiz 1 scores and the first 4 assignment scores of the corresponding subjects.
- 47. What is the significance of the admission letter provided to qualified candidates?
- The admission letter confirms the qualification of candidates and serves as official documentation of their eligibility to proceed further in the program.
- 48. Are there any penalties for candidates who qualify but do not register for courses?
- There are no penalties for candidates who qualify but do not register for courses. They retain their eligibility to register in subsequent terms until their qualifier score is valid.
- 49. How long is the validity of the qualifier score for students who have completed their Std XII?
- For students who have completed their Std XII, the validity of the qualifier score is for 3 terms from when they pass Std XII.
- 50. Can candidates apply for a reattempt of the Qualifier exam if they failed in their first attempt?
- Yes, candidates who failed in their first attempt or were absent for the final exam can apply for a reattempt of the Qualifier exam within the same term.
- 51. What is the fee for reattempting the Qualifier exam within the same term for different categories of applicants?
- The fee for reattempting the Qualifier exam within the same term is ₹1500 for General category/OBC applicants, ₹750 for SC/ST category/PwD (>= 40% disability) applicants, and ₹375 for SC/ST category applicants who are also PwD (>= 40% disability).
- 52. Are candidates required to redo the entire qualifier process if they did not become eligible for the Qualifier exam?
- Yes, candidates who did not become eligible for the Qualifier exam must redo the entire qualifier process, including the 4 weeks of coursework and weekly graded assignments.
- 53. What options are available for candidates who qualify in the second attempt within a term?
- Candidates who qualify in the second attempt within a term can only register for courses from the subsequent term until the qualifier score is valid.
- 54. How are candidates notified about their qualifier exam results?
- Candidates are notified about their qualifier exam results through email, WhatsApp, and within their login on the portal.
- 55. Can candidates who qualify in the first attempt register for courses in subsequent terms?
- Yes, candidates who qualify in the first attempt can register for courses in subsequent terms until their qualifier score is valid.

- 56. What is the purpose of considering qualifier exam scores and assignment scores as Quiz 1 scores in a candidate's first term following the qualifier exam?
- Considering qualifier exam scores and assignment scores as Quiz 1 scores in a candidate's first term helps calculate the Final score for the term.
- 57. Is there any difference in the registration process for candidates who qualify in their first attempt versus those who qualify in their second attempt?
- Yes, candidates who qualify in their first attempt have more options for course registration compared to those who qualify in their second attempt.
- 58. Can candidates reapply for the Qualifier exam once their score is no longer valid?
- Yes, candidates can reapply for the Qualifier exam once their score is no longer valid. They must go through the entire qualifier process again.

Sure, let's cover as many aspects as possible:

- 1. \*\*What is the purpose of the Qualifier exam?\*\*
  - The Qualifier exam serves as a gateway for entry into the Foundation level of the program.
- 2. \*\*How many subjects are included in the qualifier exam?\*\*
  - The qualifier exam comprises four subjects.
- 3. \*\*What is the minimum requirement for passing the qualifier exam in each course?\*\*
- The minimum requirement for passing the qualifier exam varies depending on the category of the learner, with percentages ranging from 30% to 40%.
- 4. \*\*What is the minimum required average qualifier exam score?\*\*
- The minimum required average qualifier exam score varies depending on the category of the learner, with percentages ranging from 40% to 50%.
- 5. \*\*How are qualifier exam marks communicated to candidates?\*\*
- Qualifier exam marks are displayed within the candidate's login on the portal, and candidates also receive email and WhatsApp alerts.
- 6. \*\*What is the validity period of the qualifier score?\*\*
- The qualifier score is valid for the three terms following the qualifier exam date for learners to register for the Foundation level.
- 7. \*\*What happens if a candidate's qualifier score expires?\*\*
- If a candidate's qualifier score expires, they must retake the qualifier exam to become eligible for the program.
- 8. \*\*Is there a limit to the number of times a candidate can attempt the qualifier exam?\*\*

- There is no limit to the number of times a candidate can attempt the qualifier exam.
- 9. \*\*What is the fee for attempting the qualifier exam?\*\*
- The fee for attempting the qualifier exam is currently set at Rs 3000 for the General category, with waivers available for SC/ST and PwD candidates with 40% disability.
- 10. \*\*Can candidates request a refund of the qualifier exam fee if they fail to appear for the exam?\*\*
  - No, the qualifier exam fee is non-refundable.
- 11. \*\*Is there an option for a second attempt at the qualifier exam?\*\*
- Yes, candidates are allowed two attempts within any term, with exams conducted at the end of 4 weeks and 8 weeks.
- 12. \*\*Are candidates required to repeat the entire qualifier process if they fail in their first attempt?\*\*
- No, candidates who fail in their first attempt do not have to repeat the entire qualifier process.
- 13. \*\*What happens if a candidate misses the qualifier exam?\*\*
  - If a candidate misses the qualifier exam, they must wait for the next opportunity to attempt it.
- 14. \*\*Can candidates outside India apply for the qualifier exam?\*\*
- Yes, candidates outside India can apply for the qualifier exam, but they may be subject to additional exam facilitation fees.
- 15. \*\*Are there any specific eligibility criteria for applying for the qualifier exam?\*\*
- The only specific eligibility criteria for applying for the qualifier exam is having studied Mathematics and English in Class 10.

### JEE-based Entry into Foundation Level

- 59. What is the JEE-based entry into the Foundation level program?
- Students who have qualified for the JEE Advanced Exams have direct entry into the Foundation level of the program.

- 60. How long is the validity of JEE-based entry into the program?
- The validity of JEE-based entry is for the three terms following the release of the JEE Advanced Eligibility list.
- 61. What is the process for candidates applying through the JEE-based entry?
- Candidates apply to the Qualifier process and upload valid proof of qualifying for the JEE Advanced Exams. If the proof is valid, they are declared eligible to join the Foundation level courses and issued an admission letter.
- 62. What happens if the proof submitted for JEE-based entry is found to be invalid?
- If the proof submitted is found to be invalid, the candidate will be treated as a regular entry candidate and will have to go through the qualifier process.
- 63. What is Credit Clearing Capability (CCC) and how is it determined?
- CCC determines the maximum number of courses a learner is permitted to register for in a term. It is calculated based on the average marks of courses passed in the previous terms.
- 64. How is CCC decided for learners?
- CCC is decided based on the learner's performance in the previous term. If a learner has passed at least one course, CCC for the next term is calculated based on their marks. If a learner has failed all courses or is absent for final exams, CCC for the next term may be fixed at 2 or retained from the last term, respectively.
- 65. What are the steps involved in course registration for students?
- Students pick the courses they want to take within the registration window, with the total courses limited by their CCC. They also select two cities for quizzes and exams, choose courses with completed prerequisites, and pay only for the number of credits they are signing up for.
- 66. Can students choose different cities for quizzes and exams in each term?
  - Yes, students can choose different cities for quizzes and exams in each term.
- 67. Are there restrictions on course selection across different levels of study?
- Yes, students can only sign up for courses within a particular level of study and are not allowed to register for courses across different levels.
- 68. What are the eligibility criteria for admission to the Diploma and Degree levels?
- Students who successfully complete all courses in the Foundation level are eligible for admission to the Diploma level program. Similarly, those who complete all courses in the Foundation and diploma programs are eligible for admission to the degree level, provided they satisfy the prescribed criteria.
- 69. When are learners eligible for the BSc degree?

