General Orientation Session

Master of Technology (M.Tech)

Data Science & Engineering

&

Artificial Intelligence & Machine Learning

21st October 2023

Introductions

- Prof. S. Gurunarayanan, Deputy Director, Work Integrated Learning Programmes (WILP)
- Prof. P.B Venkataraman, Dean, Work Integrated Learning Programmes (WILP)
- Prof. Chandra Shekar R K, Lead Programme Coordinator, M.Tech. DSE and AIML, WILP
- Prof. Shreyas Suresh Rao, Programme Coordinator (M.Tech. DSE), WILP
- Prof. Raja Vadhana P, Programme Coordinator (M.Tech. AIML), WILP
- Mr. Krishna Swami Mohan, General Manager - Operations, WILP
- Ms. Ganga Narasimhan, Manager - Operations, WILP
- Ms. Sarmistha Nag, Assistant Manager - Operations, WILP
- Mr. Sreevatsava S, Assistant Manager - Operations, WILP

Agenda

- Introducing BITS Pilani and Work Integrated Learning Programmes (WILP)
- Academic Guidelines
- Programme Overview & Operations
  - M.Tech. in Data Science & Engineering Cluster
  - M.Tech. in Artificial Intelligence & Machine Learning Cluster
- WILP Student Lifecycle
- Operations Support
- Question & Answer Session

Welcome!

Introducing

Birla Institute of Technology and Science, Pilani

and

Work Integrated Learning Programme (WILP)

Brief history

… “degree-granting college” in 1943, and to …

… to a university, BITS Pilani in 1964

Brief history

Birla College of Engineering (established 1946)

Birla College of Arts (established 1943)

Birla College of Sc., Commerce & Pharmacy (established 1943/1950)

Birla Institute of Technology & Science, Pilani (or **BITS Pilani**)
(university status bestowed by University Grants Commission in 1964)

BITS' journey, since 1964

- Collaboration with MIT, with Ford Foundation grant (mid-1960s)
- Pioneered modern system of education in mid-60s (first in India, together with IIT Kanpur)
  - Credits-based, semester system, since mid-1960s
  - Continuous and internal evaluation
  - Science-based curriculum
- Pioneered 7.5-months industry practice, since early 1970s
- Pioneered training of working professionals from industry
  - Through "Work-Integrated Learning Programme", since 1970s
  - Largest in India (with 20,000++ industry professionals)
- Pioneered online test for admissions, since 2005

Leader in Industry Engagement

BITS Pilani is widely regarded as the pioneer in the field of University-Industry linkages through its off campus programmes.

- **Practice School | (Off Campus)**
- **Sponsored Research & Consultancy**
- **Industry Immersion**
- **Work Integrated Learning Programs (Off Campus)**
- **Placements**
- **Technology Business Incubator**

What is WILP?

- Work Integrated Learning Programmes (WILP) is a variant of campus-based higher education, leading to a formal qualification. It is designed and developed collaboratively with organisations of repute. WILP is exclusively meant for the working professionals to make them remain relevant, employable and grow in their chosen profession while contributing to their organization, sector and society.
  - WILP is same as the campus program in terms of structure, rigor, pedagogy, assessment and qualification.
  - WILP considers the workplace as an extended classroom/ lab and builds the teaching-learning around this ambience, integrating theory with practice. Thus the program participants must remain employed throughout the program.
  - WILP is offered either in corporate partnership or collaboration mode. In either case an active participation of the organisation is essential.
  - The key focus of WILP is to build creative problem solving skill in ones chosen profession.

WILP Programmes at a Glance

Learning Profile					
		10+2 Students	**Technical Diploma Holders**	**B.Sc. / BCA Graduates**	**B.E / B.Tech Graduates**
Industry	**IT & EEE**	• B.Sc (Design and Computing)	• B.Tech Information Systems	• Integrated M.Tech Information Systems Integrated M.Tech. Computing Systems & Infrastructure	• M.Tech Software Systems • M.Tech Computing Systems & Infrastructure • M.Tech Embedded Systems • M.Tech Microelectronics • Post Graduate Programme in Internet of Things • Post Graduate Programme in AIML
	Data Sciences	-	-	• M.Sc. Business Analytics	• M.Tech Data Science & Engineering • M.Tech Artificial Intelligence & Machine Learning • Post Graduate Programme in Big Data Engg.
	Manufacturing	-	• B.Tech Manufacturing Technology • B.Tech Process Engineering • B.Tech Power Engineering • B.Tech Engineering Design	• B.Tech Manufacturing Technology B.Tech Process Engineering B.Tech Power Engineering B.Tech Engineering Design	• M.Tech Design Engineering • M.Tech Manufacturing Management • M.Tech Quality Management • M.Tech Automotive Engineering • M.Tech Transportation Engineering • M.Tech Digital Manufacturing • M.Tech Automotive Electronics
	Pharma / Healthcare	• B.Sc. (Pharmaceutical Sciences)	• B.Tech. Process Engineering	• B.Tech Process Engineering	• M.Tech Pharmaceutical Operations & Management
	Management	-	-	• MBA in Consultancy Management • MBA in Finance • Post Graduate Diploma in Finance	• MBA in Manufacturing Management • MBA in Quality Management • MBA in Consultancy Management • MBA in Hospital & Health Systems Management • MBA in Finance • Post Graduate Diploma in Finance

Eligibility for Higher Education and Employment

- BITS Pilani WILP degree holders can seek admission to higher education programmes in any institution. However, the requirements for admission to particular programmes are decided by the respective institutions.

BITS Pilani WILP degree holders can seek employment in any organization. However, the requirements for recruitment to particular positions are decided by the respective employing organizations.

Operational Highlights

Considering the equal involvement of the industry and the university in this unique collaborative educational effort, students are expected to remain employed full-time in relevant industries till they complete the program.

Students will be governed by the Academic Regulations of BITS Pilani as well as by the service rules of their employing organization.

The Key Academic Processes

Synchronous learning	• Typically 32 hours of lectures/ course • Instructor lead and assisted by Teaching Assistants • Lectures mostly during weekends
Asynchronous learning	• Self-learning using digital content, books and other resources • Courseware for select courses • Normally requires 64 hours/ course (Depends on the course credits)
Experiential learning	• Lab work as per the needs of the course • Performed through virtual/ remote labs
On-the job learning	• Dissertation is a structured exercise, to be performed at one's workplace • Mentor / Supervisor engagement is essential for on-the job learning • Mentor / Supervisor will periodically to assess your progress
Assessments	• Quiz (10%); Lab/ Assignment (20%); Mid-Sem (30%); Compre (40%) (typical) • Relative grading system resulting in a CGPA • Mid-Sem and Compre are compulsory, missing them will lead to repeating the course

Academic Guidelines

Vocabulary

- WILP – A model of formal education/ a variant of campus-based education
- First degree – Bachelors degree such as B.Tech.
- Higher degree – Masters degree such as M.Tech.
- First semester – The one that starts in October / November
- Second semester – The one that starts in May / June
- Degree – A formal qualification such as B.Tech. M.Tech. etc.
- Course – The subject of study such as Calculus, Engineering Design etc.
- Modules – The topics in each course
- Handout – The curriculum of each course
- Assessment – Method of evaluating learning gain
- Evaluation components (EC) – The instruments of evaluation such as quiz, exam etc.
- Grading – A method of representing student performance relative among peers in class

Expectations

- Online Live Lecture participation / watch them offline.
- Pre-preparations before lectures as advised by the instructors.
- Completion of quiz / assignments / labs on-time.
- Active participation in discussion forum.
- Active engagement with mentor & organization in the teaching-learning process.
- Providing constructive feedback on a continual basis on lecture, course, lab, digital platforms etc.
- Seeking help when in trouble from instructors and peers.
- Desisting unfair practices.

