Department of Computer Science & Engineering

Annual Report 2017-18

SWAMI VIVEKANANDA INSTITUTE OF SCIENCE & TECHNOLOGY, SONARPUR

PREAMBLE

The Department of *Computer Science & Engineering* of Swami Vivekananda Institute of Science & Technology, Sonarpur has started its magnificent journey in the year 2008. The department provides the exposure in focusing the students' need to convey knowledge and need based technical education for building up prospective career of the students.

The department has the mission to build up the students' need with essential ambience, highly qualified faculties, well equipped laboratories and books on Computer Science & Engineering subjects in the library.

Faculty members attended conference, seminars, short term training programmes, published conference & journal papers.

Students attend classes on regular basis. Students' performance in semester examinations is also very good.

Four (04) journal papers have been published during this academic year by 4th year students of this department.

One (01) student of Computer Science & Engineering Department qualified GRE & TOEFL 2018 and presently he has joined to Ph.D program at Department of Computer Science, College of Engineering, The University of Illinois, Chicago, USA.

Three (03) students of this Department qualified Gate 2018.

One (01) student of this Department qualified CAT 2018.

In regard to future placement, students of 4th year are attending soft skill development course, industry related online training programmes.

Institution Name: **Swami Vivekananda Institute of Science & Technology, Sonarpur**

1.0 **NAME OF THE DEPARTMENT**: **COMPUTER SCIENCE & ENGINEERING**

2.0 **YEAR OF STARTING OF THE PROGRAMME: 2008**

3.0 **AICTE APPROVAL DETAILS OF THE DEPARTMENT:**

(a)   Date of first approval by AICTE with reference number
(for 60 seats)
Ref. …..date …

(b)   Date of approval by AICTE for current academic year with reference number
Ref : F. No. Eastern/1_3509288673/2018/EOA   dt. 04.04.2018.

(c)   Approval by Maulana Abul Kalam Azad University of Technology (Formerly known as West Bengal University of Technology) for the current academic year with reference number
Ref : 241/BTech/Affiliation/2017-18   dt. 15.05.2017.

4.0   PROGRAMME DETAILS: *B-Tech In Computer Science & Engineering*

(a)   Nature of Programme: *Full time*

(b)   Duration: *4 years*

(c)   Sanction Intake: *60*

(d)   Year wise students:

B. Tech (2017-18)	1st Year	2nd Year	3rd Year	4th Year
No of students	47	67	61	52

Lateral entry – 20% in 3rd Semester

5.0   COURSE STRUCTURE:
(As per Affiliating University) :

List of Subjects

Sl. No.	Subject Code	Name of the Subject
First Semester:		
1	HU101	English Language & Technical Communication
2	PH101	Physics – 1
3	M101	Mathematics-1
4	ES101	Basic Electrical & Electronics Engineering – 1
5	ME101	Engg. Mechanics
6	PH191	Physics – 1 Laboratory
7	ES191	Basic Electrical & Electronics Engineering-1 Laboratory

Sl. No.	Subject Code	Name of the Subject
8	ME192	Workshop Practice
9	HU181	Language Laboratory
10	XC181	Extra Curricular Activities(NSS/NCC/NSO etc)
Second Semester:		
11	CS201	Basic Computation & Principles of Computer Programming
12	CH201	Chemistry-1
13	M201	Mathematics-2
14	ES201	Basic Electrical & Electronic Engineering-II
15	ME201	Engineering Thermodynamics & Fluid Mechanics
16	CS291	Basic Computation & Principles of Computer Programming Laboratory
17	CH291	Chemistry-1 Laboratory
18	ES291	Basic Electrical & Electronic Engineering- II Laboratory
19	ME292	Basic Engg Drawing & Computer Graphics
Third Semester:		
20	HU301	Values & Ethics in Profession
21	PH301	Physics-2
22	CH301	Basic Environmental Engineering & Elementary Biology
23	CS301	Analog & Digital Electronics
24	CS302	Data Structure & Algorithm
25	CS303	Computer Organisation
26	PH391	Physics-2
27	CS391	Analog & Digital Electronics

Sl. No.	Subject Code	Name of the Subject
28	CS392	Data Structure & Algorithm
29	CS393	Computer Organisation
Fourth Semester:		
30	M(CS)401	Numerical Methods
31	M401	Mathematics-3
32	CS401	Communication Engg & Coding Theory
33	CS402	Formal Language & Automata Theory
34	CS403	Computer Architecture
35	HU481	Technical Report Writing & Language Lab Practice
36	M(CS)491	Numerical Methods
37	CS491.	Communication Engg & Coding Theory
38	CS492	Software Tools
39	CS493	Computer Architecture
Fifth Semester:		
40	HU501	Economics for Engineers
41	CS501	Design & Analysis of Algorithm
42	CS502	Microprocessors & Microcontrollers
43	CS503	Discrete Mathematics
44	Free Elective CS504A	Circuit Theory & Network (ECE)
	CS504B	Data Communication (ECE)
	CS504C	Digital Signal Processing (ECE)
	CS504D	Object Oriented Programming (IT)
45	CS591	Design & Analysis of Algorithm
46	CS592	Microprocessors & Microcontrollers
47	CS593	Programming Practices using C++
48	F. E. CS594A	Circuit Theory & Network (ECE)
	CS594B	Data Communication (ECE)

