

DAYANANDA SAGAR UNIVERSITY

Shavige Malleshwara Hills, Kumaraswamy Layout,
Bengaluru 560078, Karnataka.
Kudlu Gate, Hosur Main Road, Bengaluru 560068, Karnataka.

School of Engineering



Bachelor of Technology

B. Tech Scheme, Syllabus and Regulations
(with effect from August 2016)

SEMESTER I SCHEME OF TEACHING AND EXAMINATION BRANCH: Cycle A

Sl. No	Course Code	Course	C R / A	No. of Hours of Teaching				Scheme of Evaluation	
				Lecture	Tutorial	Practical	No. of Credits	Continuous	Semester End Examination
1	16MA101	Engineering Mathematics	CR	03	02	--	04	40	60
2	16PH101 (50 Hours)	Introduction to Physical Sciences	CR	03	--	--	03	40	60
3	16EE101	Electrical Engineering	CR	03	02	--	04	40	60
4	16CV101	Engineering Mechanics	CR	03	02	--	04	40	60
5	16CS101	Computer Programming and Problem Solving	CR	02	--	--	02	40	60
6	16HU116	English	CR	02	--	--	02	40	60
7	16ME102	Engineering Drawing	CR	01	--	04	03	40	60
8	16PH171	Physical Sciences Laboratory	CR	--	--	04	02	40	60
9	16CS171	Computer Programming and Problem Solving Laboratory	CR	--	--	04	02	40	60
Grand Total 900				17	06	12	26	360	540
10	16ES191	Environmental Studies	AU	02	--	--	02	25	50
11	16TE191*	Ideation	AU	01	--	--	01	25	50
12	16TET192*	Case Study	AU	01	--	--	01	25	50

Continuous evaluation: Three IA Tests, self-study presentation/survey reports/quiz/surprise test/ assignments/programming exercises/presentation in seminar and workshops. *** For Computer Technology (with emphasis on Entrepreneurship)**

SEMESTER I**SCHEME OF TEACHING AND EXAMINATION 2016BRANCH: Cycle B**

Sl. No.	CourseCode	Course	CR/AU	No. of Hours of Teaching				Scheme of Evaluation	
				Lecture	Tutorial	Practical	No. of Credits	Continuous	Semester End Examination
1	16MA101	Engineering Mathematics	CR	03	02	--	04	40	60
2	16CH101	Introduction to Chemical Sciences	CR	03	--	--	03	40	60
3	16BS101	Introduction to Biological Sciences	CR	03	--	--	03	40	60
4	16EC101	Electronics Engineering	CR	03	02	--	04	40	60
5	16ME 101	Mechanical Engineering	CR	03	02	--	04	40	60
6	16HU116	English	CR	02	--	--	02	40	60
7	16CH171	Chemical Sciences Laboratory	CR	--	--	04	02	40	60
8	16ME171	Workshop Practice	CR	--	--	04	02	40	60
Grand Total 800				17	06	8	24	320	480
9	16HU191	Constitution of India	AU	02	--	--	02	25	50
10	16HU192/ 16HU193	Kannada	AU	02	--	--	02	25	50

Continuous evaluation: Three IA Tests, self-study presentation/survey reports/quiz/surprise test/ assignments/programming exercises/presentation in seminar and workshops.

SEMESTER II**SCHEME OF TEACHING AND EXAMINATION BRANCH: Cycle A**

Sl. No.	Course Code	Course	CR/ AU	No. of Hours of Teaching				Scheme of Evaluation	
				Lecture	Tutorial	Practical	No. of Credits	Continuous	Semester End Examination
1	16MA101	Engineering Mathematics	CR	03	02	--	04	40	60
2	16CH101	Introduction to Chemical Sciences	CR	03	--	--	03	40	60
3	16BS101	Introduction to Biological	CR	03	--	--	03	40	60
4	16EC101	Electronics Engineering	CR	03	02	--	04	40	60
5	16ME 101	Mechanical Engineering	CR	03	02	--	04	40	60
6	16HU116	English	CR	02	--	--	02	40	60
7	16CH171	Chemical Sciences Laboratory	CR	--	--	04	02	40	60
8	16ME171	Workshop Practice	CR	--	--	04	02	40	60
Grand Total 800				17	06	8	24	320	480
10	16HU191	Constitution of India	AU	02	--	--	02	25	50
11	16HU192/ 16HU193	Kannada	AU	02	--	--	02	25	50

Continuous evaluation: Three IA Tests, self-study presentation/survey reports/quiz/surprise test/ assignments/programming exercises/presentation in seminar and workshops.