- Learners who complete 114 credits as per the norms are eligible for the BSc degree and can continue onto the BS level.
- 70. Can students from any background apply for the JEE-based entry?
- Yes, students from any background who have qualified for the JEE Advanced Exams can apply for the JEE-based entry.
- 71. How does the program ensure fairness in determining CCC?
- CCC is determined based on the learner's performance in previous terms, ensuring fairness by considering their academic progress.
- 72. Are there any specific requirements for students regarding city selection for exams?
- Students have the freedom to choose different cities for exams in each term, providing flexibility in their exam scheduling.
- 73. What happens if a student exceeds their CCC in course registration?
- Students are limited by their CCC in course registration. Exceeding CCC may result in registration errors or the need to drop courses.
- 74. Is there a provision for financial aid or scholarships for students in the program?
- The information provided does not mention any specific provisions for financial aid or scholarships. Students are typically required to pay for courses based on the number of credits they sign up for.
- 75. Can students choose courses outside their prescribed curriculum?
- Students are encouraged to follow the prescribed curriculum, but they may have some flexibility in course selection within their level of study, provided they meet prerequisites.
- 76. How are students informed about their CCC for each term?
- Students are likely informed about their CCC through program communication channels, such as email or the program portal.
- 77. Are there any penalties for students who fail to meet their CCC requirements?
- The provided information does not mention specific penalties for failing to meet CCC requirements, but students may face limitations in course registration and academic progress.
- 78. Is there an appeals process for students dissatisfied with their CCC determination?
- The provided information does not mention an appeals process for CCC determination. However, students may seek clarification or assistance from program administrators.
- 79. Can students change their course selections after registration?
- The information provided does not specify whether students can change their course selections after registration. However, programs often have add/drop periods where students can make changes to their schedules.

#### 80. How are courses structured within the program?

- Courses are structured into different levels, starting from the Foundation level and progressing to Diploma and Degree levels. Each level consists of a set of courses designed to build upon the knowledge and skills acquired in the previous level.
- 81. What types of assessments are used in the program?
- Assessments in the program may include quizzes, assignments, projects, and final exams. These assessments help evaluate students' understanding and mastery of course material.
- 82. Are there any prerequisites for enrolling in specific courses?
- Yes, certain courses may have prerequisites, meaning students must have completed specific courses or demonstrated certain knowledge or skills before enrolling. Prerequisite requirements ensure students have the necessary foundation to succeed in advanced courses.
- 83. How are course instructors selected within the program?
- Course instructors are likely selected based on their expertise and experience in the subject matter. They may be faculty members from IIT Madras or other reputed institutes, as well as industry experts with relevant experience.
- 84. Can students interact with instructors and peers during the program?
- Yes, students typically have opportunities to interact with instructors and peers through online forums, discussion boards, virtual classrooms, and other collaborative platforms. Interaction with instructors and peers enhances learning and fosters a sense of community within the program.
- 85. What support services are available to students throughout the program?
- Support services may include academic advising, tutoring, technical support, counseling, and access to learning resources such as libraries and online databases. These services aim to support students in their academic and personal growth.
- 86. How is academic integrity maintained within the program?
- Academic integrity is typically maintained through clear policies and guidelines on plagiarism, cheating, and other forms of academic misconduct. Students are expected to uphold high standards of honesty and integrity in their academic work.
- 87. Are there opportunities for hands-on learning or practical experience in the program?
- Yes, certain courses or components of the program may include hands-on projects, case studies, internships, or other experiential learning opportunities. These experiences help students apply theoretical knowledge to real-world situations and develop practical skills.
- 88. How is feedback provided to students on their performance?

- Feedback may be provided through grades, comments on assignments, evaluations of projects, and discussions with instructors. Constructive feedback helps students understand their strengths and areas for improvement, facilitating their learning and growth.
- 89. Are there opportunities for students to engage in research or independent study?
- Yes, students may have opportunities to engage in research projects, independent study, or collaborative research with faculty members or industry partners. These opportunities allow students to explore topics of interest in depth and contribute to advancing knowledge in their field.

### Direct Entry into Diploma programme

- 100. What is the Direct Entry into Diploma programme pathway?
- The Direct Entry into Diploma programme pathway allows individuals with sufficient foundational knowledge, such as working professionals or those with prior education, to enter the Diploma level directly.
- 101. Who is eligible to apply for Direct Entry into the Diploma programme?
- Students who have completed two years in any undergraduate degree program are eligible to apply for Direct Entry into the Diploma programme. They must submit their second-year marksheet or higher as proof of eligibility.
- 102. What is the qualifying process for Direct Entry into the Diploma programme?
- The qualifying process involves a separate Direct Admission to Diploma (DAD) qualifier exam for the Diploma in Programming (DP) and Diploma in Data Science (DS). Candidates must meet the cutoff marks defined for each exam to be eligible for entry into the Diploma programme.
- 103. How many attempts are candidates allowed for Direct Entry into the Diploma programme?
- There is no limit on the number of attempts for Direct Entry, but candidates are recommended to attempt the Foundation level if they do not pass the qualifier exam.
- 104. What subjects are included in the DAD qualifier exam for DP and DS?
- The DAD qualifier exam for DP includes English, Aptitude, and six weeks of Mathematics 1. The DAD qualifier exam for DS includes English, Mathematics 1, Statistics 1, and Python programming.
- 105. Can students who complete the Diploma in Data Science pursue the Diploma in Programming without taking the qualifier exam?

- Yes, students who complete the Diploma in Data Science through Direct Admission are directly eligible to pursue the Diploma in Programming without taking the qualifier exam for DP.
- 106. What are the fees for the DAD qualifier exam, and what are the cutoff marks required for each subject?
- The fees for the DAD qualifier exam vary based on the category of the candidate. The cutoff marks required for each subject also vary depending on the category. For example, for GEN/OBC-CL candidates, the fee is Rs 6000, and the cutoff is 40% (50/100 marks).
- 107. What is the primary target audience for the Direct Entry into the Diploma program?
- The Direct Entry into the Diploma program primarily targets working professionals or learners who already possess the foundational knowledge taught in the first year of the program.
- 108. How does the Direct Entry pathway differ from the regular entry pathway?
- The Direct Entry pathway allows individuals with two years of completed undergraduate study to enter the Diploma level directly, bypassing the Foundation level. In contrast, the regular entry pathway typically requires completion of Foundation level courses.
- 109. What is the purpose of conducting the DAD qualifier exam?
- The DAD qualifier exam serves as a means to assess candidates' readiness to enter the Diploma program directly. It evaluates their proficiency in relevant subjects and determines their eligibility for entry.
- 110. Are there any specific subjects or skills candidates need to prepare for the DAD qualifier exam?
- Yes, candidates need to prepare for subjects such as English, Mathematics, Statistics, Aptitude, and Python programming, depending on the chosen Diploma program (DP or DS). Preparation may include reviewing course materials, practicing sample questions, and honing relevant skills.
- 111. Can candidates who fail to pass the DAD qualifier exam attempt it again?
- Yes, there is typically no limit on the number of attempts for the DAD qualifier exam. However, candidates are encouraged to attempt the Foundation level if they do not pass the qualifier exam.
- 112. What benefits do candidates gain from completing the Diploma program through Direct Entry?
- Candidates who complete the Diploma program through Direct Entry gain specialized skills and knowledge in programming or data science, which can enhance their career prospects and professional development.
- 113. Are there any additional requirements or qualifications needed to pursue the Diploma program through Direct Entry?