Sl. No.	Subject Code	Name of the Subject
	CS594C	Digital Signal Processing (ECE)
	CS594D	Object Oriented Programming (IT)
Sixth Semester		
49	HU601	Principles of Management
50	CS601	Data Base Management System
51	CS602	Computer Networks
52	CS603	Operating System
53	P.E. CS604A	Information Theory & Coding
	CS604B	Computer Graphics
	CS604C	ERP
54	F. E. CS605A	Operation Research (M)
	CS605B	Human Resource Management (HSS)
	CS605C	Multimedia Technology (IT)
55	CS691	Data Base Management System Lab
56	CS692	Network Lab
57	CS693	Operating System Lab
58	CS681	Seminar
Seventh Semester		
59	CS701	Software Engineering
60	CS702	Compiler Design
61	CS703	A. Pattern Recognition B. Soft Computing C. Artificial Intelligence D. Image Processing
62	CS704	A. Distributed Operating System B. Cloud Computing C. Data Warehousing and Data Mining D. Sensor Networks E. Mobile Computing
63	CS705	A. Internet Technology (IT) B. Microelectronics & VLSI Design (ECE) C. Control System (EE)

Sl. No.	Subject Code	Name of the Subject
		D. Modeling & Simulation (M)
64	HU781	Group Discussion
65	CS791	Software Engg. Lab
66	CS793	A. Pattern Recognition B. Soft Computing C. Artificial Intelligence D. Image Processing
67	CS795	A. Internet Technology (IT) B. Microelectronics & VLSI Design (ECE) C. Control System (EE) D. Modeling & Simulation (M)
68	CS792	Industrial Training
69	CS794	Project- 1
Eighth Semester		
70	HU801A	Organizational Behavior
71	HU801B	Project Management
72	CS801	A. Advanced Computer Architecture B. Parallel Computing C. Natural Language Processing D. Cryptography & Network Security E. Business Analytics
73	CS802	A. Technology Management (HSS) B. Cyber Law & Security Policy (HSS) C. Optical Networking (ECE) D. Low Power Circuits & Systems (ECE) E. E-Commerce(IT) F. Robotics(EE & ME)
74	CS891	Design Lab / Industrial problem related practical training (Workshop needed)
75	CS892	Project-2
76	CS893	Grand Viva

6.0   COURSE STRUCTURE:

List of Subjects

First Semester:

Theory						Credit Point	Marks					
		Contacts hours per week										
Code	Subject Name	L	T	P	Total		UT1/ UT2	Assignment	Attendance	Total Internal	Total External	TOTAL
HU101	ENGLISH LANGUAGE & TECHNICAL COMMUNICATION	2	0	0	2	2	15	10	5	30	70	100
PH101	PHYSICS-1	3	1	0	4	4	15	10	5	30	70	100
M101	MATHEMATICS-1	3	1	0	4	4	15	10	5	30	70	100
ES101	Basic Electrical & Electronics Engineering – 1	3	1	0	4	4	15	10	5	30	70	100
ME 101	ENGG. MECHANICS	3	1	0	4	4	15	10	5	30	70	100
Total Theory					18	18						

Practical						Credit Point	Marks		
		Contacts hours per week							
Code	Subject	L	T	P	Total		Total Internal	Total External	TOTAL
PH191	PHYSICS	0	0	3	3	3	40	60	100
ES191	BASIC ELECTRONIC ENGINEERING	0	0	3	3	3	40	60	100
ME192	Workshop Practice	1	0	3	4	4	40	60	100
Total Practical					10	10			

SESSIONAL						Credit Point	Marks		
		Contacts hours per week							
		L	T	P	Total		Total Internal	Total External	TOTAL
HU181	LANGUAGE LABORATORY	0	0	2	2	2	40	60	100
XC181	EXTRA CURRICULAR ACTIVITIES (NCC/NSS/NSO etc)	0	0	2	2	2	40	60	100
Total of Sessional					4	4			
Total of Semester					32	32			

List of Subjects

Second Semester:

Theory	Contacts periods per week	Credit Point	NONE Marks

Code	Subject Name	L	T	P	Total		UT1/ UT2	Assign ment	Atten dance	Total Internal	Total External	TOTAL
CS 201	BASIC COMPUTATION & PRINCIPLES OF COMPUTER PROGRAMMING	3	1	0	4	4	15	10	5	30	70	100
CH201	CHEMISTRY	3	1	0	4	4	15	10	5	30	70	100
M201	MATHEMATICS-2	3	1	0	4	4	15	10	5	30	70	100
ES201	Basic Electrical & Electronic Engineering-II	3	1	0	4	4	15	10	5	30	70	100
ME201	Engineering Thermodynamics & Fluid Mechanics	3	1	0	4	3	15	10	5	30	70	100
Total Theory					20	20						

Practical		Contacts periods per week				Credit Point	Marks		
Code	Subject	L	T	P	Total		Total Internal	Total External	TOTAL
CS291	BASIC COMPUTATION & PRINCIPLES OF COMPUTER PROGRAMMING	0	0	2	3	3	40	60	100
CH291	CHEMISTRY	0	0	3	3	3	40	60	100
ES291	BASIC ELECTRICAL ENGINEERING	0	0	2	3	3	40	60	100
ME292	Basic Engg Drawing & Computer Graphics	1	0	3	4	3	40	60	100
Total Practical		0	0		10	6			
Total Semester					28	21			

List of Subjects

Third Semester:

Theory					Credit Point	Marks					
		Contacts periods per week									
Code	Subject Name	L	T	P	Total		UT1/ UT2	Assignment	Attendance	Total Internal	Total External	TOTAL
HU301	Values & Ethics in Profession	3	0	0	3	3	15	10	5	30	70	100
PH301	Physics-2	3	1	0	4	4	15	10	5	30	70	100
CH301	Basic Environmental Engineering & Elementary Biology	3	0	0	3	3	15	10	5	30	70	100
CS301	Analog & Digital Electronics	3	0	0	3	3	15	10	5	30	70	100
CS302	Data Structure & Algorithm	3	1	0	4	4	15	10	5	30	70	100
CS303	Computer Organisation	3	1	0	4	4	15	10	5	30	70	100
Total Theory					21	21						