SEMESTER IIS
SCHEME OF TEACHING AND EXAMINATION
BRANCH: Cycle B

Sl. No.	Course Code	Course	CR/ AU	No. of Hours of Teaching				Scheme of Evaluation	
				Lecture	Tutorial	Practical	No. of Credits	Continuous	Semester End Examination
1	16MA101	Engineering Mathematics	CR	03	02	--	04	40	60
2	16PH101 (50 Hours)	Introduction to Physical Sciences	CR	03	--	--	03	40	60
3	16EE101	Electrical Engineering	CR	03	02	--	04	40	60
4	16CV101	Engineering Mechanics	CR	03	02	--	04	40	60
5	16CS101	Computer Programming and Problem Solving	CR	02	--	--	02	40	60
6	16HU116	English	CR	02	--	--	02	40	60
7	16ME102	Engineering Drawing	CR	01	--	04	03	40	60
8	16PH171	Physical Sciences Laboratory	CR	--	--	04	02	40	60
9	16CS171	Computer Programming and Problem Solving	CR	--	--	04	02	40	60
Grand Total 900				17	06	12	26	360	540
9	16ES191	Environmental Studies	AU	02	--	--	02	25	50
10	16TE191*	Ideation	AU	01	--	--	01	25	50
11	16TET192*	Case Study	AU	01	--	--	01	25	50

Continuous evaluation: Three IA Tests, self-study presentation/survey reports/quiz/surprise test/ assignments/programming exercises/presentation in seminar and workshops. * **For Computer Technology (with emphasis on Entrepreneurship)**

DAYANANDA SAGAR UNIVERSITY
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SCHOOL OF ENGINEERING



SCHEME & SYLLABUS

FOR

BACHELOR OF TECHNOLOGY (B.Tech)

COMPUTER SCIENCE & ENGINEERING

(3rd to 8th Semester)

(With Effect from 2016-17)

SEMESTER – III

SL	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					SCHEME OF EVALUATION	
				L	T	P	S/P	C	CIA	END EXAM
1	16MA201	ENGINEERING MATHEMATICS	CR	03	02	--	--	04	40	60
2	16CS201	DISCRETE MATHEMATICAL STRUCTURES	CR	03	02	--	--	04	40	60
3	16CS202	ELECTRONIC CIRCUITS	CR	03	--	--	02	04	40	60
4	16CS203	DIGITAL CIRCUITS AND LOGIC DESIGN	CR	03	--	--	--	03	40	60
5	16CS204	DATA STRUCTURES AND APPLICATIONS	CR	03	--	--	--	03	40	60
6	16HU106	ECONOMICS FOR ENGINEERS	CR	03	--	--	--	03	40	60
7	16CS271	DATA STRUCTURES LABORATORY	CR	--	--	04	--	02	40	60
8	16CS272	DIGITAL CIRCUITS AND LOGIC DESIGN LABORATORY	CR	--	--	04	--	02	40	60
GRAND TOTAL = 800				18	04	08	02	25	320	480

SEMESTER – IV

SL.	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					SCHEME OF EVALUATION	
				L	T	P	S/P	C	CIA	END EXAM
1	16MA202	ENGINEERING MATHEMATICS	CR	03	02	--	--	04	40	60
2	16CS205	FINITE AUTOMATA AND FORMAL LANGUAGES	CR	03	--	--	02	04	40	60
3	16CS206	MICROPROCESSORS AND APPLICATIONS	CR	03	--	--	--	03	40	60
4	16CS207	COMPUTER ORGANIZATION	CR	03	--	--	--	03	40	60
5	16CS208	INTRODUCTION TO OS AND UNIX	CR	03	--	--	02	04	40	60
6	16CS209	ALGORITHMS DESIGN AND ANALYSIS	CR	03	--	--	--	03	40	60
7	16CS273	MICROPROCESSORS AND APPLICATIONS LAB	CR	--	--	04	--	02	40	60
8	16CS274	DESIGN AND ANALYSIS OF ALGORITHMS LAB	CR	--	--	04	--	02	40	60
GRAND TOTAL = 800				18	02	08	04	25	320	480