Academic Guidelines (M. Tech. DSE & M.Tech. AIML)

2 Years, 4 Semesters programme

Year	First Semester			Second Semester		
	Course No.	Course Title	Units	Course No.	Course Title	Units
I	DSE/AIML * xx123	Core Course 1	4	DSE/AIML * xx123	Core Course 1	4
	DSE/AIML * xx123	Core Course 2	5	DSE/AIML * xx123	Elective – I	
	DSE/AIML * xx123	Core Course 3	5	DSE/AIML * xx123	Elective – II	
	DSE/AIML * xx123	Core Course 4	5	DSE/AIML * xx123	Elective – III	
		Total	19		Total	16 (min)
	Third Semester			Fourth Semester		
II	DSE/AIML * xx123	Core Course 1	5	DSE/AIML * xx123	Dissertation	16
	DSE/AIML * xx123	Elective – I				
	DSE/AIML * xx123	Elective – II				
	DSE/AIML * xx123	Elective – III				
		Total	16 (min)		Total	16

- Minimum 16 units each in 2nd and 3rd semesters
- Dissertation is of 16 units, standalone
- Each unit corresponds to about 30 hours of effort

Sample Course Handout

BITS Pilani
Pilani | Dubai | Goa | Hyderabad

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI
WORK INTEGRATED LEARNING PROGRAMMES

COURSE HANDOUT

Part A: Content Design

Course Title	Mathematical Foundations for Data Science
Course No(s)	
Credit Units	4
Course Author	G Venkiteswaran
Version No	2
Date	15.09.2019

Course Description

Vector and matrix algebra, systems of linear algebraic equations and their solutions; eigenvalues, eigenvectors and diagonalization of matrices; graphs and digraphs; trees, lists and their uses; partially ordered sets and lattices; Boolean algebras and Boolean expressions;

Course Objectives

No	Objective- The course aims to
CO1	Introduce concepts in linear algebra and to use it as a platform to model physical problems.
CO2	Provide techniques for analytical and numerical solutions of linear equations and introduce the concept of convergence.
CO3	Utilize concepts of linear algebra and calculus in solving optimization problems.
CO4	Introduce some of the mathematical structures, concepts and notations used in discrete mathematics.
CO5	Introduce some concepts from graph theory, partially ordered sets, Boolean algebras.

Text Book(s)

No	Author(s), Title, Edition, Publishing House
T1	Erwin Kreyszig, Advanced Engineering Mathematics, Wiley India, 9 th Edition, 2011
T2	Kenneth H. Rosen, Discrete Mathematics and its Applications, Tata McGraw Hill, 7th Ed., 2011.

Reference Book(s) & other resources

No	Author(s), Title, Edition, Publishing House
R1	K Hoffman and R Kunze, Linear Algebra, Pearson Education, 2nd Edition, 2005.
R2	Kolman, Busby, Ross and Rehman, Discrete Mathematical Structures for Computer Science, Pearson Education, 6th Edition, 2017

Content Structure

No	Title of the module	References
M1	1. Matrices, System of equations, determinants and inverse of a matrix 1.1. Matrix Algebra-Row-reduced echelon form of a matrix, inverse of a matrix 1.2. System of linear equations, Consistency and inconsistency of system of linear equations	T1: Sec 7.1 – 7.3, 7.5, 7.8
M2	2. Vector spaces and Linear transformations 2.1 Vector space, subspace and span of a set, Linear dependence and independence of a set of vectors, basis and dimension 2.2. Linear transformation, rank and nullity	T1: Sec 7.4, 7.9, R1: Sec 3.2
M3	3. Eigenvalues, Eigenvectors and singular values 3.1. Eigenvalues 3.2. Eigenvectors 3.3. Singular value decomposition	T1: Sec 8.2, 8.3 and class notes
M4	4. Numerical linear algebra 4.1. Gauss elimination with partial pivoting and scaling 4.2. Iterative methods for solving linear system of equations	T1: Sec 20.1
M5	5. Matrix Eigenvalue Problems 5.1. Eigenvalue problems in linear system of equations 5.2. Power method for finding the dominant eigenvalue	T1: Sec 20.3, 20.8
M6	6. Linear and non-linear optimization 6.1 Basics of calculus 6.2 Linear optimization using simplex method and sensitivity 6.3 Non-linear optimization	Class notes
M7	6. Sets, Functions and Relations, Boolean Algebra 6.1 Introduction to set theory, set relations, set operators, cardinality of sets, Cartesian product of sets 6.2 Fundamentals of functions – range, domain, injection, surjection, bijection of functions 6.3 Fundamentals of relations, reflexive, symmetric and transitive properties in relations, representing relations, applications of relations, equivalence relations, partial order relations, lattices. 6.4 Boolean functions, representing Boolean functions	T2: Sec 2.1, 2.2, 2.3, 7.1 – 7.6, 10.1, 10.2
M8	7. Graph Theory 7.1 Introduction to graph theory, directed and undirected graphs, handshaking theorem, special graph structures, graph representations and isomorphism of graphs, connectedness, components, Euler, Hamilton paths and cycles	T2: Sec 8.1-8.5

Sample Course Handout

Part B: Contact Session Plan

Academic Term	I semester 2018-2019
Course Title	Mathematical Foundations for Data Science
Course No	
Lead Instructor	

Course Contents

Contact Hours	List of Topic Title	Text/Ref Book/external resource
1	Introduction to matrices, row-reduced echelon form of a matrix, Consistency of linear systems and matrix inversion • Unary and binary operations and special matrices (orthogonal matrix, upper and lower triangular, diagonal and sparse) • Row reduction and determination of rank. Comparison to computation using determinants • Use of rank in determining the consistency and inconsistency of linear systems • Row reduction to determine the inverse of the matrix (the Gauss Jordan method) (this is to be used in Simplex method later on)	T1: Sec 7.1 – 7.3, 7.5, 7.8
2	Vector space, subspace and span, Linear dependence and independence, basis and dimension, Linear transformation, rank and nullity and the rank nullity theorem • Definition and examples of vector space (R^n, space of polynomials of finite degree, n x m matrices etc.,) • Determination of whether a non-empty set of a vector space is a subspace or not • Span of a finite set • Linear dependence and independence (theory and couple of examples) • Basis and dimension of a finite dimensional vector space	T1: Sec 7.4, 7.9 R1: Sec 3.2
	• Linear transformation T: V → W (definition and a couple of examples) • Range(T) and Ker(T) as subspaces of W and V respectively • Rank Nullity Theorem (statement without proof) with examples	
3	Eigenvalues and eigenvectors of a matrix with applications • Eigenvalues – definition and method of determination of eigenvalues • Eigenvectors – definition and methods of finding the eigenvectors	T1: Sec 8.2 – 8.4
4	Singular value decomposition with examples (using MATLAB) and applications (Face recognition with SVD) • SVD of a matrix (derivation) • Exemplify using matlab for a couple of matrices and also show that the singular values are arranged in descending order. • Face recognition example.	Class notes
5	Gauss elimination with scaling and partial pivoting; LU factorization and related methods • Gauss elimination (with and without scaling and partial pivoting). Take an example to shown the role played by precision. • LU factorization, Cholesky and Crout's methods with examples	T1: Sec 20.1, 20.2
6	Iterative methods of solving linear systems; Matrix eigenvalue problems and Power method for finding the dominant eigenvalue • Write Ax = b in the form (L+D+U) x = b and work out the iterative scheme for Gauss Jacobi and Gauss Seidel iterations. • Introduce vector and matrix norms (row sum, column sum and Frobenius norms) and work out a few problems in Excel / Matlab • Explain the power method and work out a couple of problems.	T1: Sec 20.3, 20.8
7 -8	Application of linear algebra in optimization. Modelling linear programming problem and the basics of Simplex algorithm and sensitivity analysis. • Model a LPP in construction of buildings. • Model the currency conversion optimization problem. • Work out the graphical method of solution in the case of 2 variable case • Simplex method for simple cases • Outline how Gauss Jordan produces the inverse matrix. • Graphical sensitivity analysis (Change in objective value coefficients and rhs of constraints)	Class notes
9	Calculus of one and several variables; Limits, continuity and	Class notes
	differentiability; Maxima and minima of functions; Steepest gradient method for finding the maximum. Constrained optimization (Lagrange multipliers) • Review limits, continuity and differentiability (graphically and algebraically) • Maxima and minima in one variable • Steepest gradient method • Lagrange multipliers (for more number of constraints)	