Practical					Credit Point	Marks		
		Contacts periods per week						
Code	Subject	L	T	P	Total	Total Internal	Total External	TOTAL
PH391	Physics-2	0	0	3	3	2	40	60	100
CS391	Analog & Digital Electronics	0	0	3	3	2	40	60	100
CS392	Data Structure & Algorithm	0	0	3	3	2	40	60	100
CS393	Computer Organisation	0	0	3	3	2	40	60	100
Total Practical					12	8		
Total Semester					33	29		

List of Subjects

Fourth Semester:

Theory		Contacts hours per week				Credit Point	Marks					
Code	Subject Name	L	T	P	Total		UT1/ UT2	Assignment	Attendance	Total Internal	Total External	TOTAL
M(CS)401	Numerical Methods	2	1	0	3	2	15	10	5	30	70	100
M401	Mathematics-3	3	1	0	4	4	15	10	5	30	70	100
CS401	Communication Engg & Coding Theory	2	1	0	3	3	15	10	5	30	70	100
CS402	Formal Language & Automata Theory	3	1	0	4	4	15	10	5	30	70	100
CS403	Computer Architecture	3	1	0	4	4	15	10	5	30	70	100
Total Theory					18	17						

Practical		Contacts hours per week				Credit Point	Marks		
Code	Subject	L	T	P	Total		Total Internal	Total External	TOTAL
HU481	Technical Report Writing & Language Lab Practice	0	0	3	3	2	40	60	100
M(CS) 491	Numerical Methods	0	0	2	2	1	40	60	100
CS491.	Communication Engg & Coding Theory	0	0	3	3	2	40	60	100
CS492	Software Tools	0	0	3	3	2	40	60	100
CS493	Computer Architecture	0	0	3	3	2			
Total Practical					14	9			
Total Semester					32	26			

List of Subjects

Fifth Semester:

Theory	Contacts hours	Credit	Marks

Code	Subject Name	per week				Point						
		L	T	P	Total		UT1 / UT2	Assignment	Attendance	Total Internal	Total External	TOTAL
HU501	Economics for Engineers	3	0	0	3	3	15	10	5	30	70	100
CS501	Design & Analysis of Algorithm	3	1	0	4	4	15	10	5	30	70	100
CS502	Microprocessors & Microcontrollers	3	1	0	4	4	15	10	5	30	70	100
CS503	Discrete Mathematics	3	0	0	3	3	15	10	5	30	70	100
EEE-504	F.E. A) Circuit Theory & Network (ECE) B) Data Communication (ECE) C) Digital Signal Processing (ECE) C) Object Oriented Programming (IT)	3	0/1	0	3/4	3/4	15	10	5	30	70	100
Total Theory					17/18	17/18						

	Practical	Contacts hours per week				Credit Point	Total Internal	Total External	TOTAL
	Subject	L	T	P	Total	Point	Total Internal	Total External	TOTAL
CS591	Design & Analysis of Algorithm	0	0	3	3	2	40	60	100
CS592	Microprocessors & Microcontrollers	0	0	3	3	2	40	60	100
CS593	Programming Practices using C++	1	0	2	3	2			
CS594	F. E. A) Circuit Theory & Network (ECE) B) Data Communication (ECE) C) Digital Signal Processing (ECE) D) Object Oriented Programming	0	0	3	3	2	40	60	100

	(IT)											
Total Practical				**12**	**8**							
Total Semester				**29/30**	**25/26**							

List of Subjects

Sixth Semester:

Theory		Contacts hours per week				Credit Point	Marks					
Code	Subject Name	L	T	P	Total		UT1 / UT2	Assignment	Attendance	Total Internal	Total External	TOTAL
HU601	Principles of Management	2	0	0	2	2	15	10	5	30	70	100
CS601	Data Base Management System	3	0	0	4	4	15	10	5	30	70	100
CS602	Computer Networks	3	0	0	4	4	15	10	5	30	70	100
CS603	Operating System	3	0	0	4	4	15	10	5	30	70	100
CS604	P.E A) Information Theory & Coding B) Computer Graphics C) ERP	3	0	0	3	3	15	10	5	30	70	100
CS605	F. E. A) Operation Research (M) B) Human Resource Management (HSS) C) Multimedia Technology (IT)	3 / 3	0 / 1	0 / 0	3/4	3/4	15	10	5	30	70	100
Total Theory					**17/18**	**17/18**						
Practical		Contacts hours per week				Credit Point	Marks					
Code	Subject	L	T	P	Total		Total Internal			Total External		TOTAL
CS691	Data Base Management System Lab	0	0	3	3	2	40			60		100
CS692	Network Lab	0	0	3	3	2	40			60		100

CS693	Operating System Lab	0	0	3	3	2	40	60	100
CS681	Seminar	0	0	3	3	2	40	60	100
Total Practical					**12**	**8**			
Total Semester					**29-30**	**25-26**			

List of Subjects

Seventh Semester:

Theory		Contacts hours per week				Credit Point	Marks					
Code	Subject Name	L	T	P	Total	Credit Point	UT1 / UT2	Assignment	Attendance	Total Internal	Total External	TOTAL
CS701	Software Engineering	3	0	0	3	3	15	10	5	30	70	100
CS702	Compiler Design	3	0	0	3	3	15	10	5	30	70	100
CS703	A. Pattern Recognition B. Soft Computing C. Artificial Intelligence D. Image Processing	3	0	0	3	3	15	10	5	30	70	100
CS704	A. Distributed Operating System B. Cloud Computing C. Data Warehousing and Data Mining D. Sensor Networks E. Mobile Computing	3	0	0	3	3	15	10	5	30	70	100
CS705	A. Internet Technology (IT) B. Microelectronics & VLSI Design (ECE) C. Control System (EE) D. Modeling & Simulation (M)	3	0	0	3	3	15	10	5	30	70	100
Total Theory					**15**	**15**						
Practical		Contacts hours				Credit	Marks					