- In addition to completing two years of undergraduate study, candidates may need to meet specific academic criteria and submit relevant documentation, such as their second-year marksheet or higher, to qualify for Direct Entry into the Diploma program.
- 114. Can candidates from any academic background apply for Direct Entry into the Diploma program?
- Yes, candidates from any academic background who have completed two years in any undergraduate degree program are eligible to apply for Direct Entry into the Diploma program.
- 115. How does the Direct Entry pathway accommodate the needs of working professionals?
- The Direct Entry pathway allows working professionals to enter the Diploma program directly, bypassing the Foundation level and saving time. This accommodates their busy schedules and enables them to focus on advanced coursework relevant to their career goals.
- 116. What is the significance of the Direct Admission to Diploma (DAD) qualifier exam?
- The DAD qualifier exam serves as an assessment tool to evaluate candidates' readiness for the Diploma program. It ensures that candidates possess the necessary knowledge and skills to succeed at the Diploma level.
- 117. Are there specific dates for the DAD qualifier exam, and how often is it conducted?
- The DAD qualifier exam is typically conducted three times a year, coinciding with the end term examinations of the IITM BS DS program. Specific dates for the exam may vary, but candidates can expect multiple opportunities to attempt the qualifier.
- 118. What subjects are covered in the DAD qualifier exam, and how long does it last?
- The DAD qualifier exam covers subjects such as English, Mathematics, Statistics, Aptitude, and Python programming, depending on the chosen Diploma program (DP or DS). The exam duration varies, with the DP qualifier lasting three hours and the DS qualifier lasting four hours.
- 119. How does the Direct Entry pathway streamline the academic journey for candidates?
- By allowing candidates to enter the Diploma program directly, the Direct Entry pathway streamlines the academic journey by eliminating the need to complete the Foundation level. This saves time and enables candidates to focus on advanced coursework relevant to their interests and career aspirations.
- 120. Are there any financial considerations for candidates applying for Direct Entry into the Diploma program?
- Candidates may need to pay a fee to attempt the DAD qualifier exam, which varies based on their category (GEN/OBC-CL, SC/ST/PwD, SC/ST and PwD, OBC-NCL, EWS). Additionally, candidates should consider the overall cost of the Diploma program, including tuition fees and any associated expenses.

### Evaluation and grading of courses in every term

- 121. What are the different types of assessments for each course in every term?
  Each course is evaluated through three types of assessments: online weekly assignments, monthly in-person proctored quizzes, and an in-person end term exam.
- 122. How are online assignments structured within a course?

   Online assignments typically span 12 weeks and require submission within specified due dates. The average score of the best 5 out of the first 9 weekly assignments should be >= 40/100 to be eligible for the final exam.
- 123. What is the format of the proctored quizzes, and how often are they conducted?
  Two proctored quizzes are conducted at the end of Weeks 4 and 8, based on the content covered in Weeks 1-4 and 1-8 respectively. The quizzes are in-person and typically consist of a single session with varying time limits based on the number of subjects.
- 124. How are the scores from the quizzes used in the overall assessment?

   The Qualifier score is counted as Quiz 1 score for courses registered in the Foundation level in the subsequent term of the qualifier exam. The final exam score accounts for 50% of the Total Course Score (T), known as the End Semester Score (E).
- 125. What happens if a student does not attend at least one of the two proctored quizzes?

   If a student does not attend at least one of the two proctored quizzes, they may not be eligible to write the final exam. Specific details regarding eligibility criteria should be checked in the grading document.
  - 126. How is eligibility determined for the end term exam?
- Eligibility criteria for the end term exam are outlined in the grading document and may vary based on specific course requirements and performance in assignments and quizzes. Students should refer to the grading document for detailed information.
  - 127. Can students retake guizzes if they are not satisfied with their initial scores?

- No, there are typically no make-up quizzes provided. However, students may have the opportunity to attempt Quiz 1 again in subsequent terms, with the better of the two scores used for calculations.
  - 128. How do online weekly assignments contribute to the final evaluation of a course?
- Online weekly assignments are an essential part of the course evaluation. The average score of the best 5 out of the first 9 weekly assignments should be >= 40/100 to be eligible for the final exam. Additionally, the scores obtained in these assignments contribute to the Final Course Score.
- 129. What is the purpose of the proctored quizzes conducted at the end of Weeks 4 and 8?
   Proctored quizzes assess students' understanding of the course material covered up to that point. They provide an opportunity for students to demonstrate their knowledge in an in-person setting and contribute to their overall course grade.
  - 130. How are the time limits for proctored quizzes determined?
- The time limits for proctored quizzes vary based on the number of subjects being assessed. Typically, a single session exam provides 4 hours for 4 subjects, 3 hours for 3 subjects, and 2 hours for 2 or 1 subject.
- 131. What is the significance of attending at least one of the two proctored quizzes?
  Attendance at least one of the two proctored quizzes is often mandatory for eligibility to write the final exam. This requirement ensures that students engage with the course material and demonstrate their understanding at key intervals throughout the term.
  - 132. How is eligibility for the end term exam determined?
- Eligibility for the end term exam may be based on various factors, including performance in assignments and quizzes. Specific criteria for eligibility should be outlined in the grading document, and students are encouraged to review this information carefully.
- 133. What percentage of the total course score does the final end term exam contribute?

   The final end term exam typically accounts for 50% of the Total Course Score (T), also known as the End Semester Score (E). This assessment is crucial in determining students' overall performance in the course.

### Pass criteria for each course

- 134. How is a candidate's performance evaluated to determine if they have passed a course?
  A candidate is deemed to have passed a course if their Total Course Score (T) is greater than or equal to 40/100. This criterion applies uniformly to all learners in the course.
- 135. What grading system is used to assess a candidate's performance in a course?
   An absolute grading system is followed, where the Total Course Score (T) is used to assign a letter grade and corresponding grade point to the candidate. The grading system is outlined in a table based on specific score ranges.
  - 136. Can you explain the letter grades and grade points assigned based on the Total Course Score (T)?
    - The letter grades range from S to U, corresponding to different score ranges. Each letter grade is associated with a specific grade point, ranging from 10 for S to 0 for U.
- 137. What are the consequences if a candidate fails to meet the passing criteria for a course?
  If a candidate's Total Course Score (T) is below 40/100, they are assigned a grade of U, indicating failure. Additionally, if their weekly average assignment score is less than 40/100 or they attend 0 guizzes, they are also considered to have failed.
- 138. How are candidates who do not meet the passing criteria treated in subsequent terms?
  Candidates who fail or have incomplete performance in a course may have the opportunity to complete the course in the next term. The grading document specifies the actions to be taken based on the nature of the incomplete performance.
  - 144. How is the distribution of grades managed within the absolute grading system?
    Grades within the absolute grading system are determined based on predefined score ranges. The distribution of grades reflects the performance of candidates relative to these ranges, ensuring consistency and fairness in assigning grades.
- 145. What factors influence the distribution of grades in a course?
   The distribution of grades in a course is primarily influenced by the performance of candidates, as reflected in their Total Course Score (T). The predefined score ranges for each letter grade dictate how grades are distributed across the spectrum of scores.
  - 146. How does the grading system accommodate variations in candidate performance?