Evaluation Components (EC)

Evaluation Component 1 (EC1) Quizzes and Assignments	Evaluation Component 2 (EC2) Mid-Semester Examination *	Evaluation Component 3 (EC 3) Comprehensive Examination *
• Minimum weightage 20% • Individual or group assignments • Quizzes administered through LMS	• Minimum weightage 30% • Closed Book Exam, 120 minutes	• Minimum weightage 40% • Open Book Exam, 150 minutes

Note : * Indicates Mandatory Component

Examination

Examination

- Hall Ticket
- Conducted onsite / online (If necessary)
- Mandatory Mock test (In case if the exam is conducted Online)

Make-ups

- No Make-ups for EC 1 components
- Granted for EC2 and EC3 in genuine cases
- Process to apply for makeups will be shared through LMS
- Not to be considered as a grade improvement exam

RRA Report

- Students who are absent for EC2 and/or EC3 would need to Register again in the subsequent semester(s) and clear them

Grading & CGPA

Letter Grade	Grade Point	Qualitative grade
A	10	Excellent
A-	9	Very Good
B	8	Good
B-	7	Above Average
C	6	Fair/Average
C-	5	Below average
D	4	Poor
E	2	Exposed (consider as failed)
RRA	0	Required to Register Again

Year	First Semester		
	Course No.	Course Title	Units
I	DSE/AIML * xx123	Core Course 1	4
	DSE/AIML * xx123	Core Course 2	5
	DSE/AIML * xx123	Core Course 3	5
	DSE/AIML * xx123	Core Course 4	5
		Total	19

MFML → B- (7)
ISM → A (10)
ACI → B (8)
ML → C (6)

GPA=(7*4+10*5+8*5+6*5)/19 = 7.7894

Grading

- Relative grading
- Students with less than 5.5 CGPA and having “E” grade / “RRA” report in one or more courses cannot register for Dissertation
- It is mandatory to attend Mid Semester and Comprehensive Exams to be eligible for grading.
  - RRA Grade: Awarded in cases where a student is not evaluated on a mandatory component
  - In such cases [RRA’s, E Grades, CGPA < 5.5], students must re-register for courses [backlog courses] to improve
  - Limit on maximum number of courses per semester including backlog courses - subject to individual performance

Academic Guidelines (M.Tech. DSE & M.Tech. AIML)

Year	First Semester			Second Semester		
	Course No.	Course Title	Units	Course No.	Course Title	Units
I	DSE/AIML * xx123	Core Course 1	4	DSE/AIML * xx123	Core Course 1	4
	DSE/AIML * xx123	Core Course 2	5	DSE/AIML * xx123	Elective – I	
	DSE/AIML * xx123	Core Course 3	5	DSE/AIML * xx123	Elective – II	
	DSE/AIML * xx123	Core Course 4	5	DSE/AIML * xx123	Elective – III	
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	DSE/AIML * xx123	Elective – III				
		Total	16 (min)		Total	16

- Electives must be chosen among the ones offered so that the minimum unit requirements are met.
- At the end of third semester,
  - Coursework of above (19+16+16) units must be completed
  - CGPA ≥ 5.5
  - In all the registered courses , student must have earned a grade from {A,A-,B,B-,C, C-,D,D-} to proceed to the fourth semester (Dissertation)

Academic Guidelines

- What if the minimum requirements are not met at the end of third semester?
  - Repeat all the courses where the grade is RRA/ E and obtain a grade in {A,A-,B, B-, C,C-, D}
  - If CGPA is less than 5.5 and all the courses have grades in {A,A-,B, B-, C,C-, D}
    - Repeat one or more courses [as advised by the institute] where the grades are poor and improve the grades
- Student will proceed to fourth semester of the program only after meeting the minimum requirements mentioned
- Graduation Requirements
  - Completing courses (core + electives) up to semester 3 meeting requirements
  - Successful completion of dissertation -
    - Grades - { Excellent, Good, Fair, Poor } and not RRA

Platforms and Access

eLearn & LMS (taxila/ moodle)	• The single window through which you will access everything • How to access eLearn on desktop • How to access eLearn on mobile
BITS Mail	• The single mode of mail communication • How to access BITS Mail
Live Lecture (MS Teams)	• Platform to join and watch instructor-led live lectures • How to use Microsoft Teams
Experiential Learning	• Platform to perform experiential learning • Learning through Virtual Lab
eLibrary	• OpenAthens eLibrary - A virtual library with relevant books • You can download some of the books and access them offline (can't print)

Program Overview & Operations
M.Tech. DSE & M.Tech. AIML

Major Academic Processes

- Registration
- Certificates
  - **Grade sheet** will be issued at the end of each semester - through LMS - soft copy
  - **Transcript** and **Provisional Certificate** will be issued at the end of the programme (~ 2 months)
  - Finally, **Degree Certificate** will be issued (~ 6 months)
- Feedback

Program Timelines

Semester #	Semester Start	Semester End
Semester 1	November, 2023	April, 2024
Semester 2	May, 2024	October, 2024
Semester 3	November, 2024	April, 2025
Semester 4	May, 2025	October, 2025

Schedule - Lecture Sessions

- Classes will be held over weekends through online mode
- 4 – 5 Sessions / day
  - Class #1: 8:30 AM to 10:30 AM IST
  - Class #2: 10:40 AM to 12:40 PM IST
  - Class #3: 1:40 PM to 3:40 PM IST
  - Class #4: 3:50 PM to 5:50 PM IST
  - Class #5: 06:00 PM to 08:00 PM IST
- Each course will be offered in multiple sections. Students will be allotted a section for a course. Sections will be allotted in such a way that a student attends all the classes either on Saturday or Sunday (If needed, One session on Friday evening)
- Sessions will be recorded and automatically made available in Microsoft Teams account for streaming

Schedules - Tutorial, evaluation components

- **Tutorials / Webinar Sessions**
  - 4 sessions of 90 – 120 mins for each course
    - Recitation of topics, problem solving will be the focus of the sessions
    - Typically delivered by Teaching Assistants, attached to the course
    - On Tuesday / Thursday from 7:00 PM to 8:30 PM or 09:00 PM
    - Sessions will be recorded and posted for later reference.
- **Mid Semester (120 Mins / course), Comprehensive Exams (150 Mins / course)**
  - Schedules to be announced at the beginning of semester
  - Exam may fall on Friday/Saturday/Sunday
- **Assignments & Quizzes**
  - To be announced through LMS for each courses. No make-ups.