Code	Subject	L	T	P	Total	Point	Total Internal	Total External	TOTAL
					per week	Point			
HU781	Group Discussion	0	0	3	3	2	40	60	100
CS791	Software Engg. Lab	0	0	3	3	2	40	60	100
CS793	A. Pattern Recognition / B. Soft Computing / C. Artificial Intelligence / D. Image Processing	0	0	3	3	2	40	60	100
CS795	A. Internet Technology (IT) / B. Microelectronics & VLSI Design (ECE) / C. Control System (EE) / D. Modeling & Simulation (M)	0	0	3	3	2	40	60	100
CS792	Industrial training	4 wks during 6th -7th Sem-break				2	40	60	100
CS794	Project- 1				3	2	40	60	100
Total Practical					**15**	**12**			
Total Semester					**30**	**27**			

List of Subjects

Eighth Semester:

Code	Subject Name	L	T	P	Total	Credit Point	UT1/ UT2	Assignment	Attendance	Total Internal	Total External	TOTAL
Theory		Contacts hours per week					Marks					
HU801A	Organizational Behavior	2	0	0	2	2	15	10	5	30	70	100
HU801B	Project Management	2	0	0	2	2	15	10	5	30	70	100
CS801	A. Advanced Computer Architecture / B. Parallel Computing / C. Natural Language Processing	3	0	0	3	3	15	10	5	30	70	100

Code	Subject	L	T	P	Total	Credit Point						
	D. Cryptography & Network Security											
	E. Business Analytics											
CS802	A. Technology Management (HSS)	3	0	0	3	3	15	10	5	30	70	100
	B. Cyber Law & Security Policy (HSS)											
	C. Optical Networking (ECE)											
	D. Low Power Circuits & Systems (ECE)											
	E. E-Commerce(IT)											
	F. Robotics(EE & ME)											
Total Theory					**8**	**8**						

Practical		Contacts hours per week				Credit Point	Marks		
Code	Subject	L	T	P	Total		Total Internal	Total External	TOTAL
CS891	Design Lab / Industrial problem related practical training (Workshop needed)	0	0	6	6	4	40	60	100
CS892	Project-2	0	0	12	12	6	40	60	100
CS893	Grand Viva	0	0	0	0	3	40	60	100
Total Practical					**18**	**13**			
Total Semester					**26**	**21**			

FACULTY PROFILE

	Name	Qualification	Date of Birth	Designation	Date of joining
1	Pranab Kr. Gayen	B.E., M.E	13/08/1976	Associate Professor & HOD	30-01-2009
2	Pradipta Roy	B.Sc, M.Sc., M.Tech	10/10/1976	Assistant Professor	01-09-2010
3	Anindita Das	B. Tech, M.Tech	19/10/1984	Assistant Professor	26-12-2011
4	Sudipta Hazra	B.E, M.Tech	06/04/1986	Assistant Professor	26-02-2009
5	Jadav Ch. Das	B. Tech, M. Tech,	08/06/1985	Assistant Professor	06-02-2010
6	Bikash Debnath	B.Sc, MCA, M. Tech	31/12/1980	Assistant Professor	02-12-2011
7	Basanti Bhattacharyya	B. Tech, M.Tech	03/02/1989	Assistant Professor	12-08-2015
8	Saswati Achariya	B. Tech, M.Tech	11/12/1985	Assistant Professor	18-10-2016
9	Dr. Srikanta Pal	B.Sc., M.Tech, Ph.D	25/11/1977	Assistant Professor	01-08-2017
10	Samik Roychoudhury	B. Tech, M.Tech	12/09/1990	Assistant Professor	01-08-2017
11	Sumana Kundu	B.E, M.Tech	29/03/1985	Assistant Professor	08-08-2017

7.0   TECHNICAL STAFFS:

1. Mr. Ibrahim Sardar
2. Mr. Krishnakali Roy Choudhury
3. Mr. Brijit Bhattacharya

8.0   DELEGATION OF RESPONSIBILITY:

Institutional:

- Academic Council– Pranab Kumar Gayen (Member)

- Examination Cell– Mr. Pranab Kumar Gayen (O.I.C),
  Mr. Sudipta Hazra (Member),
  Mr. Jadav Chandra Das (Member),
  Mr. Bikash Debnath (Member),
  Mr. Ibrahim Sardar (Member)

- Routine Committee– Mr. Pranab kumar Gayen,
  Mr. Sudipta Hazra

- Disciplinary Committee– Mr. Pradipta Roy (Member)
  Mr. Pranab Kumar Gayen, (Member)

- Anti-ragging Committee– Mr. Pradipta Roy (Member),
  Mr. Pranab Kumar Gayen, (Member),
  Mrs. Anindita Das(Member) ,
  Mr Jadav Das (Member)

- Sports committee– Mr. Jadav Chandra Das (Member),
  Mr. Bikash Debnath (Member),
  Mr. Ibrahim Sardar (Member)

Departmental:

- Research and Development– Mr. Jadav Chandra Das (Member) ,
  Mrs. Anindita Das (Member)

- University Affairs– Mr. Pranab kumar Gayen,
  Mr. Sudipta Hazra

- Students' Mentorship– Mr. Pranab kumar Gayen
  Mr. Pradipta Roy,
  Mrs. Anindita Das,
  Mr. Bikash Debnath,
  Mr. Jadav Chandra Das,
  Mr. Sudipta Hazra,
  Mr. Srikanta Pal,
  Mrs. Basanti Bhattacharya,
  Mrs. Sumana Kundu,
  Mrs. Krishnakali Roychowdhury,
  Mr. Ibrahim Sardar,
  Mr. Brijit Bhattacharjee.

- Departmental Library–Mrs. Anindita Das,
  Mrs. Krishnakali Roychowdhury.