- The grading system is designed to accommodate variations in candidate performance by assigning grades based on the Total Course Score (T). This allows for flexibility in assessing candidates' achievements relative to the course objectives and expectations.
- 147. Are there any provisions for adjusting the grade distribution to account for external factors?
- The grading system typically does not include provisions for adjusting the grade distribution based on external factors. However, academic institutions may implement policies to address exceptional circumstances or systemic issues that impact candidate performance.
- 148. What measures are in place to ensure the integrity and reliability of the grade distribution process?
- The integrity and reliability of the grade distribution process are ensured through adherence to predefined grading criteria and rigorous assessment procedures. Transparency in grading policies and consistent application of evaluation standards contribute to the reliability of the process

### Repeating course

- 149. How does the program facilitate repeating a course for improvement?
  - Learners can repeat a course for improvement in grades any number of times by paying double the regular course fee. They must submit all weekly assignments, appear for quizzes, and take the final exams. The highest score obtained across all attempts will be used for calculating the CGPA.
- 150. What are the options available for learners who were not eligible to attempt the end term exam or did not pass the course?
- If a learner was not eligible to attempt the end term exam or did not pass the course, they have the option to repeat the entire course. Alternatively, they can choose to reappear for the final term exam as a makeup exam.
- 151. How does the makeup exam process work for learners who were absent for the final exam alone?
- Learners who were absent for the final exam alone have two options: they can either reappear for the final term exam as a makeup exam or repeat the entire course. The makeup exam fee is specified, and learners can only take the makeup exam once.
- 152. What are the time and term limits for repeating a course?
- Learners must repeat a course within the specified time and term limits. Each level must be completed within 36 months (3 years / 9 terms), and the entire program must be completed within 96 months (8 years / 24 terms).
- 153. Can learners choose to repeat a course for improvement?

- Yes, learners can choose to repeat courses for improvement in grades. The highest grade achieved will be recorded in the transcript. However, the course fee for repeating for improvement will be double the normal fee.
- 154. What is the grading pattern for makeup exams?
- The grading pattern for makeup exams follows the formula used in the term the course work was done, not the term the makeup exam was taken. This ensures consistency and fairness in grading across all assessments.
- 155. How does the program handle learners repeating a course for improvement in grades?
- Learners can repeat a course for improvement in grades any number of times by paying double the regular course fee. They must submit all weekly assignments, appear for quizzes, and take the final exams. The highest grade achieved will be recorded in the transcript.
- 156. What options are available for learners who were not eligible to attempt the end term exam or did not pass the course?
- If a learner was not eligible to attempt the end term exam or did not pass the course, they have the option to repeat the entire course. Alternatively, they can choose to reappear for the final term exam as a makeup exam.
- 157. Can learners choose to repeat a course for reasons other than improvement in grades?
- Yes, learners can choose to repeat a course for various reasons, such as to meet eligibility criteria for attempting the end term exam, or if they were absent for the final exam alone.
- 158. How does the makeup exam process work for learners who were absent for the final exam alone?
- Learners who were absent for the final exam alone have two options: they can either reappear for the final term exam as a makeup exam or repeat the entire course. The makeup exam fee is specified, and learners can only take the makeup exam once.
- 159. What are the time and term limits for repeating a course?
- Learners must repeat a course within the specified time and term limits. Each level must be completed within 36 months (3 years / 9 terms), and the entire program must be completed within 96 months (8 years / 24 terms).
- 160. How does the grading pattern for makeup exams ensure fairness and consistency?
- The grading pattern for makeup exams follows the formula used in the term the course work was done, not the term the makeup exam was taken. This ensures consistency and fairness in grading across all assessments.
- 161. Are there any restrictions on the number of times a learner can repeat a course?

- No, there are no restrictions on the number of times a learner can repeat a course for improvement or other reasons.
- 162. Can learners choose to repeat courses across multiple terms?
- Yes, learners have the flexibility to repeat courses in a single term or across multiple terms based on their preferences and schedule.
- 163. What happens if a learner chooses to repeat a course and also register for new courses in the same term?
- Learners can repeat courses and register for new courses in the same term, but the total number of courses must not exceed the Credit Clearing Capability (CCC) limit.
- 164. Is there any special process for registering for courses when repeating a course?
- Yes, learners must apply for any new course or repeat a course through the course registration form. Simply submitting a form alone will not be accepted.
- 165. Can learners apply for improvement courses at different levels?
- Yes, improvement courses can be registered at any level. For example, a foundation course improvement can be registered at the diploma level.
- 166. What options are available for learners who receive an incomplete (I) grade in a course?
- Learners with an incomplete grade have the option to take a makeup exam or repeat the entire course to complete their requirements.
- 167. How are makeup exams scheduled, and what is their significance in the overall course completion process?
- Makeup exams are scheduled for learners who have received an incomplete grade in a course. They provide an opportunity for learners to reappear for the final exam and complete the course requirements. However, makeup exams do not count towards the Credit Clearing Capability (CCC) limit.

### Exam city list

Bahrain		
Manama		
Kuwait		
Salmiya		
Oman		

Muscat

Singapore

Singapore
Sri Lanka
Colombo
Jaffna
UAE
Dubai
Hamdan (AUH)
Sharjah
Andaman And Nicobar Islands
Port Blair
Andhra Pradesh
Anantapur
Bhimavaram
Guntur
Kadapa
Kurnool
Rajahmundry
Tirupathi
Vijayawada
Vishakhapatnam
Arunachal Pradesh
Naharlagun
Assam
Dibrugarh
Guwahati
Silchar
Tezpur

Patna
Bhagalpur
Gaya
Muzaffarpur
Darbhanga
Chhattisgarh
Raipur
Delhi
Delhi
Goa
Panaji
Gujarat
Ahmedabad
Anand
Rajkot
Surat
Vadodara
Haryana
Faridabad
Gurgaon
Kurukshetra
Himachal Pradesh
Hamirpur
Shimla
Jammu and Kashmir
Jammu

Bihar

### Jharkhand Dhanbad Jamshedpur Ranchi Karnataka Belgaum Bengaluru Dharwad Gulbarga Mangalore Mysore Kerala Calicut Ernakulam Kollam Kottayam Palakkad Thrissur Trivandrum Madhya Pradesh Bhopal Gwalior Indore Jabalpur Maharashtra Amravati

Srinagar

Aurangabad
Jalgaon
Kolhapur
Mumbai
Nagpur
Nanded
Nashik
Pune
Solapur
Manipur
Imphal
Meghalaya
Shillong
Mizoram
Aizawl
Nagaland
Dimapur
Odisha
Bhubaneswar
Rourkela
Sambalpur
Puducherry
Puducherry
Punjab
Chandigarh
Jalandhar
Ludhiana

### Rajasthan Jaipur Jodhpur Kota Udaipur Sikkim Bardang Tamil Nadu Chennai-Avadi Chennai-South Coimbatore Erode Kanchipuram Madurai Salem Thanjavur Tiruchirappalli Tirunelveli Vellore Telangana Hyderabad Warangal Tripura Agartala **Uttar Pradesh** Agra

Amritsar

Greater Noida
Kanpur
Lucknow
Meerut
Varanasi
Uttarakhand
Dehradun
Haldwani
Roorkee
West Bengal
Aasansol
Adisaptagram
Durgapur
Kolkata
Siliguri

Allahabad

Ghaziabad

Gorakhpur

### Term structure

168. How is the academic year structured in terms of terms and durations?
The academic year is divided into three terms: January Term, May Term, and September Term, each lasting four months.

169. How many weeks of coursework are included in each term?
Each term consists of 12 weeks of coursework, which includes video lectures and assignments for the enrolled courses.

170. What types of assessments are conducted during the term?

- Assessments during the term may include in-person invigilated quizzes, programming exams, mini projects, vivas, take-home assignments, and other relevant evaluations, depending on the nature of the course.

171. How are the in-person invigilated quizzes scheduled within the term?Two in-person invigilated quizzes are scheduled during the term, typically at the end of Weeks 4 and 8, covering the content from the preceding weeks.

