INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN & MANUFACTURING JABALPUR

UG CURRICULUM

The academic load and the credit for a given course are decided by the following calculation:

Academic Load: **AL** = 3.0 x **L** + 1.0 x **T** + 1.5 x **P** + 0.0 x **D**

(**L**: Lecture Hours, **T**: Tutorial Hours, **P**: Practice Hours, and **D**: Discussion Hours)

Proposed Table

Academic Load **AL**	Course Weightage or **Units**
≤ 06	2
> 06 - ≤ 08 / (06, 08]	3
(08, 11]	4
(11, 14]	5

Guidelines used for Course Category Classification and Numbering

NS	Natural Science
ES	Engineering Science
IT	Information Technology
DS	Design
MN	Manufacturing
MS	Management Science
HS	Humanities & Social Sciences
CS	Computer Science & Engineering
EC	Electronics & Communications Engineering
ME	Mechanical Engineering
PR	Project

Grading

S	Satisfactory
X	Non-Satisfactory

Summary of Courses and Credits

Semester / Course Type	Core (NS / ES/ IT/ DS/ MN)	Professional CSE/ ECE / ME	Humanities & Management	Total Courses in each semester	Credits
I	5	-	1	6	22
II	5	-	1	6	22
III	4	1	1	6	23
IV	1	5	-	6	22
V	1	4	1	6	23
VI	2	3	1	6	22
VII	Project Semester + 1 Profession Online Course (through NPTeL)				18
VIII	-	4	1	5	18
Total	18	17	6	41	170

Semester / Course Type	Theory Courses without Lab component	Theory Courses with Lab component	Pure Lab Courses	Total Courses in each semester	Electives	
					Open	Prof
I	2	3	1 (Engineering Literacy)	6	-	-
II	3	2	1 (IT Workshop I)	6	-	-
III	2	3	1 (IT Workshop II)	6	-	-
IV	4/5	1/-	1 (Professional Lab)	6	1	-
V	4	1	1 (Professional Lab)	6	-	-
VI	3/4	1/-	2 (Professional Lab + Fabrication Project)	6	2	2
VII	Project Semester + 1 Profession Online Course (through NPTeL)					
VIII	4	-	1 (Professional Lab)	5	1	3
Total	22 / 24	9 /11	8	41	4	5

Semester	Core (NS / ES/ IT/ DS/ MN)	Professional CSE/ ECE / ME	Humanities & Management	Total Credits
I	19	-	3	22
II	19	-	3	22
III	15	4	4	23
IV	4	18	-	22
V	5	14	4	23
VI	8	10	4	22
VII	-	18	-	18
VIII	-	14	4	18
Total	70	78	22	170

Semester I (24 Hours/week) **Credits: 22**

NS 101	Mathematics for Continuous Domain (3 L + 1T)	4
NS 102	Physics I (2L + 1T + 2P)	4
IT 101	Fundamentals of Computing (2L + 3P)	4
ES 101	Fundamentals of Electrical & Electronics (3L + 2/3T +2x2/3P) (A slot of 2 hours of Tutorial in week 1 to be followed by 2 weeks of lab of 2 hours per week)	5
HS 101	Effective Communication (2L + 1T)	3
ES 102	Engineering Literacy (3P)	2

Semester II (24 Hrs/week) **Credits: 22**

NS 103	Mathematics for Continuous & Discrete Domain (3L +1T)	4
NS 104	Physics II (3L + 1T)	4
DS 101	Engineering Graphics (2L + 3P)	4
ES 103	Data Structures and Algorithms (3L + 2P)	5
HS 102	Culture & Human Values (2L + 1GD)	3
IT 102	IT Workshop I (3P) (Matlab 6 turns + SolidWorks 6 turns)	2

Semester III (24 Hrs/week) **Credits: 23**

NS 205	Mathematics for Discrete Domain / Mathematics III (3L + 1T)	4
ES 204	Engineering Drives and Devices (2L + 2P)	4
HS 203	Arts and Aesthetics (2L + 2P)	4
MN 201	Materials & Manufacturing Processes (3L + 3P)	5
Professional Course I:	(3L + 1T)	4
IT 203	IT Workshop II (3P) (OOPs with Java OR (Matlab 6 turns + LabView 6 turns)) OR (CATIA 6 turns + ADAMS or LabView 6 turns)	2