9.0   STUDENTS ACTIVITY

- Four (04) journal papers have been published during this academic year by 4th year students of this department.
- One (01) student of Computer Science & Engineering Department qualified GRE & TOEFL 2018 and presently he has joined to Ph.D program at Department of Computer Science, College of Engineering, The University of Illinois, Chicago, USA.
- Three (03) students of Computer Science & Engineering Department qualified Gate 2018.
- One (01) student of Computer Science & Engineering Department qualified CAT 2018.

10.0   SPACE ALLOCATION

A) Laboratories

1. Computer Laboratory 01   -   Room No. A215   (676 sq. ft.)
2. Computer Laboratory 02   -   Room No. A217   (578 sq. ft.)
3. Computer Laboratory 03   -   Room No. A219   (514 sq. ft.)
4. Computer Laboratory 04   -   Room No. A220   (491 sq. ft.)
5. Computer Laboratory 05   -   Room No. A223   (441 sq. ft.)

B) Classrooms

1. 1st year CSE Classroom   -   Room No. A405   (569 sq. ft.)
2. 2nd year CSE Classroom   -   Room No. A317   (748 sq. ft.)
3. 3rd year CSE Classroom   -   Room No. A203   (635 sq. ft.)
4. 4th year CSE Classroom   -   Room No. A407   (492 sq. ft.)

C) Others

1. HOD Room   -   Room No A214   (260 sq. ft.)
2. Faculty Room - Room No A208   (218sq. ft.)

11.0   RESOURCES:

11.1   DEPARTMENTAL LIBRARY:

Books available – 25 nos.

11.2   LABORATORY:

Laboratory Name	Lab Summary
C Programming Lab	• Introduction to C, Algorithm, Program, and Flow charts. • Implementation of different decision making and branching concepts. • Implementing Loops for pattern designing. • Implementation of Function and Recursion. • Implementation of 1D and 2D Arrays to solve matrix multiplication, sorting, searching related Problems. • String implementation with String library functions. • Concept of Structure is designed to create student database. • Implementation of Pointer to array, structure etc. • File implementation to design file copy, appending programs.
Data Structure	• Implementation of different searching algorithms using array. • Implementation of different sorting algorithms using array. • Implementation of different operations like insertion, deletion, traversing on linked list. • Implementation of Stack using array and linked list. • Implementation of Queue, Circular Queue using array and linked list. • Sparse Matrices: Multiplication, addition. • Implementation of different Tree traversal technique.
Computer Organization	• Truth table verification of MUX. • Truth table verification of Decoder • Experiment on 4-bit Comparator • Design an Adder/Subtractor composite unit. • Design a BCD adder. • Combinational circuit design using MUX. • Use ALU chip for multi-bit arithmetic operation.
Numerical Methods Lab	• Assignments on Newton forward /backward, Lagrange's interpolation. • Assignments on numerical integration using Trapezoidal rule, Simpson's 1/3 rule, Weddle's rule. • Assignments on numerical solution of a system of linear equations using Gauss elimination • Assignments on numerical solution of Algebraic Equation by Regular-falsi and Newton Raphson methods. • Assignments on ordinary differential equation: Euler's and Runga-Kutta methods.
Software Tools	• Difference with BASIC. Concept about form Project, • Application, Tools, Toolbox,

Laboratory Name	Lab Summary
	• Controls & Properties. Idea about • Data basics, Different type variables & their use. • Sub-functions & Procedure details, Input box () & Msgbox (). • Making decisions, looping • List boxes & Data lists, List Box control, Combo Boxes, data Arrays. • Frames, buttons, check boxes
Computer Architecture	• HDL introduction • Basic digital logic base programming with HDL • 8-bit Addition, Subtraction, Multiplication. • 8-bit Register design • Design of various Combinational Circuits • Design of Registers • Up and Down counter Design • 8-bit simple ALU design

Design & Analysis of Algorithm	• Divide and Conquer approach:
	  ▪ Find Maximum and Minimum element from a array,
	  ▪ Quick Sort,
	  ▪ Merge Sort etc.
	• Multiplication of matrix
	• Dynamic Programming approach:
	  ▪ Implement all pair of Shortest path for a graph (Floyd-Warshall Algorithm),
	  ▪ Implement Single Source shortest Path for a graph (Dijkstra).
	• Greedy Method approach: Minimum Cost Spanning Tree by Prim's Algorithm
	• Graph Traversal Algorithm.

Microprocessors & Microcontrollers	• Study of Prewritten programs on 8085 trainer kit using the basic instruction set (data transfer, Load /Store, Arithmetic, Logical). • Table look up • Copying a block of memory • Shifting a block of memory • Packing and unpacking of BCD numbers • Addition of BCD numbers • Binary to ASCII conversion and vice-versa (Using Subroutine Call) • BCD to Binary Conversion and vice-versa • String Matching, Multiplication • Program using IN/OUT instructions and 8255 PPI on the trainer kit e.g. subroutine for delay.
Programming Practices Using C++	• Introduction to C++, basic loop control, executing programs, writing functions, selection statements, review of functions and parameters, command line arguments, recursion, I/O streams, arrays and string manipulation, pointers, structures & unions. • Object-Oriented Programming in C++, fundamentals of classes, constructors-destructors. • Dealing with inheritance, derived class handling, abstract class, virtual class, overriding.