#### 172. What is the purpose of the end-of-term exams?

- The end-of-term exams are comprehensive assessments conducted at the conclusion of each term to evaluate the learners' understanding of the course materials covered throughout the term.
- 173. Are there specific dates for the commencement and conclusion of each term?
  Yes, specific dates for the start and end of each term are provided to ensure proper planning and scheduling for learners and instructors alike.
  - 174. How are the term durations aligned with the calendar year?
- The term durations are structured to align with the calendar year, with the January Term starting at the beginning of the year, the May Term starting in May, and the September Term commencing in September.
  - 175. Can students enroll in courses across multiple terms?
- Yes, students have the flexibility to enroll in courses across multiple terms based on their academic plans and schedules.
  - 176. Are there any breaks or holidays within each term?
- Typically, breaks or holidays within each term are not explicitly mentioned. However, learners may refer to the academic calendar for any scheduled breaks or holidays, if applicable.
  - 177. How do instructors manage coursework and assessments throughout the term?
  - Instructors design and deliver coursework and assessments over the 12-week duration of the term, ensuring a balanced distribution of learning activities and evaluation tasks.
    - 178. What is the significance of the term structure in academic planning?
- The term structure provides a framework for organizing and delivering educational content and assessments within defined timeframes, facilitating effective academic planning and progression.
- 179. Are there any provisions for adjusting the term structure in exceptional circumstances?

   In exceptional circumstances, such as unforeseen events or emergencies, adjustments to the term structure may be made to accommodate the needs of learners and ensure continuity in academic activities.

### Frequently Asked Questions on iit m website

#### Does IIT Madras offer B.Sc in Programming & Data Science on-campus?

No, there is no equivalent on-campus version. IIT Madras has carefully curated this exclusively as an online program.

Will those enrolled to this program have access to IIT Madras campus facilities?

Due to limitations of campus facilities and students being spread out geographically, learners enrolled in the program will not have access to IITM campus facilities.

## What is the language of instruction for these courses? Are they available in other regional languages?

All our program courses are taught in English. Hence, we expect a minimum proficiency in English language to participate in the program.

I am a CA / B.Com Graduate / Lawyer / B.Sc Graduate / Mechanical engineer / MBBS student and do not have any knowledge of coding. Does this course cover the basics of coding before progressing to advanced levels?

It is not necessary to have a prior knowledge of coding to learn from our program. Our program is structured in such a way that once a learner starts from the Foundational level and progresses towards the Degree level, in sequence, he / she will obtain sufficient proficiency in Programming and Data Science.

#### How long will it take to complete the online degree program if I am working?

The full program can take anywhere between 3 and 6 years to complete. On an average, we anticipate that a learner studying part time will finish the degree in 4 to 5 years. While this is the estimated time for the full degree, a diploma can potentially be obtained faster (around 8 months - 2 years). Check Academics page to better understand the program structure.

#### What are the technological requirements for this program?

Access to good internet connection as well as a laptop / desktop device will be a key requirement to learn effectively from our courses. Familiarity with Google tools would be an advantage.

#### Will the classes be taught live? Will there be any interaction?

No. Pre-recorded lessons and assignments will be made available on our portal on a weekly basis. Learners can learn from the content released each week at their own pace, but will be required to submit the weekly assignments online within stipulated deadlines.

One or two LIVE sessions per course may be conducted to clear doubts and interact with the course instructor and course support team.

#### What is the overall structure of the program? What are Levels?

The program is split into three levels that have to be done strictly in sequence:

- 1: Foundational Level (8 courses)
- 2: Diploma Level (6 Programming courses + 6 Data Science courses)
  - 3: Degree Level (11 courses)

Check Overall Structure in Academics page.

#### How much time do I need to spend on a course per day?

The expected effort to do well in one course is about 10 hours per week.

#### How many courses can I complete in a year?

There are 3 terms in a year. Learner may be allowed to register for a maximum of 2 - 4 courses in a term depending on their performance in previous exams and their preferred pace of learning.

Note that all courses of one level need to be completed before registering for courses in the next level, and all prerequisites of a course need to be completed before registering for that course.

#### How / where do I ask questions or doubts related to the course content of the program?

Each course page will have a discussion forum where learners can raise their course-related questions and interact with the course instructor or course support team.

For all questions not related to the course, you may write to support@onlinedegree.iitm.ac.in

# Are there any communication groups on WhatsApp, Telegram etc for the IITM Online Degree Program?

We have NOT created any official groups anywhere yet. We currently answer all questions / doubts via support email / calls.

We have plans to create official groups for our learners when the qualifier month starts.

We will reach out to you through whatsapp, email and SMS. Kindly look out for

communication from our side on this.

#### Are there any sample video content or assignments?

As a sample, Week 1 content videos have been made available for the first four Foundational Level courses for you to try and learn from. We recommend you to check out these lectures and try the sample assignment we have put out for each course. The links to Week 1 Content & Assignment pages can be accessed from the Foundational Level courses section in Academics page.

#### I ran into an error or issue in the application form. What do I do?

Please send us your registered email ID and a screenshot of the error / issue with relevant description to support@onlinedegeree.iitm.ac.in

If the error is after payment has been made, please forward the confirmation email from Razorpay along with email ID, application number and screenshot with description.

#### Is there an attendance policy for this program?

There is no daily attendance, but once you register for the courses, submission of weekly assignment is taken as an attendance indicator. Minimum required scores in weekly assignments of a course will determine if a learner will be allowed to write the end term exam for that course or not.

#### Can I take my exams from home?

No. Every term will have 3 quizzes and an end term exam for each course. All quizzes and end term exams will be in-person, invigilated exams at designated centres across the country. You need to travel to the exam centre and take these exams. Check Exam Cities in Academics Page.

#### What is a quiz?

A quiz is similar or equivalent to a monthly test in schools and colleges. Marks obtained in quizzes count towards the total score obtained in the course. All quizzes will be in-person, invigilated exams at designated centres across the country.

#### Are the exam dates flexible?

No, the exam dates are not flexible. The quiz and end term exam dates are fixed for all learners taking the same course in a term. We try our best to schedule all exams during the weekends though it may not be possible for every exam.

What if I want to request for a city not listed in the current list of exam cities?

If the city of your choice is not in our current exam cities list, please send an email to support@onlinedegree.iitm.ac.in. We will consider your request, but there is no guarantee that we will add it.

#### Will there be multiple exam centres within an exam city? How many?

There may be more than one exam centre in any exam city. The count depends on the number of learners in each city and availability of centres on given date with our exam partner.

#### When will the term start? What is the timeline?

Learners who clear the Qualifier Exam will be expected to register for the program right after their results are announced. In the first term alone, classes start (with week 5) immediately after the completion of week 4 in the qualifier phase with no gap. Please check Important Dates in Admissions page to get to know the timeline.

#### Can I pursue only a Diploma instead of Degree?

Learners who join the IIT Madras Online Degree Program have the option of exiting the program earlier with a Diploma in Programming AND / OR Diploma in Data Science.

Learners who wish to exclusively pursue a Diploma in Programming OR Data Science alone and already have a basic understanding of the foundations can check out IIT

Madras Diploma Program website.

What is the eligibility criteria to apply for the Degree Program?

Check Eligibility section in Admissions page for the latest update of the eligibility criteria.

#### Is the program available to students currently in class 12 or equivalent?

Students currently in class 12 (or equivalent) will be allowed to apply for the program, go through the qualifier phase and write the qualifier exam, but will not be allowed to register for the foundational level of the program until they clear class 12 (or equivalent). Note that a Qualifier Exam result is valid only for 3 terms (about 1 year) right after the exam. So, plan accordingly.

# I took a break year after class 12 to prepare for JEE / NEET. Can I Apply for the Program?

Yes, you may apply for the Program if you have studied Mathematics & English in class 10 and have cleared class 12 or equivalent.

I had dropped out of degree over two decades ago. Would I be eligible to apply?