NOTE: CR – Credit, AU – Audit, L – Lecture, T – Tutorial, P – Practical, S/P – Seminar/Project, C – No. of Credits, CIA – Continuous Internal Assessment

SEMESTER V

SL.	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					SCHEME OF EVALUATION	
				L	T	P	S/P	C	CIA	END EXAM
1	16CS301	PROBABILITY MODELS	CR	03	--	--	--	03	40	60
2	16CS302	DATABASE MANAGEMENT SYSTEMS	CR	03	--	--	--	03	40	60
3	16CS303	OPERATING SYSTEMS	CR	03	--	--	--	03	40	60
4	16CS304	SOFTWARE ENGINEERING	CR	02	--	02	--	03	40	60
5	16CS305	OBJECT ORIENTED PROGRAMMING	CR	03	--	--	02	04	40	60
6	16CSXXX	DEPARTMENT ELECTIVE – I	CR	03	--	--	--	03	40	60
7	16CSXXX	DEPARTMENT ELECTIVE – II	CR	03	--	--	--	03	40	60
8	16CS371	DATA BASE MANAGEMENT SYSTEMS LAB	CR	--	--	04	--	02	40	60
9	16CS372	OPERATING SYSTEMS LAB	CR	--	--	04	--	02	40	60
GRAND TOTAL = 900				20	--	10	02	26	360	540

DEPARTMENTAL ELECTIVE -1		DEPARTMENTAL ELECTIVE -II	
COURSE CODE	COURSE TITLE	COURSE CODE	COURSE TITLE
16CS321	SIGNALS & SYSTEMS	16CS331	RANDOMIZED AND APPROXIMATE ALGORITHMS
16CS322	VLSI DESIGN AND VERIFICATION	16CS332	NUMERICAL COMPUTING
16CS323	DATA COMMUNICATIONS	16CS350/ 16CT421	CYBER SECURITY
		16CS334/ 16CS430	CLOUD COMPUTING
		16CS333	MINOR PROJECT

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SEMESTER VI

SL.	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					SCHEME OF EVALUATION	
				L	T	P	S/P	C	CIA	END EXAM
1	16CS306	COMPUTER GRAPHICS	CR	03	--	--	02	04	40	60
2	16CS307	COMPILER DESIGN AND SYSTEMS SOFTWARE	CR	03	02	--	--	04	40	60
3	16CS308	COMPUTER NETWORKS	CR	03	02	--	--	04	40	60
4	16CS309	UNIX SYSTEMS PROGRAMMING	CR	03	--	--	--	03	40	60
5	16CSXXX	DEPARTMENT ELECTIVE – III	CR	03	--	--	--	03	40	60
6	16CSXXX	DEPARTMENT ELECTIVE – IV	CR	03	--	--	--	03	40	60
7	16CS373	SYSTEMS SOFTWARE AND COMPILER DESIGN LAB	CR	--	--	04	--	02	40	60
8	16CS374	NETWORKS AND LINUX PROGRAMMING LAB	CR	--	--	04	--	02	40	60
GRAND TOTAL = 800				18	04	08	02	25	320	480

DEPARTMENTAL ELECTIVE -I		DEPARTMENTAL ELECTIVE -II	
COURSE CODE	COURSE TITLE	COURSE CODE	COURSE TITLE
16CS336	DIGITAL IMAGE PROCESSING	16CS343	COMPUTATIONAL GEOMETRY
16CS337	COMPUTER ARCHITECTURE	16CS344	SOFT COMPUTING
16CS338	MOBILE COMPUTING & MOBILE APPS DEVELOPMENT	16CS345	DATA SCIENCE
		16CS346	MINOR PROJECT