Laboratory Name	Lab Summary
Object Oriented Programming	- Assignments on class, constructor, overloading, inheritance, overriding - Assignments on wrapper class, arrays - Assignments on developing interfaces- multiple inheritance, extending interfaces - Assignments on creating and accessing packages - Assignments on multithreaded programming - Assignments on applet programming
Data Base Management System Lab	- Creating Database - Table and Record Handling - Retrieving Data from a Database - Database Management
Network Lab	- Familiarization with Networking cables (CAT5, UTP) Connectors (RJ45, T-connector) Hubs, Switches - NIC Installation & Configuration (Windows/Linux) - TCP/UDP Socket Programming - Multicast & Broadcast Sockets - Implementation of a Prototype Multithreaded Server - IPC (Message queue) - Error Checking Methods
Operating System Lab	- LINUX commands. - Shell programming: creating a script, making a script executable, shell syntax (variables, conditions, control structures. - Creation and identification of process.
Seminar	Technical topics beyond the Syllabus.
Software Engineering Lab	- Railway Reservation system, - Hospital management System, - University Admission system - Use Case diagram, Class diagram, Sequence diagram and prepare Software Design Document.
Artificial Intelligence	- Programming Languages such as PROLOG - Designing family tree relation - Implementation of recursive functions to design programs for GCD, Fibonacci Series. - Implementation of LIST to perform string reversal and string concatenation.
Internet Technology	- Applet code implementation - JavaScript applications - CSS - HTML page design
Project	Software based projects.

12.0 FACULTY PARTICIPATIONS:

(a) Participation in parents department

i)	External sponsored projects	
ii)	Consultancy	
iii)	Continuing education	
iv)	Collaboration (industrial/institutional)	
v)	Students Projects	√
vi)	Students Guidance (M.Tech/PhD)	
vii)	Invited lectures (National/International)	
viii)	Professional Society Activities	√
ix)	Conferences/seminars/winter/summer schools	√
x)	Research Publications	√
xi)	Text Books/Monographs published	√
xii)	Patents/ Awards received	
xiii)	Any financial Assistance for projects	

13.0 FDP/ QIP/ SEMINAR/INVITED TALK ORGANIZED

13.1 Day long Invited lectures on "**……..**" on …., 2017 organized by this department sponsored by SVIST.
13.2

Invited Speakers:
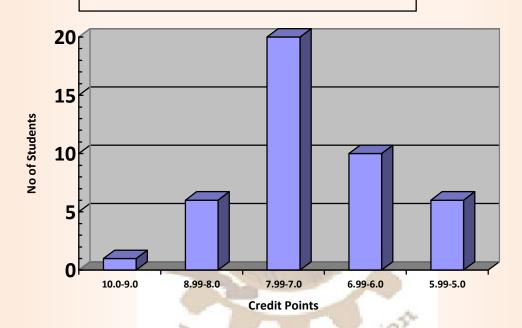- ….University.
- …. University

14.0 STUDENTS RESULTS:

1st SEMESTER

	10.00 – 9.00	8.99 – 8.00	7.99 – 7.00	6.99 – 6.00	5.99 – 5.00
2017-18	1	6	20	10	6

2nd SEMESTER

	10.00 – 9.00	8.99 – 8.00	7.99 – 7.00	6.99 – 6.00	5.99 – 5.00
2017-18	0	8	19	11	3

☐ 2ND SEMESTER 2017-18

3rd SEMESTER

	10.00 – 9.00	8.99 – 8.00	7.99 – 7.00	6.99 – 6.00	5.99 – 5.00
2017-18	0	7	29	20	8

☐ 3RD SEMESTER 2017-18

4th SEMESTER					
	10.00 – 9.00	8.99 – 8.00	7.99 – 7.00	6.99 – 6.00	5.99 – 5.00
2017-18	1	14	25	16	8

☐ 4TH SEMESTER 2017-18

5th SEMESTER					
	10.00 – 9.00	8.99 – 8.00	7.99 – 7.00	6.99 – 6.00	5.99 – 5.00
2017-18	2	21	23	10	3

☐ 5TH SEMESTER 2017-18

6th SEMESTER					
	10.00 – 9.00	8.99 – 8.00	7.99 – 7.00	6.99 – 6.00	5.99 – 5.00
2017-18	3	24	19	10	3

☐ 6TH SEMESTER 2017-18

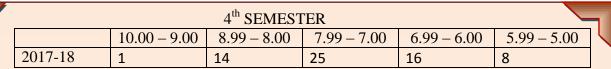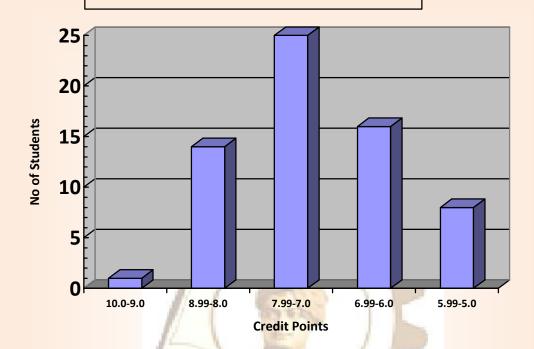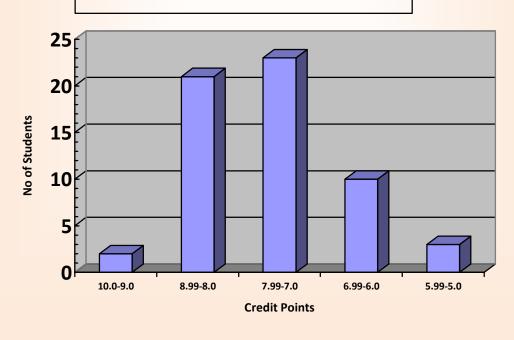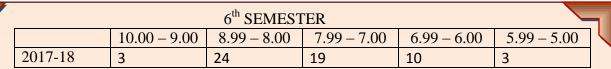| 7th SEMESTER					
	10.00 – 9.00	8.99 – 8.00	7.99 – 7.00	6.99 – 6.00	5.99 – 5.00
2017-18	9	29	11	2	1