Yes. If you cleared class 12 or equivalent in 2019 or earlier, you may apply for our program - there is no requirement to have completed a degree program. Check our latest eligibility criteria.

#### How and where can I apply for the program?

Anyone who is eligible may apply by filling in the application form, uploading required documents and paying the application fee.

We recommend that you go through the Academics Page to better understand the program and the Admissions Page to understand the admission process before applying.

#### What is the qualifier process?

All applicants will have to go through a Qualifier Process, like a trial month, wherein they will get access to 4 weeks of content for the four foundational level courses - English I, Mathematics for Data Science I, Statistics for Data Science I and Computational Thinking. Check Qualifier Process in Admissions page

# Will everyone who goes through the qualifier process be allowed to write the qualifier exam? What is the passing criteria?

No. Only the learners who get the minimum required marks in the online assignments during the qualifier process of 4 weeks will allowed to attend the qualifier exam. Only those learners allowed to write the qualifier exam shall be provided with hall tickets.

Refer to Qualifier Process and the section below it to learn about the minimum required marks in the qualifier assignments and minimum required marks to pass / clear the qualifier exam.

## How long is the qualifier exam result valid for? Can I join the program at a later term if I clear the qualifier exam now?

The Qualifier Exam result is valid for a period of 3 terms (or 1 year). So, a learner may choose to not register for Foundational Level immediately after clearing the Qualifier Exam and register for the Foundational level in the second or third term following the Qualifier Exam.

How many times a year will there be admissions? Will it be only once a year? For now, we are running applications / admissions thrice a year.

What are the documents / files required to apply for the qualifier process of the program?

The list of required documents is available on the Application Process section of the admissions page.

## Can the credits from this online degree program be transferred to learner's college or university (like on the NPTEL platform)?

IITM's Online BSc Degree in Programming and Data Science is a stand alone program.

Credits cannot be transferred.

## Will IIT Madras provide the course material for the program in hard copy through courier (like IGNOU)?

No, the course content will be provided only in online mode so you can watch them anytime, anywhere. There will be no hard copy provided. Depending on the course, learners may be recommended reference books / material that they may buy separately.

# Can I submit an older version of the OBC-NCL / EWS certificate while applying or registering for courses?

Student has to submit valid certificates while applying / registering. These will be verified by our team. An approved certificate will be valid for three terms.

## After applying, can I get a refund of application fee if I can't write the qualifier exam or if I fail the qualifier exam?

No. There will be no refund of application fee once paid.

# After registering for a course in a term, can I carry over the fees to the next term if I am not able to complete the course?

No. A course registration is valid only for one term. If a learner is not able to clear a course in a term, they will be considered as having failed the course and will need to register for the course again at a later term along with the required fee.

Note that a learner will be allowed to drop off from a course within the first four weeks of the term. In such cases, a part of the course fee will be retained as admin charges and the balance, if any, may be carried over to the next term.

#### What is the Fee structure? Should we submit the entire fees at once or in installments?

The overall program fees will not be paid at one stretch. The actual fees you will be paying in each term will be in proportion to the number of courses you register for in the respective term. So, if you register for 2 courses in a term, you have to pay the fees only for those 2 courses. For more details, please refer to Fee Structure in Academics Page.

#### What is the mode of payment?

Fees can be paid only through online mode. Fees through DD will not be accepted.

Note that payment cannot be made using Debit Card. You can pay using any Credit Card, Netbanking (all Indian Banks), Wallet, UPI (Google Pay, BHIM, etc.).

### Will I get any confirmation on successful payment of fee?

Yes. After successful completion of payment, you will receive a confirmation email from Razorpay.

If my payment fails, how many days will it take to the money back in my bank account? In case of failed payments, it will take 3 to 4 weeks for the money to be credited back in your bank account.

### Can I edit my application form after submitting it?

Your application form will be considered as submitted only upon making the application fee payment. Until then, you may edit the contents of your application form. After the application fee has been paid, you will not be allowed to edit the application form.

In case your uploaded document(s) gets "returned / rejected" during verification, you will be given a chance to re-upload a valid document within a stipulated deadline.

# My application status says "Verification Under Process". How long will it take for my application to be verified?

Verification of documents may take upto 3 weeks. Please be patient. We will keep you updated about your application status by email / SMS.

### How to avoid getting my application "returned / rejected"?

After you submit your application, we verify the same before changing the status of uploaded document(s) to "accepted" or "returned / rejected".

Be careful when filling the application form and double check the information you enter. We verify the files / documents you have uploaded (photograph, signature, ID card, SC / ST / OBC-NCL / EWS / PwD document if applicable). If any of the files / documents uploaded is unclear or broken or found to be wrong or incorrect, your application may be "returned / rejected".

In case your uploaded document(s) gets "returned / rejected" during verfication, you will be given a chance to re-upload a valid document within a stipulated deadline.

Being honest and careful while filling the application form and uploading correct documents in the correct formats will help get your application "accepted". Check Application Process for required documents, document formats and sizes.

#### Can I select only one city as my Exam City instead of selecting two preferences?

No. You will need to pick two different preferences for exam cities in the order of your preference. Your exam centre shall be allotted in any one of the two exam cities picked depending on availability. We recommend that you familiarise with the current available Exam City options to be able to pick your preferred exam cities.

# Can I change my exam cities for the qualifier exam after having paid and submitted my application?

You will not be allowed to change your exam city for the qualifier exam after submitting your preferences in the application form.

If there is any unavoidable situation because of which you need to have the qualifier exam city changed, please write to us. We will try to accommodate your request based on availability, but cannot guarantee a change of exam city.

# Will the Exam City preferences I select for the Qualifier Exam in the application form be fixed for all the later exams?

No. The Exam city preferences selected in the application form is for the Qualifier Exam only. You will have the option of picking a different set of Exam City options, if you wish, after qualifying for the later invigilated exams.

#### Will I get a scholarship / loan for this programme?

We are trying to see if this is possible. Please watch out for announcements regarding scholarships / loans.

# Is there any concession for SC / ST / OBC-NCL / EWS / PwD candidates in terms of scores?

SC / ST / OBC-NCL / EWS /PwD candidates will have concession in minimum scores required during the qualifier process to enter the program. Check out Qualifier Process in Admissions page. Note that there will be no such concessions after entering the program. (OBC candidates not belonging to the OBC-NCL category cannot avail any concession)

Is there any fee waiver for SC / ST / OBC-NCL / EWS / PwD candidates or candidates with lower family income?

Only SC / ST / PwD candidates may avail fee waivers in the application stage. After clearing the qualifier process and exam, candidates belonging to any category (General / OBC / EWS / SC / ST / PwD) may avail fee waivers in course fees based on family income. Check Fee Structure in Academics page for details.

#### What does "family income" in the fee structure mean?

The term family income for the purpose of availing fee waivers includes the income of the candidate, the income of his/her parents and spouse, also the income of his/her siblings and children below the age of 18 years.

After clearing the Qualifier Exam, all learners who wish to avail fee waivers based on Family Income required to submit Family Income Certificate in the format provided in the Fee Structure section. Note that the Family Income Certificates are valid only for one year and will need to be submitted afresh each year to continue availing fee waiver based on Family Income through the program.

# I belong to the general category and I want to avail fee waiver since my family income in below 5 lakhs per annum. Why do I need to submit EWS + Family Income Certificate to avail the waiver?