People involved in the Course Delivery

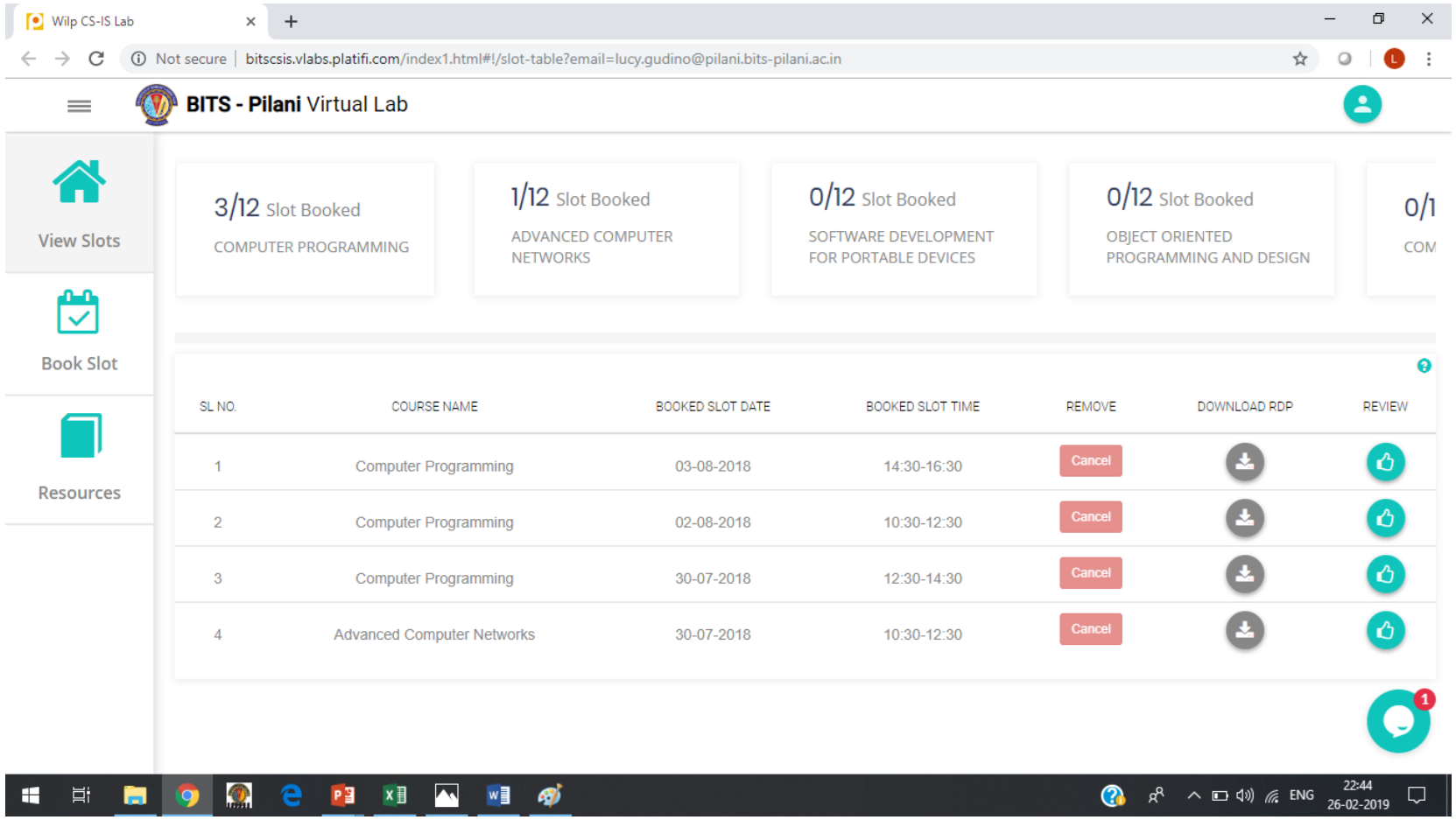
- Instructor - in - Charge (IC)
  - Leads the course delivery
- Instructors
- Teaching Assistants

Course led by IC			
Sec: Sat #1	Sec: Sat #2	Sec: Sun #1	Sec: Sun #2
Instructor #1	**Instructor #2**	**Instructor #3**	**Instructor #4**
Supported by Teaching Assistants			

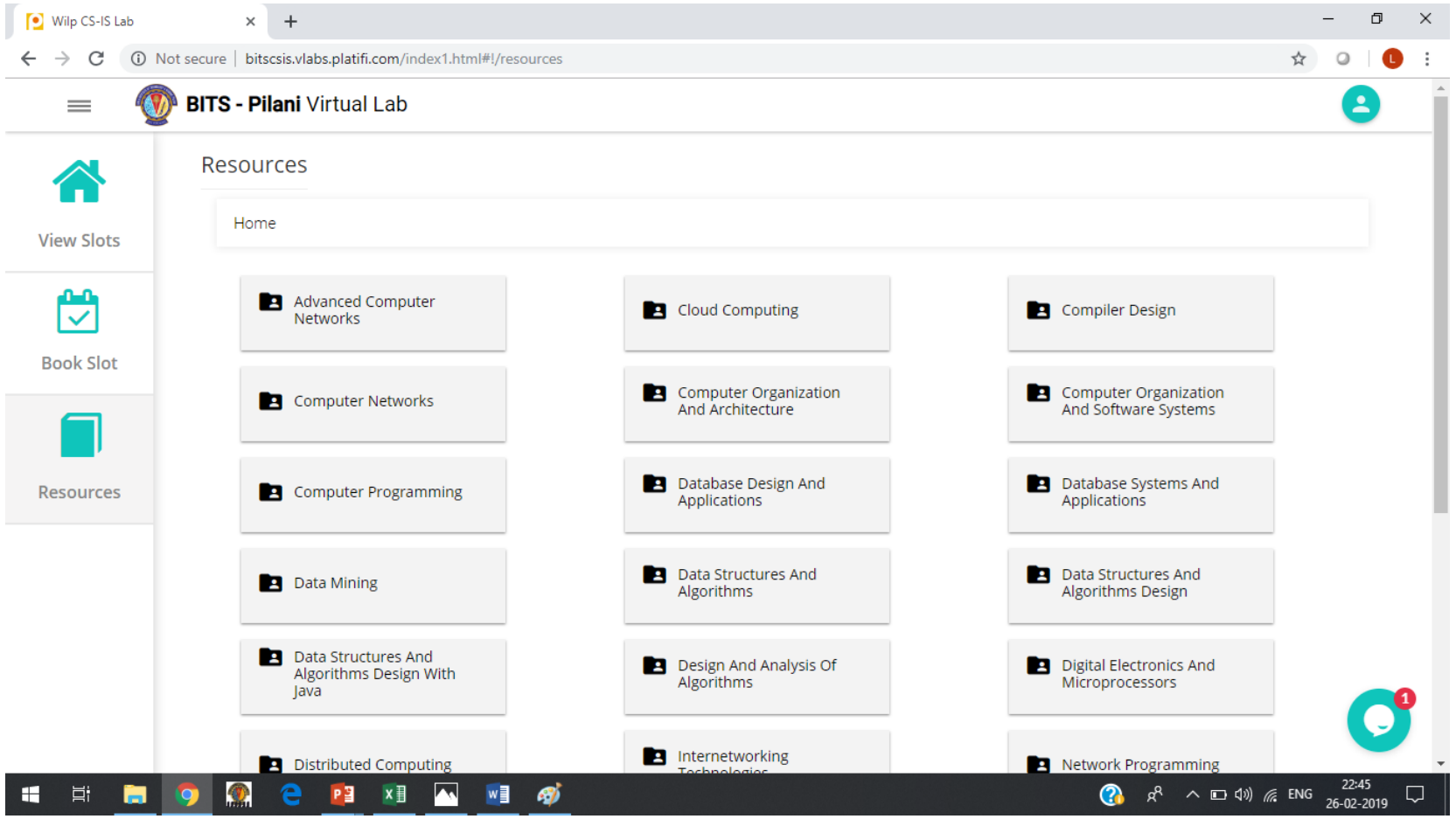
Course Delivery

- Semester #4
- Dissertation
- No. of units: 16
- 3 Interactions between Student and BITS Examiners