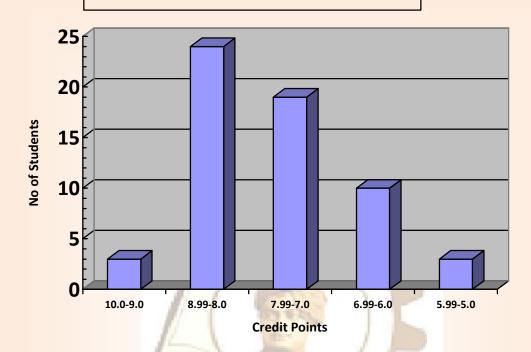**☐ 7TH SEMESTER 2017-18**

8th SEMESTER

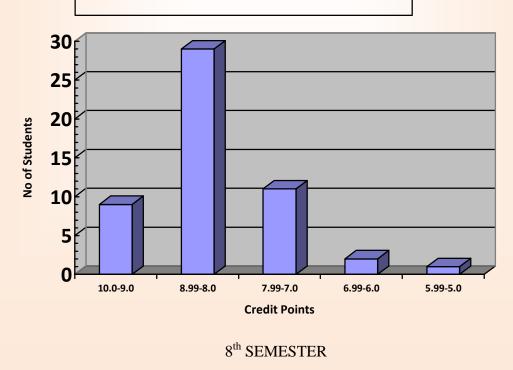|	10.00 – 9.00	8.99 – 8.00	7.99 – 7.00	6.99 – 6.00	5.99 – 5.00
2017-18	21	23	7	1	0

15.0   INDUSTRIAL TRAINING:

Computer Science & Engineering department co-ordinates Industrial Training for every student as this is compulsory according to university course curriculum.

Sl. No	Name of Students	Roll No	Training Period/duration	Name of Company
1.	1. Adrish Ray 2. Archita Gupta 3. Biswadeep Paul 4. Daipayan Banerjee 5. Ishita Sengupta 6. Jitsoma Dey 7. Ankit Samanta	24100114002 24100114010 24100114019 24100114021 24100114027 24100114028 24100114008	1 Month	Webskitters Technology

2.	1. Akash Pal 2. Sourav Chakraborty 3. Arindam Maondal 4. Avijeet Prasad 5. Ayan Samanta 6. Raju Dutta 7. Ramit Kumar Roy 8. Ranjib Datta 9. Ria Mondal 10. Saurav Sarkar 11. Soumalya Das 12. Nilu Maity 13. Debanjali Banerjee	24100114003 24100114050 24100114012 24100114017 24100114018 24100114038 24100114039 24100114040 24100114041 24100114044 24100114048 24100114033 24100114022	1 Month	Webtek Labs Pvt. Ltd.
3.	1. Abhijit Mitra 2. Anamitra Ray 3. Ananya Ray 4. Arghadeep Sen 5. Arkyadip Acharyya 6. Arunava Karanjai 7. Asia Amreen Zaman 8. Atish Kumar Gupta 9. Dibyajyoti Chatterjee 10. Disha Chanda 11. Moumita Sarkar 12. Paramesh Chakraborty 13. Rajarshi Roy Chowdhury 14. Rahul Sodani 15. Pampa Mondal 16. Sandip Bardhan 17. Shibashis Mitra 18. Soubarno Banerjee 19. Soumita Pandit 20. Swapnil Banerjee	24100114001 24100114005 24100114006 24100114011 24100114013 24100114014 24100114015 24100114016 24100114024 24100114025 24100114031 24100114035 24100114037 24100114036 24100114034 24100114043 24100114046 24100114047 24100114049 24100114053	72 Hours	Globsyn
4.	1. Naina Singh	24100114032	72 Hours	Think Again Lab
5.	1. Anuj Kumar Rai	24100114009	1 month	Experis It
6.	1. Don Sarkar	24100114026	1 month	Lyceum Software Technology
7.	1. Md Sabbir Alam 2. Tapas Dey	24100114030 24100114054	1 month	IBM
8.	1. Sayantan Chakraborty	24100114045	1 month	Computer Society of India

16.0   STUDENT'S MENTORSHIP:

Name of Faculty	Students Roll No.	Frequency of interactions	Remarks
Mr. PRANAB GAYEN	24100117010 to 24100117013 (1st Year)	Once in a month	1. Collected their certificates and testimonials
	24100116009 to 24100116014 (2nd Year)	Once in a week	2. Problems and doubts regarding the different classes and others college activities had been discussed.
	24100115001 to 24100115006 (3rd Year)		3. Encourage them to attain the regular classes and submit the assignment within schedule time.
	24100114001 to 24100114003 & 24100114005, 24100114006 (4th Year)		4. Encourage them to take participation in different cultural programme, quiz, debate competition and online certificate examination.
Mr. BIKASH DEBNATH	24100117014 to 24100117017 (1st Year)	Once in a month	1. Collected their certificates and testimonials
	24100116015 to 24100116020 (2nd Year)	Once in a week	2. Problems and doubts regarding the different classes and others college activities had been discussed.
	24100115008 to 24100115011 (3rd Year)		3. Encourage them to attain the regular classes and submit the assignment within schedule time.
	24100114007 to 24100114011 (4th Year)		4. Encourage them to take participation in different cultural programme, quiz, debate competition and online certificate examination.
Mr. PRADIPTA ROY	24100117018 to 24100117021 (1st Year)	Once in a month	1. Collected their certificates and testimonials
	24100116021 to 24100116026 (2nd Year)	Once in a week	2. Problems and doubts regarding the different classes and others college activities had been discussed.
	24100115012 to 24100115017 (3rd Year)		3. Encourage them to attain the regular classes and submit the assignment within schedule time.
	24100114012 to 24100114016 (4th Year)		4. Encourage them to take participation in different cultural programme, quiz, debate competition and online certificate examination.
Ms. ANINDITA DAS	24100117022 to 24100117025 (1st Year)	Once in a month	1 Collected their certificates and testimonials
	24100116027 to 24100116032 (2nd Year)	Once in a week	2. Problems and doubts regarding the different classes and others college activities had been discussed.
	24100115018 to		3. Encourage them to attain the regular classes and submit the