Economically Weaker Section (EWS) in India, as defined by the Govt. of India, is a sub-category of people belonging to the General category with an annual family income less than ₹8 lakhs per annum and who do not belong to any category such as SC/ST/OBC. Course fee waivers from IIT Madras are available for general category learners with family income less than ₹5 lakhs per annum. As per the policy of IIT Madras, and as part of our documentation process to ensure that we give fee waiver benefits to the deserving learners, we require general category learners with family income less than ₹5 lakhs per annum to submit both EWS certificate and Family Income certificate. EWS and Family Income certificates will need to be obtained in the format mentioned in the Fee Structure section in Academics page.

# Will students who enter the program have internship / recruitment opportunities provided by IIT Madras?

We will try to make internship / recruitment opportunities available to learners; we will notify learners when the opportunities arise.

### How does IIT Madras plan to provide placements for lakhs of applicants?

A large number of learners apply and participate in the qualifier process. After clearing the qualifier process, learners will need to clear foundational level courses, diploma level courses and then the degree level courses to finally get a BSc degree from IIT

Madras. That's a total of 31 courses of IIT standard and 116 course credits. When a student is able to successfully clear these courses and fulfill all the academic requirements, we are confident that the students will be employable.

### Do I get placement opportunities after I complete the BSc Degree?

The demand for data analysts / scientists and full stack developers is very high. Through our program, we do our best to equip our learners with required subject expertise. We are also planning to give soft skills training as part of the program. It is all about enabling IITM BSc graduates with the right job opportunities. IIT Madras will actively reach out to the recruiters in the context of placement opportunities for the graduates of the Online BSc Degree Program.

### What is the registration process for the Foundational Level?

Once you clear the Qualifier Exam, you will be allowed to access the Course Registration Form from your dashboard upon logging in. In the Course Registration Form, you will need to fill the required details, upload necessary documents and pay the course fee to register for the first term of your Foundational Level. You may choose to register for one or more Foundational Level courses with the upper limit of courses you can register for depending on your Qualifier Exam Score.

Note that there will be an added Exam Fee applicable for learners opting to write their quizzes and end term exams outside India.

## What are the documents / files that are required to be uploaded while registering for the Foundational Level?

It is mandatory any one of these documents while registering for Foundational Level:

- 12th or equivalent mark sheet OR
  - Degree Certificate OR
- Certificate of the highest level of education

What are the documents needed to avail fee waiver at Foundational Level and later?

Please refer to the Fee Structure section in the Academics page to see which fee waiver may be applicable to you and the relevant documents / certificates that will need to be submitted.

I have already submitted my category certificate while applying for the Qualifier Process. Do I need to submit them again while registering for the Foundational Level?

No, not required to submit again. However, the EWS / OBC-NCL certificate need to be submitted again if the previously submitted certificate is not valid until the end of the current financial year.

# I can't afford to pay the entire Foundational Level fees at one shot and I do not come under any fee waiver category too, can I pay the fees in 2 or 3 installments?

Please be informed that you will not be paying the entire Program fee or Foundational Level fee at one stretch. The actual fees you will be paying will be in proportion to the number of courses you register for in every term. So, if you register for 2 courses in the January 2021 Term, you have to pay the course fees only for those 2 courses.

In the Fee Structure section, select your goal to be able to see a detailed PDF with break down of course fee over each term.

# Can I change my email ID in the Foundational Level? Will we get any official student email ID?

The personal email ID you applied for the program with cannot be changed. This email ID is used to access the whole Qualifier Process and the Foundational Level Course Registration Form.

Once all the documents uploaded in the Foundational Level Course Registration Form are approved, each registered learner will be assigned a roll number and a corresponding official IIT Madras Online Degree student email ID. After that, all further communication and course access will be through the official student email ID.

### Is it possible to get an educational loan for this Program?

We are working on the process of getting the bank loans approved for this Program.

Please do look out for updates from our side on this.

### Will I be given a new portal to access courses at Foundational Level?

No, the current portal will be used for all the Levels. You will be given a new official IITM Online Degree student email ID to access the portal.

#### Will I be issued an ID card?

An ID card in electronic format will be provided, subject to conditions on use of ID card.

Can I take a break of 1 or 2 year(s) after completing the Foundational Level?

The BSc Degree has to be completed within a maximum period of 6 years. While a 1 or 2 year break between Levels is allowed, we recommend that you time the length of your breaks depending on whether you want to pursue a Diploma or Degree, and how many courses you are able to take up in a term.

I am unable to attend the Qualifier Exam but received hall ticket / I didn't clear the Qualifier Exam. What will be the procedure to re-apply? Do I need to pay application fee again?

You can re-apply again for the immediate next Qualifier Process with partial application fee payment. Your previous assignment scores will be considered and you will be directly eligible to write the Qualifier Exam without having to submit assignments again.

I applied for the Qualifer Exam but I didn't obtain the minimum required average assignment scores to take Qualifier Exam, and hence didn't receive any hall ticket for the same. What will be the procedure to re-apply?

You have to re-apply as a new applicant with payment of full application fee.

I'm eligible to apply 4 courses in the upcoming term, but I have only 2 Foundational Level courses left to complete. Will I be allowed to register for Diploma Level courses along with the Foundational Level courses?

No, you have to complete all the 8 courses in Foundation Level before enrolling to the Diploma Level courses.

### What is the eligiblity to write the End Term Exam for a course?

To be eligible to write the End Term Exam for a course, it is mandatory for the learner to have (i) obtained in the course an Average Assignment Score >= 40/100 AND (ii) appeared for at least one out of the three proctored in-person Quizzes.

Learners who are not eligible to write a specific course's End Term Exam will not be issued hall ticket for the same. They will have to repeat the entire course including assignments and quizzes in a later term.

### Is it mandatory to take the proctored in-person Quizzes?

It is mandatory to attempt at least one of the three proctored in-person quizzes in a term to be eligible to appear for the End Term Exams.

# Will Qualifier phase assignment scores be included while calculating the eligilibity for the End Term?

For the courses you register for immediately after clearing your Qualifier Exam, yes, your Qualifier phase assignment scores will be included while calculating eligibility for the End Term Exam.

For courses that you register for in a later term, you will be required to repeat the assignments completed in the Qualifier phase.

### Will my Qualifier Exam Score be considered in the subsequent term?

The Qualifier Exam Score will be counted as Quiz 1 Score for the courses registered in the Foundation level in the term immediately after the Qualifier exam.

#### What will happen if I am absent for an End Term Exam?

Learner has two options:

- 1. Register for the course in the subsequent term with the option of taking the End Term Exam alone and by paying a reduced fee (Rs.1000 per Foundational Level course and Rs.2000 per Diploma / Degree Level Course).
  - 2. Repeat the entire course (including assignments and quizzes) by paying the full course fee.

#### What is the procedure to add / drop a course?

Once the registration window closes in any term, adding courses will not be allowed.

Dropping a course will be allowed within 4 weeks of the term start.

#### Can I get a refund if I drop a course within the first four weeks of the term start?

For courses dropped within the first four weeks of the term, admin charges will be retained and the balance course fee, if any, will be refunded. Admin charges for a Foundational Level course is Rs.2000 and the admin charges for a Diploma / Degree Level course is Rs.4000.

For learners who registered to take exams outside India, 50% of End Term Exam Fee for the dropped course will be refunded. If such a learner chooses to drop all courses in a term, 50% of Quiz 2 & Quiz 3 fee will also be refunded.

For more details, please refer to the operations document shared with registered students named "Part II - Foundation + Diploma" under section "13.7. Dropping a Course".

### Is it possible to repeat a course for improving grades?

Though it is not recommended, a learner may choose to repeat a course for improving grades any number of times. The course fee for repeating a course will be twice the regular course fee and the learner will have to submit the online graded weekly assignments, appear for the Quiz(zes) and End Term Exam.