Virtual Lab / Remote Lab

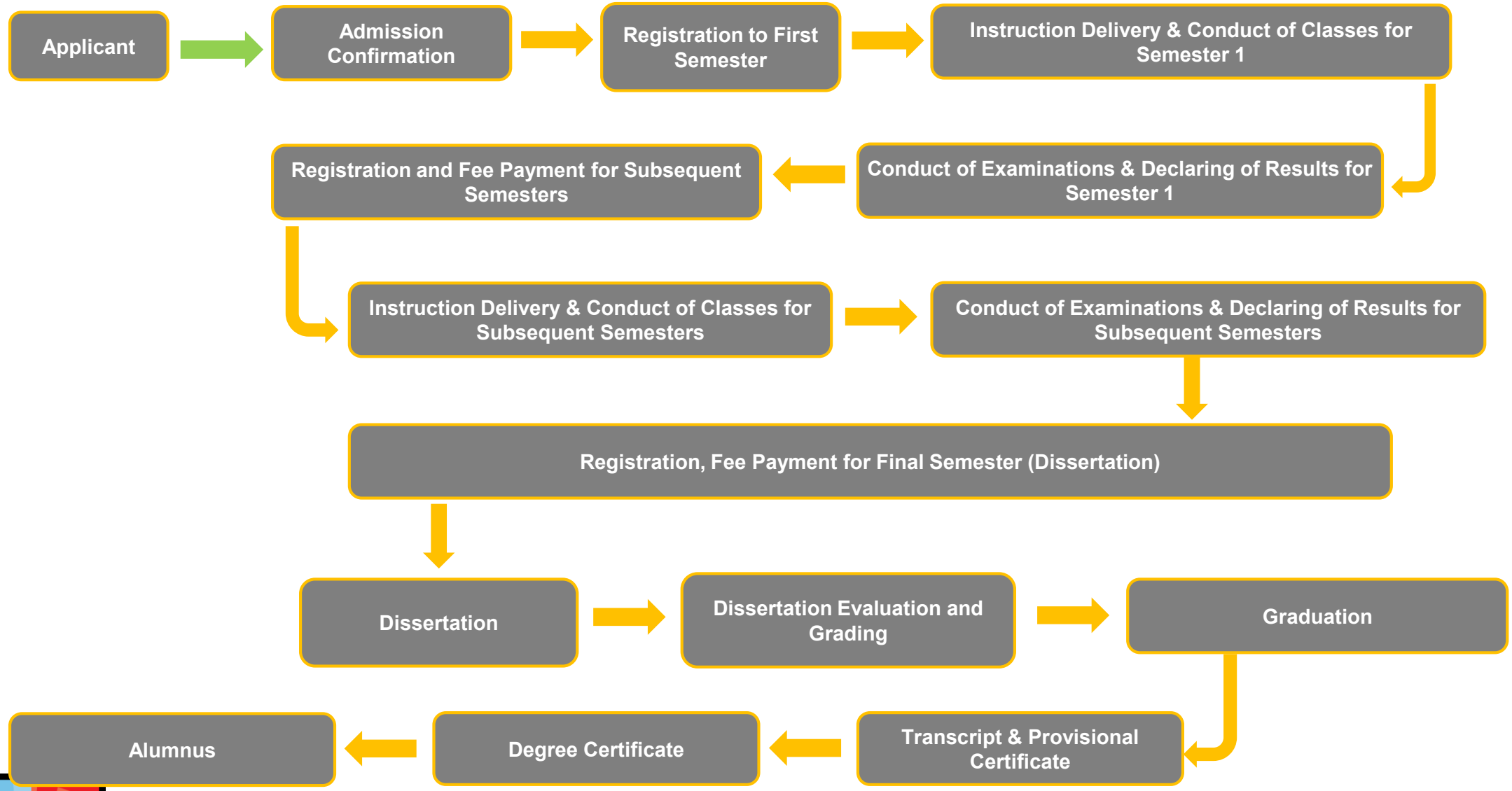


Virtual Lab / Remote Lab



WILP Student Lifecycle

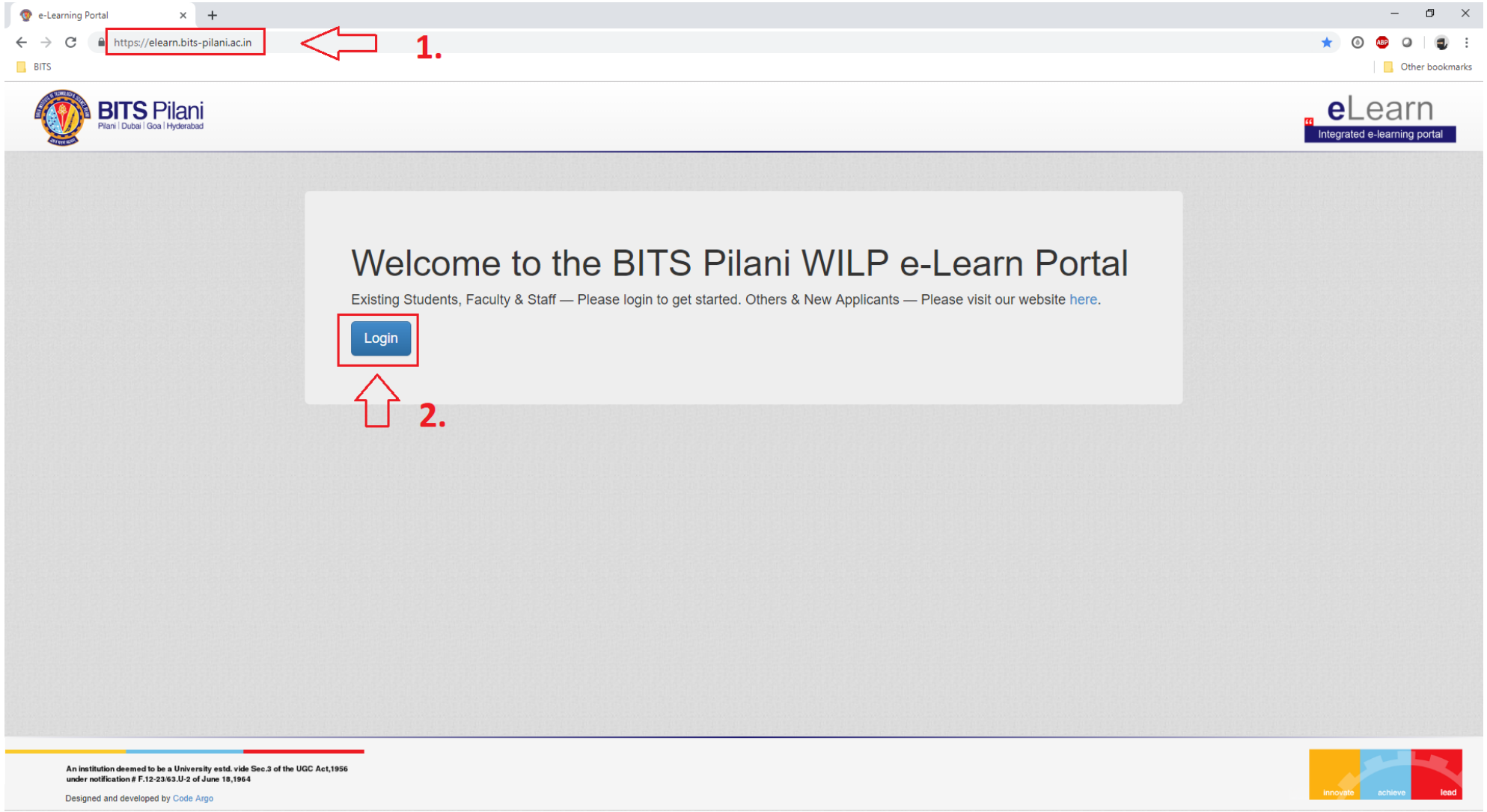
WILP Student Lifecycle



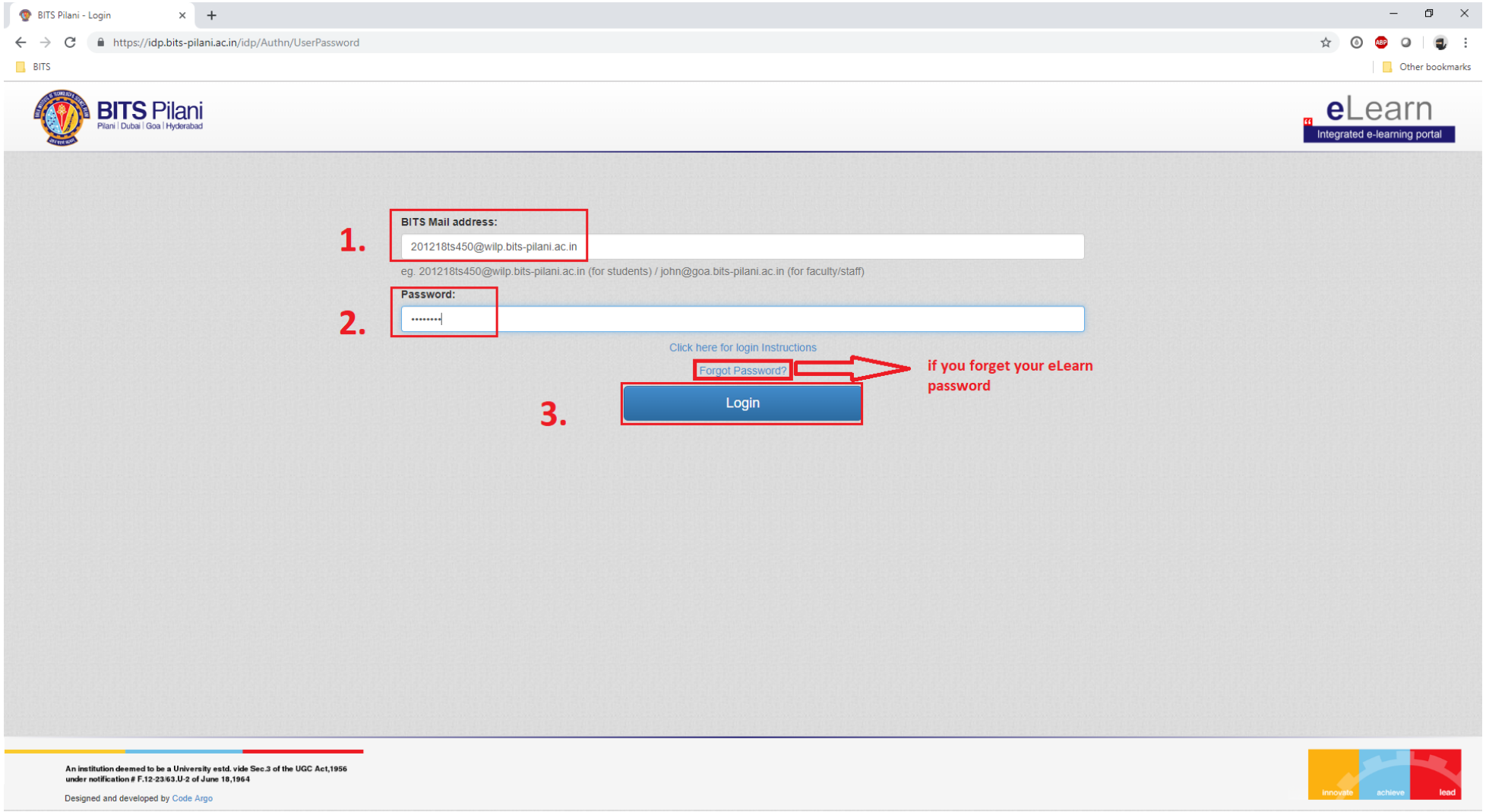
WILP Student Login Credentials

- WILP Students will have four sets of Login credentials:
  - BITS Mail ID: All email from BITS WILP Division will be sent to this mail ID
  - eLearn Portal (Unified portal interface for WILP Students): All IT systems under WILP (except BITS Mail)
  - MS Teams: For Live Lectures
  - OpenAthens: For Accessing e-Library
- Username is your full BITS email address: 2023xxxxyyy@wilp.bits-pilani.ac.in
- Default passwords are shared by our team via email.
- **Please setup email forwarding from your BITS Mail account to your personal/office email ids.**
- If you're unable to login into your BITS Mail account, please send an email to mailadmin@wilp.bits-pilani.ac.in and request for a password reset
- If you're unable to login into your eLearn account, please click on the "Forgot Password" link and enter your BITS Mail address. The eLearn account password reset link will be emailed to you.