	24100115023 (3rd Year)		assignment within schedule time. 4. Encourage them to take participation in different cultural programme, quiz, debate competition and online certificate examination.
	24100114017 to 24100114021 (4th Year)		
Ms. SUMANA KUNDU	24100117026 to 24100117029 (1st Year)	Once in a month	1. Collected their certificates and testimonials 2. Problems and doubts regarding the different classes and others college activities had been discussed. 3. Encourage them to attain the regular classes and submit the assignment within schedule time. 4. Encourage them to take participation in different cultural programme, quiz, debate competition and online certificate examination.
	24100116033 to 24100116038 (2nd Year)	Once in a week	
	24100115024 to 24100115028 (3rd Year)		
	24100114022 to 24100114025 (4th Year)		
Mr. JADAV CHANDRA DAS	24100117030 to 24100117033 (1st Year)	Once in a month	1 Collected their certificates and testimonials 2. Problems and doubts regarding the different classes and others college activities had been discussed. 3. Encourage them to attain the regular classes and submit the assignment within schedule time. 4. Encourage them to take participation in different cultural programme, quiz, debate competition and online certificate examination.
	24100116040 to 24100116045 (2nd Year)	Once in a week	
	24100115029 to 24100115033 (3rd Year)		
	24100114026 to 24100114028, 24100114030 (4th Year)		
Mr. SUDIPTA HAZRA	24100117034 to 24100117037 (1st Year)	Once in a month	1. Collected their certificates and testimonials 2. Problems and doubts regarding the different classes and others college activities had been discussed. 3. Encourage them to attain the regular classes and submit the assignment within schedule time. 4. Encourage them to take participation in different cultural programme, quiz, debate competition and online certificate examination.
	24100116046 to 24100116050 (2nd Year)	Once in a week	
	24100115034 to 24100115038 (3rd Year)		
	24100114031 to 24100114034 (4th Year)		
Dr. SRIKANTA PAL	24100117038 to 24100117041 (1st Year)	Once in a month	1. Collected their certificates and testimonials 2. Problems and doubts regarding the different classes and others college activities had been discussed. 3. Encourage them to attain the
	24100116051 to 24100116055 (2nd Year)	Once in a week	

	24100115039 to 24100115043 (3rd Year)		regular classes and submit the assignment within schedule time. 4. Encourage them to take participation in different cultural programme, quiz, debate competition and online certificate examination.
	24100114035 to 24100114038 (4th Year)		
Ms. BASANTI BHATTACHARYYA	24100116056 to 24100116060 (1st Year)	Once in a month	1. Collected their certificates and testimonials 2. Problems and doubts regarding the different classes and others college activities had been discussed. 3. Encourage them to attain the regular classes and submit the assignment within schedule time. 4. Encourage them to take participation in different cultural programme, quiz, debate competition and online certificate examination.
	24102817015 to 24102817017 & 24102817060 to 24102817062 (2nd Year)	Once in a week	
	24100115044 to 24100115048 (3rd Year)		
	24100114039 to 24100114042 (4th Year)		
Mr. Ibrahim Sardar	24100117046 to 24100117049 (1st Year)	Once in a month	1. Collected their certificates and testimonials 2. Problems and doubts regarding the different classes and others college activities had been discussed. 3. Encourage them to attain the regular classes and submit the assignment within schedule time. 4. Encourage them to take participation in different cultural programme, quiz, debate competition and online certificate examination.
	24100116061 to 24100116065 (2nd Year)	Once in a week	
	24100115049 to 24100115054 (3rd Year)		
	24100114043 to 24100114046 (4th Year)		
Ms. KRISHNAKALI ROYCHOWDHURY	24100117050 to 24100117053 (1st Year)	Once in a month	1. Collected their certificates and testimonials 2. Problems and doubts regarding the different classes and others college activities had been discussed. 3. Encourage them to attain the regular classes and submit the assignment within schedule time. 4. Encourage them to take participation in different cultural programme, quiz, debate competition and online certificate examination.
	24100116066 to 24100116067 & 24100117001 to 24100117003 (2nd Year)	Once in a week	
	24100115055, 24100115056, 24100116001 to 24100116003 (3rd Year)		
	24100114047 to 24100114051		

	(4th Year)		
Mr. Brijit Bhattacharjee	24100117044 to 24100117056 (1st Year)	Once in a month	1. Collected their certificates and testimonials
	24100117005 to 24100117009 (2nd Year)	Once in a week	2. Problems and doubts regarding the different classes and others college activities had been discussed.
	24100116004 to 24100116008 (3rd Year)		3. Encourage them to attain the regular classes and submit the assignment within schedule time.
	24100114053 to 24100114054 & 24100115058 to 24100115059 (4th Year)		4. Encourage them to take participation in different cultural programme, quiz, debate competition and online certificate examination.

17.0   DEPARTMENTAL BUDGET:

Swami Vivekananda Institute of Science & Technology		
Sonarpur,Kolkata-700145		
Budget and Allocation Statement		
Dept of Computer Science & Engineering		Rs. In Lacs
	2017-2018	
Accounts Head	**Budgeted Amount**	**Allocation Amount**
Capital Equipment, Software & License Fees	3.00	2.80
Library Books	1.00	1.00
Research & Development	1.00	0.80
Laboratory Equipments	1.00	1.00
Visiting Faculty Remuneration	0.20	0.10
Laboratory Maintenance	0.50	0.50
Journal & Periodicals	0.25	0.20
Faculty Development & Initiative	0.75	0.60
Contingency Exp	0.50	0.50
Total	**8.20**	**7.50**

Submitted by

Mr. Pranab Kumar Gayen

HOD (CSE)