The highest score among all attempts of a course will be used for calculating the CGPA.

### What is the procedure to change exam city from UAE to India / India to UAE?

Please send an email to support@onlinedegree.iitm.ac.in

#### How can I change the exam city within India?

Each exam has a deadline before which change of exam city is allowed. Option to change the exam city will be available till each deadline in the student Dashboard, in the "Exam Cities and Hall Tickets" page.

S. No	Questions	Answer
JEE Based Entry		
1	What is the application fees for JEE Based Entry?	The fees for JEE-Based Entry are the same as for regular entry, with the amount being Rs. 3000.
2	What are the documents required for JEE Based Entry?	You'll need to provide your JEE Mains Result as one of the required documents, and you can also proceed with your JEE Advanced Registration.
3	How many course can be registered in JEE Based Entry?	Depending on the amount of time you plan to dedicate to studying, you can register for 1, 2, 3,

		or 4 courses.
4	What is the difference between Regular Entry & JEE Based Entry?	The distinction between these entries lies in the selection process. With regular entry, you're required to choose 4 subjects. Conversely, with JEE-based entry, you have the flexibility to select the number of courses you wish to study according to your convenience.
5	When is the registration period for the courses available?	IITM will notify you about the course selection once your registration fee has been paid.
6	When do we qualify for JEE-Based Entry?	You become eligible to register for JEE-Based Entry once you have cleared the cutoff for JEE Mains.
7	When will we gain access to the content?	Access to the content will be granted only after you have registered for the courses. Furthermore, for an early trial, you can access Ace Grade lectures corresponding to your selected subjects.
8	What happens after joining through JEE-Based Entry?	After entry, you can continue this program as a regular student.
9	Is it possible to enroll in another college after participating in JEE-Based Entry?	Yes! You can continue with this program even if you enroll in another college or pursue a different degree.
10	What will occur if my JEE entry document is invalid?	If the proof document submitted is deemed invalid, the student will be reclassified into the non-JEE category and will be treated as a regular entry candidate at the foundation level. They will then have to undergo the qualifier process.
11	Is there any fee waiver for JEE-qualified students?	No, there is no fee waiver for JEE-qualified students. Fee waivers will be provided based on your reservation category and annual income.
12	What is CCC in this course?	The CCC (Credit Clearing Capability), It indicates the number of courses you can join.
13	What is starting CCC foe JEE Based Student?	Initially, the CCC for JEE-Based students is 4.
14	Does it remain at 4 for every term?	No, it will depend on your performance regarding how many courses you can join.
15	How do I complete the application form for the program?	You can find the application form on IIT M official Website.
16	What is the process for paying the admission fee of Rs 3000?	The admission fee of Rs 3000 can be paid through the payment options available on IITM Website, such as credit/debit card, UPI or online banking.
17	How do I verify my proof for JEE Based Entry?	Once you have completed the application form and paid the admission fee, you need to submit

		proof of your qualification for JEE Advanced, such as your JEE Advanced admit card or result.
18	Can you provide more details about the foundation level courses that I'll be starting?	The foundation level courses include English 1, Maths 1, Statistics 1, and Computational Thinking, designed to provide you with a strong base for your academic journey.
19	How do I register for the courses (English 1, Maths 1, Statistics 1, Computational Thinking)?	You can register for the courses by logging into your account on IITM website and following the registration process, which includes selecting the courses you wish to enroll in and paying the respective course fees.
20	Is there flexibility in the number of courses I can register for, based on my schedule?	Yes, depending on the time you have available for studying, you can register for 1, 2, 3, or 4 courses.
21	What kind of content will I have access to once I register for the courses?	After you register for the courses, you will gain access to the course materials, lectures, and other educational content relevant to your selected courses.
22	How does the program accommodate students who may join another college or pursue a different degree?	IITM program is designed to be flexible, allowing you to continue your studies even if you join another college or pursue a different degree. You can manage your coursework alongside your other academic commitments.
23	What is the duration of the direct entry opportunity for students who have qualified for the JEE Mains Exams?	The direct entry opportunity is valid for the 3 terms following the release of the JEE Advanced Eligibility list.
24	What does it mean to be issued the admission letter, and what information does it contain?	The admission letter confirms your eligibility for the program and contains important details such as your student ID, course registration instructions, and other relevant information
25	How does being categorized as a non-JEE student affect my access to the program's resources and courses?	As a non-JEE student, you will need to go through the qualifier process and may have different access privileges compared to JEE-qualified students. This may affect your course registration and other program resources.

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Evaluation and grading of courses in every term

- 121. What are the different types of assessments for each course in every term?
  Each course is evaluated through three types of assessments: online weekly assignments, monthly in-person proctored guizzes, and an in-person end term exam.
- 122. How are online assignments structured within a course?

   Online assignments typically span 12 weeks and require submission within specified due dates. The average score of the best 5 out of the first 9 weekly assignments should be >= 40/100 to be eligible for the final exam.
- 123. What is the format of the proctored quizzes, and how often are they conducted?
  Two proctored quizzes are conducted at the end of Weeks 4 and 8, based on the content covered in Weeks 1-4 and 1-8 respectively. The quizzes are in-person and typically consist of a single session with varying time limits based on the number of subjects.
- 124. How are the scores from the quizzes used in the overall assessment?

   The Qualifier score is counted as Quiz 1 score for courses registered in the Foundation level in the subsequent term of the qualifier exam. The final exam score accounts for 50% of the Total Course Score (T), known as the End Semester Score (E).
- 125. What happens if a student does not attend at least one of the two proctored quizzes?

   If a student does not attend at least one of the two proctored quizzes, they may not be eligible to write the final exam. Specific details regarding eligibility criteria should be checked in the grading document.
  - 126. How is eligibility determined for the end term exam?
- Eligibility criteria for the end term exam are outlined in the grading document and may vary based on specific course requirements and performance in assignments and quizzes. Students should refer to the grading document for detailed information.
- 127. Can students retake quizzes if they are not satisfied with their initial scores?

   No, there are typically no make-up quizzes provided. However, students may have the opportunity to attempt Quiz 1 again in subsequent terms, with the better of the two scores used for calculations.
- 128. How do online weekly assignments contribute to the final evaluation of a course?

   Online weekly assignments are an essential part of the course evaluation. The average score of the best 5 out of the first 9 weekly assignments should be >= 40/100 to be eligible for the final exam. Additionally, the scores obtained in these assignments contribute to the Final Course Score.
- 129. What is the purpose of the proctored quizzes conducted at the end of Weeks 4 and 8?

- Proctored quizzes assess students' understanding of the course material covered up to that point. They provide an opportunity for students to demonstrate their knowledge in an in-person setting and contribute to their overall course grade.
- 130. How are the time limits for proctored quizzes determined?

   The time limits for proctored quizzes vary based on the number of subjects being assessed. Typically, a single session exam provides 4 hours for 4 subjects, 3 hours for 3 subjects, and 2 hours for 2 or 1 subject.
- 131. What is the significance of attending at least one of the two proctored quizzes?
  Attendance at least one of the two proctored quizzes is often mandatory for eligibility to write the final exam. This requirement ensures that students engage with the course material and demonstrate their understanding at key intervals throughout the term.
  - 132. How is eligibility for the end term exam determined?
- Eligibility for the end term exam may be based on various factors, including performance in assignments and quizzes. Specific criteria for eligibility should be outlined in the grading document, and students are encouraged to review this information carefully.
- 133. What percentage of the total course score does the final end term exam contribute?

   The final end term exam typically accounts for 50% of the Total Course Score (T), also known as the End Semester Score (E). This assessment is crucial in determining students' overall performance in the course.