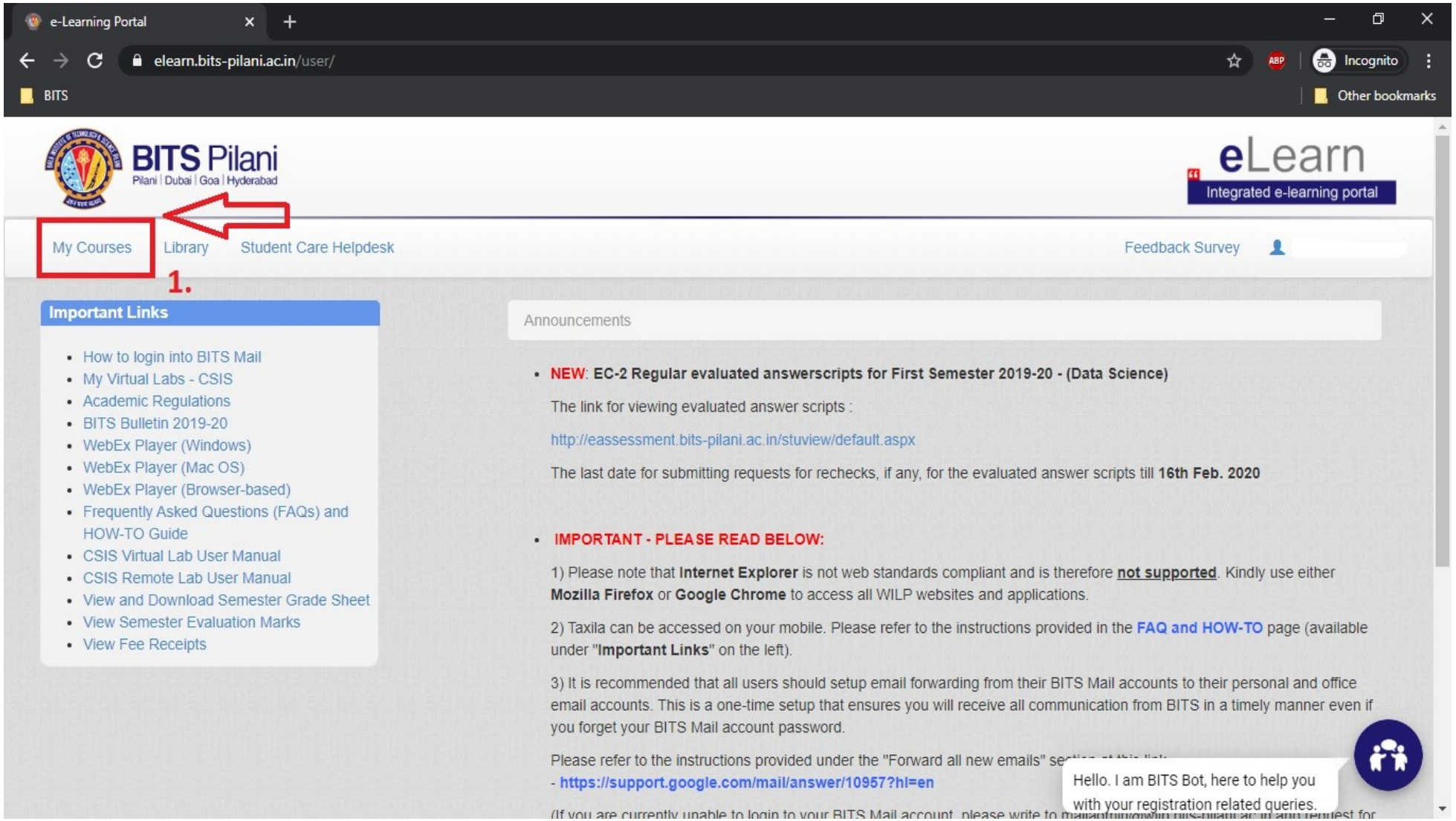
eLearn Portal



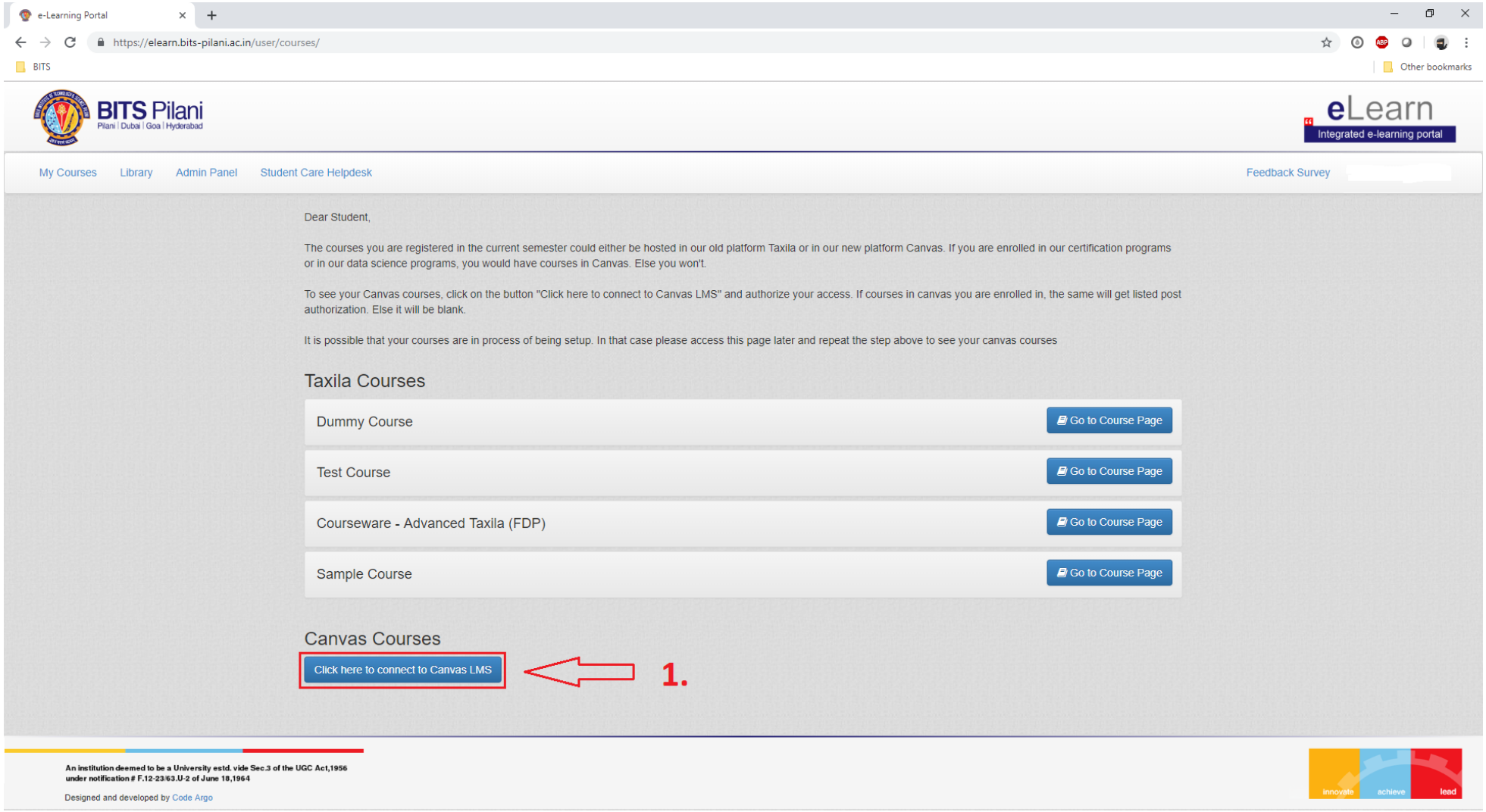
eLearn Portal – Login



eLearn Portal – My Courses



eLearn Portal - CANVAS LMS



Student Electronic ID Card

Steps for Generating & Downloading the Student Electronic ID Card from the eLearn Portal:

- Login to the eLearn portal with your **eLearn Login ID** and **Password**.
- Click the **"Generate Electronic ID Card"** option under the “**Important Links**” section.
- Choose the appropriate **Semester of the Academic Year** from the drop-down under the “**Semester**” Dropdown.
- On clicking the “**Submit**” option, students will be able to see the preview of the Electronic ID Card with details such as your **Photograph, Name, Student ID No, Programme Enrolled**.
- The validity of the downloaded Electronic ID Card will be mentioned under the image.
- Click on “**Download**” to download the Student Electronic ID Card as a PDF copy.
- **Please note that all newly admitted students will be able to generate & download the Student Electronic ID Card from the eLearn portal only after 3 weeks from the start date of their Semester Classes.**

OpenAthens Online Library Access

Visit https://my.openathens.net/

Select for BITS Pilani under “Find your Institution”