Semester IV (22 / 23 Hrs/week) **Credits: 22**

Open Elective I (3L OR 2L+2P)		4
ES.../	Probability & Statistics; Numerical Methods, Mechatronics and Robotics; Sensing Methods and Devices; Computer Graphics and Visualization; Instrumentation and Measurements; Control Systems; Signals, Systems and Networks (for non-ECE)	
Professional Course II:	(3L + 1T)	4
Professional Course III:	(3L + 1T)	4
Professional Course IV:	(3L + 1T)	4
Professional Course V:	(3L + 1T)	4
Professional Lab I	(3P)	2

Semester V (21 Hours/week) **Credits: 23**

MS 301	Management: Concepts and Techniques (3L)	4
DS 302	Engineering Design (2L + 4P)	5
Professional Course VI:	(3L)	4
Professional Course VII:	(3L)	4
Professional Course VIII:	(3L)	4
Professional Lab II (3P)		2

Semester VI (21 Hours/week) **Credits: 22**

Open Elective II (3L OR 2L+2P)		4
ES.../	Control and Robotics (2L + 2P), Probability & Statistics; Numerical Methods, Computer Graphics and Visualization; Sensing Methods and Devices; Instrumentation and Measurements; Control Systems; Signals, Systems and Networks (for non-ECE)	
Open Elective III (3L) (Management Stream)		4

MS… Systems Management / Marketing Management/ Human Resource Management/ Business Models for Manufacturing/ Industrial Relations/ Operations Management

Professional Elective I: (3L) 4

Professional Elective II: (3L) 4

MN 303 Fabrication Project (6P) 4

Professional Lab III (3 Hours) 2

Semester VII **Credits: 18**

PR 401 Project Semester S / X 16

(6 months duration – starting from preceding summer vacations – to be carried out in reputed organization OR Research Laboratory OR Institute of repute) (The organization where the internship is to be carried out has to be approved by the Internship Board)

CS/ EC / ME 499 Professional Online Course I: (Through NPTeL) S/X 2

(The students have to do one course on-line through NPTeL from the list of courses approved by Senate. The course will be a self-learning / reading course but the students have to appear in one examination at the end of the semester on the dates announced by Academic Office)

Semester VIII (12 Hrs/week) **Credits: 18**

Professional Elective III: (3L) 4

Professional Elective IV: (3L) 4

Professional Elective V: (3L) 4

Open Elective IV (3L) (HSS Stream) 4

HS … Professional Ethics / Engineering Economics / Industrial Psychology/ Industrial Sociology …

Professional Lab IV (3 Hours) 2

Total Credits: 170

SOME IMPORTANT FEATURES OF THE REVISED CURRICULUM

Total Number of Courses to be Registered = 41

Semester VII –Project based Internship + 1 Profession Online Course (through NPTeL)

Number of Core Courses = 18 ~ 43.9 %

Core Courses under different categories

Natural Sciences (NS)	= 5
Engineering Sciences (NS)	= 6 (including 2 Electives)
Information Technology (IT)	= 3
Design (DS)	= 2
Manufacturing(MN)	= 2

Professional Courses (CS / EC / ME) = 17 ~ 41.46 %

Compulsory for each discipline	= 8
Professional Labs	= 4
Electives	= 5

HSS and Management Courses = 06 ~ 15 %

Humanities & Social Science (HS)	= 4 (including 1 Elective)
Management Sciences(MS)	= 2 (including 1 Elective)

Professional Online Course – through NPTeL

- CS / EC / ME 499 – to be selected from a list of courses approved by the discipline (Phase 1)
- The course has to carried out in the "Self Learning Mode" and would be evaluated at the end of the Odd Semester by a committee of the discipline in the form of Satisfactory / Non-Satisfactory