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SEMESTER VII

SL.	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					SCHEME OF EVALUATION	
				L	T	P	S/P	C	CIA	END EXAM
1	16CS401	MACHINE LEARNING	CR	03	--	--	--	03	40	60
2	16CS402	EMBEDDED SYSTEMS	CR	02	--	--	02	03	40	60
3	16CS403	OPTIMIZATION TECHNIQUES	CR	03	--	--	--	03	40	60
4	16CSXXX	DEPARTMENT ELECTIVE – V	CR	03	--	--	--	03	40	60
5	16CSXXX	DEPARTMENT ELECTIVE – VI	CR	03	--	--	--	03	40	60
6	16HU401	LAW FOR ENGINEERS	CR	03	--	--	--	03	40	60
7	16IE4XX	INSTITUTIONAL ELECTIVE-I	CR	03	--	--	--	03	40	60
8	16CS471	WEB PROGRAMMING LAB	CR	--	01	03	--	02	40	60
9	16CS481	PROJECT	CR	--	--	--	04	02	40	60
GRAND TOTAL = 900				20	01	03	06	25	360	540

DEPARTMENTAL ELECTIVE -V		DEPARTMENTAL ELECTIVE -VI	
COURSE CODE	COURSE TITLE	COURSE CODE	COURSE TITLE
16CS421	PATTERN RECOGNITION	16CS428	DATA WARE HOUSE AND DATA MINING
16CS422	WIRELESS NETWORKS	16CS429	CRYPTOGRAPHY
16CS423	MOBILE COMPUTING AND APPS DEVELOPMENT	16CS431	DISTRIBUTED COMPUTING
16CS424	MULTI CORE ARCHITECTURE		
16CS425	IOT		

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SEMESTER VIII

SL.	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					SCHEME OF EVALUATION	
				L	T	P	S/P	C	CIA	END EXAM
1	16CSXXX	DEPARTMENT ELECTIVE - VII	CR	03	--	--	--	03	40	60
2	16IE4XX	INSTITUTIONAL ELECTIVE-II	CR	03	--	--	--	03	40	60
3	16CS482	SEMINAR	CR	--	--	--	02	01	50	--
4	16CS483	PROJECT	CR	--	--	--	20	10	100	100
GRAND TOTAL = 450				06	--	--	22	17	230	120

DEPARTMENTAL ELECTIVE -VII	
COURSE CODE	COURSE TITLE
16CS336	COMPUTER VISION
16CS337	PARALLEL COMPUTING
16CS338	SOCIAL NETWORKS AND ANALYTICS
16CS339	HUMAN COMPUTER INTERFACE

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INSTITUTIONAL ELECTIVES LIST - B.TECH PROGRAMME**GENERAL COURSE CODE: 16IE4XX**

SL.No	COURSE CODE	COURSE TITLE	OFFERING DEPARTMENT
1	16IE401	ARTIFICIAL INTELLIGENCE	CSE
2	16IE402	DATA STRUCTURES& ALGORITHMS	CSE
3	16IE403	WEB TECHNOLOGIES	CSE
4	16IE404	MANAGEMENT INFORMATION SYSTEM	CSE
5	16IE405	SOCIAL NETWORKS AND ANALYTICS (15CS338)	CSE
6	16IE421	SENSORS, NETWORKS AND PROTOCOLS	ECE
7	16IE422	IMAGE PROCESSING AND COMPUTER VISION	ECE
8	16IE423	AUTOMOTIVE EMBEDDED SYSTEMS	ECE
9	16IE424	EVOLUTION OF TELECOMMUNICATIONS	ECE
10	16IE441	ENTREPRENEURSHIP MANAGEMENT	CT
11	16IE442	INNOVATION AND ENTREPRENEURSHIP	CT
12	16IE443	LOGISTICS AND SUPPLY CHAIN MANAGEMENT	CT
13	16IE444	DIGITAL MARKETING	CT
14	16IE445	ADVANCED ORGANIZATIONAL BEHAVIOR(15CT449)	CT
15	16IE461	INDUSTRIAL ROBOTICS & AUTOMATION	ME
16	16IE462	TOTAL QUALITY MANAGEMENT	ME
17	16IE463	FUNDAMENTALS OF AUTOMOBILE ENGINEERING	ME
18	16IE464	RENEWABLE ENERGY SOURCES	ME
19	16IE465	PRODUCT & INDUSTRIAL DESIGN	ME
20	16IE466	PRODUCT ENGINEERING & ENTREPRENEURSHIP	CT
21	16IE467	FUNDAMENTALS OF CLOUD COMPUTING	CSE
22	16IE468	MACHINE LEARNING WITH PYTHON	CSE
23	16IE469	FUNDAMENTALS OF AEROSPACE ENGINEERING	ASE

- **Updated on 11.11.2020**