Input OpenAthens Account username and password

Use Search Option on Homepage for specific title / Publication

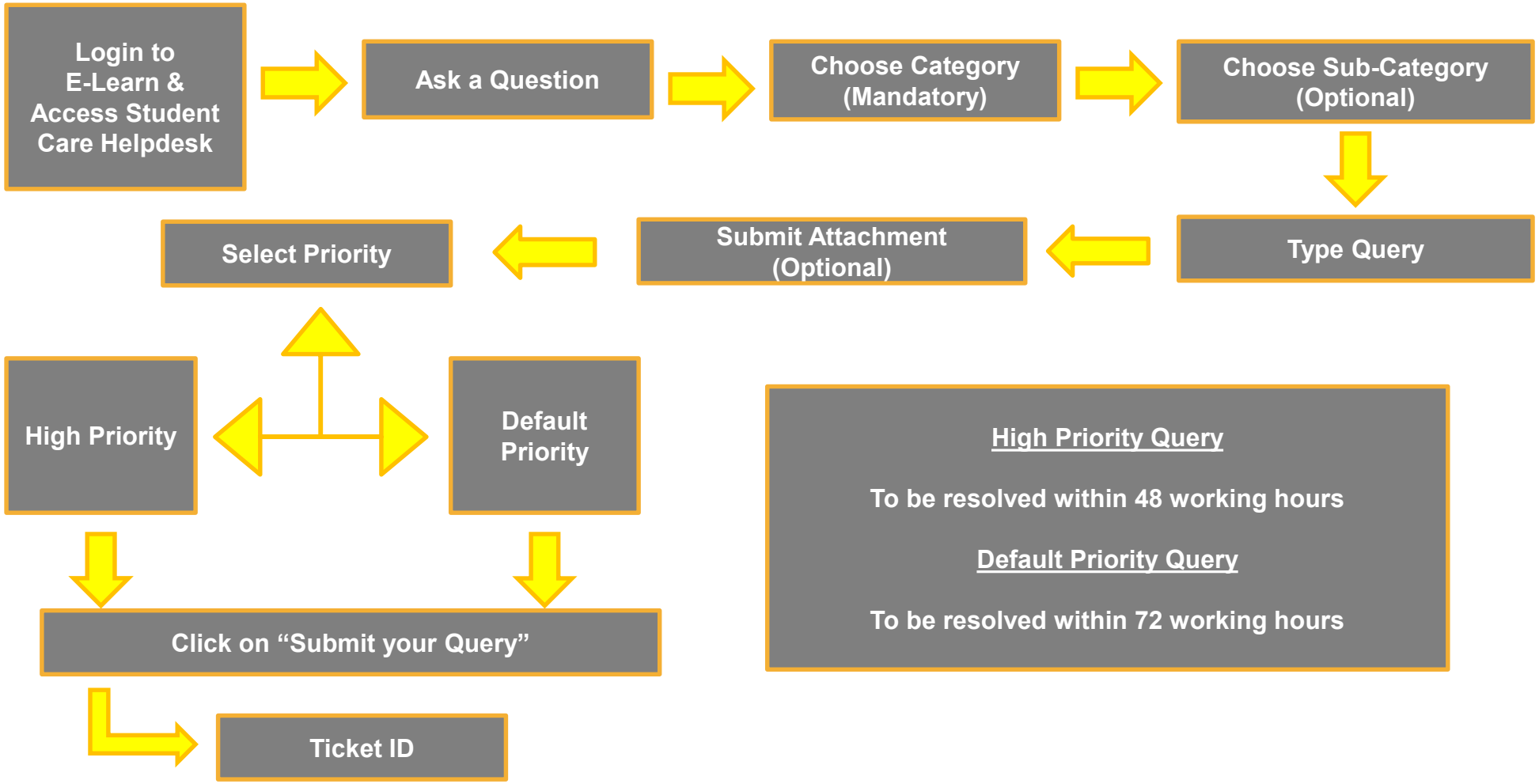
If available, add to My Bookshelf

Open the eBook Online or download to system (if available for download by publisher)

Please note that all newly admitted students will be able to access the Open Athens eLibrary platform only after 3 weeks from the start date of their Semester Classes.

Student Care Helpdesk – Posting Queries

Student Care Helpdesk Portal: https://wilpqueries.bits-pilani.ac.in/



Mode of Examination Options

Option 1: <u>Examinations at Designated Examination Centres:</u>

- In this option students will need to appear in person for taking the examinations at the Institute's Designated Examination Centres.
- These Designated Examination Centres would have all the necessary infrastructure that is required to take the examination.

- **Designated Examination Centres are at the following locations in India & Abroad:**

Bangalore **Chennai** **Delhi NCR** **Hyderabad** **Pune**

Mumbai **Kolkata** **Goa** **Pilani** **Dubai**

Mode of Examination Options

Option 2: Online Examinations:

- Institute will explore the feasibility of conducting the Online Mode of Examinations.
- Institute will confirm the availability of Online Mode of Examinations for the semester within 3 Weeks from the start of the semester.
- In the Online Examinations option, students can take exams online from any location e.g. office or home.
- Students preferring the Online Mode of Examination must arrange on their own:
  - the Mandatory IT Infrastructure (Hardware, Software, Connectivity, Uninterrupted Power etc.)
  - and also the Mandatory Non-IT Infrastructure required for taking the exam

Students must refer to

Mandatory IT and Non-IT Infrastructure Requirements for Online Proctored Exams in WILP

document to understand the Mandatory IT and Non-IT Infrastructure for taking online exams.

You should choose this option only if you are confident to arrange the required IT Infrastructure and Non-IT Infrastructure to take the examinations under this mode.

Mode of Examination Options

- It is the institute's endeavor to offer two options on the mode of exams at the time of registration for each semester of the Programme. However, Option 2 of Online Examinations is offered purely at the discretion of the institute.
- Availability of Option 2 of Online Examinations may not always be feasible or is assured and is subject to the institute's own assessment of the feasibility of providing it.
- Students will need to choose one from the available option/s provided by the institute at the beginning of every semester.
- Students opting for Option 2 of Online Examinations would require to log in to the institute's online examination platform as per the announced examination schedule and take the online examinations in compliance with the institution's defined instructions, guidelines, and rules which are announced before all examinations.
- The Institute regularly takes actions to optimize its examination system and hence the mandatory IT and Non-IT Infrastructure requirements, instructions, guidelines, and rules associated with both the above mentioned examination modes may change anytime at the Institute's discretion. All students will need to 100% comply with any such changed specifications announced by the Institute.
- **Institute at its discretion may choose not to offer Option 2 of Online Examinations and in such a case students will need to take the examinations as per Option 1 which entails appearing for the examination at any one of the Designated Examination Centres.**

Mandatory IT and Non-IT Infrastructure Requirements for Option 2 - Online Mode of Examinations

- **Mandatory IT and Non-IT Infrastructure Requirements for Option 2 - Online Mode of Exams:**
- Students who have opted for **Option 2 - Online Mode of Examination for the Mid-Semester (EC2) & Comprehensive (EC3) examinations**, are required to ensure that they comply with the below **Mandatory IT and Non-IT Infrastructure Requirements.**

Mandatory Hardware Requirements

- **PLEASE NOTE THAT ONLINE MODE OF EXAMINATIONS CAN BE TAKEN USING MICROSOFT WINDOWS OPERATING SYSTEM (OS) MACHINES ONLY.**
- **OTHER SYSTEMS LIKE MAC / MACBOOK / MACBOOK AIR / LINUX OS / CHROME OS WILL NOT BE ALLOWED FOR TAKING ONLINE MODE OF EXAMINATIONS.**
- **IN CASE THE STUDENT DOESN'T HAVE A WINDOWS OPERATING SYSTEM (OS) MACHINE CURRENTLY, HE / SHE WOULD NEED TO ARRANGE FOR THE SAME COMPLYING WITH THE REQUIREMENTS FOR TAKING ONLINE PROCTORED EXAMINATIONS.**

Announcement of Semester Results

- At the end of every semester, on the basis of the student's performance in the evaluation components of their semester registered courses, course-wise semester results will be prepared and published to the students on the portal.
- Post the announcement of semester results, the institute will be starting the semester registration process for the subsequent semester.

Registration for Subsequent Semesters

- Students are required to register online and complete their Semester Registration process at the beginning of every semester.
- Semester Registration process consists of two parts:

1. **Semester Fee Payment:**
    - Students should pay their semester fee payment through the ERP Portal semester fee payment link.
2. **Registration of Semester Courses:**
    - Post the Semester Fee Payment, students will be permitted to choose the courses and complete the registration process for semester courses on ERP Portal.
    - Students will be permitted to register for the courses which are listed for the subsequent semesters as per the academic curriculum of their Programme.

Operations Support

M.Tech. DSE & M.Tech. AIML

Formal Communication

- Communicate with the appropriate ones for quick resolutions.
- For Example:
  - Raise all queries on course contents, clarifications in the Canvas discussion forums, messages to TA's, Instructors or IC's
  - Other course related concerns as emails to your Instructor / IC by email
  - Issues with Canvas LMS, matters related to access etc, issues with hall tickets, exam venues etc. as tickets in the student care helpdesk –
    - Queries raised here will be typically resolved in 48 - 72 hours
    - You will find options to escalate your queries in the student care helpdesk.

Formal Communication

- Formal BITS Notices will be delivered through Canvas Announcements and Emails in BITS Email ID.
- Configure ***your BITS Email ID signature*** to carry the following details

  [Your Name as it appears on University Records]

  [Your Student ID - All Caps]

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- Include relevant details when you initiate email communications with Instructors / IC's / and others in BITS.
  - For Ex: Mention your Section #, when you write to your IC.
- Always use BITS Email ID for all official communication

Whom to Contact for Support?

- **Student Care Helpdesk Portal:**
  - https://wilpqueries.bits-pilani.ac.in/
- **Programme Coordinators Contact:**
  - pc.dse@wilp.bits-pilani.ac.in
  - pc.aiml@wilp.bits-pilani.ac.in
- **Operations Team Contact:**
  - ops.dse@wilp.bits-pilani.ac.in
  - ops.aiml@wilp.bits-pilani.ac.in

Questions?

General Orientation Session
M.Tech. DSE & M.Tech AIML