

**Guru Nanak Dev Engineering College, Ludhiana**  
**Department of Computer Science & Engineering**

Ref. No.: C.S.E./26/94

Dated: ...13/7/2017

Minutes of 6<sup>th</sup> meeting of Board of Studies of Computer Science and Engineering Department held on 12.07.2017 at 11:00 am in the Committee Room, GNDEC, Ludhiana.

The following persons were present:

1. Dr. Parminder Singh, Professor & Head, Department of Computer Science and Engineering, GNDEC, Ludhiana (Chairman)
2. Er. Amanpreet Singh Brar, Associate Professor, Department of Computer Science and Engineering, GNDEC, Ludhiana (Member)
3. Er. Sumeet Kaur Sehra, Assistant Professor, Department of Computer Science and Engineering, GNDEC, Ludhiana (Member)
4. Er. Vivek Thapar, Assistant Professor, Department of Computer Science and Engineering, GNDEC, Ludhiana (Member)
5. Dr. Gurpreet Singh Lehal, Professor, Department of Computer Science, Punjabi University, Patiala (Member)
6. Dr. Paramjit Singh, Professor, Giani Zail Singh Campus, College of Engineering and Technology, Bathinda (Member)
7. Dr. Shaveta Rani, Professor, Giani Zail Singh Campus, College of Engineering and Technology, Bathinda (External Expert)

The meeting started with welcome address by chairman BOS, and the already circulated agenda was put up for discussion. Following decisions were taken unanimously:

Dr. Parminder Singh

Er. Amanpreet Singh Brar

Er. Sumeet Kaur Sehra

Er. Vivek Thapar

Dr. Gurpreet Singh Lehal

Dr. Paramjit Singh

Dr. Shaveta Rani

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## Proceedings:

### Agenda Item 1

Approval of change of conduct hours and credits of following courses of 1<sup>st</sup> year B.Tech. program:

a. Fundamentals of Computer Programming and Information Technology

Lecture: 03 hours, Credit: 03

Tutorial: 01 hour, Credit: 0.5

b. Fundamentals of Computer Programming and Information Technology Lab.

Practical: 02 hour, Credit: 01

### **Approved**

Committee approved the syllabi and authorized Chairman BOS for further changes if required.

The followings suggestions are given

Course Code	Course Name	Suggestions
BTCS-101	FCPIT	<ul style="list-style-type: none"><li>• Section wise no. of hours to be mentioned</li><li>• Revision of syllabus is required</li></ul>
BTCS-102	FCPIT Laboratory	<ul style="list-style-type: none"><li>• Revision of contents is required</li></ul>

### Agenda Item 2

Approval of changed subject codes of already finalized course scheme of B.Tech. Computer Science and Engineering (Batch 2014 onwards).

### **Approved**

Dr. Parminder Singh

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## B.Tech. Computer Science and Engineering Course Scheme

Course Code	Course Name	Load Allocation			Marks Distribution		Total Marks	Credits
		L	T	P	Internal	External		
<b>Third Semester</b>								
CS-14301	Mathematics-III	3	1	-	40	60	100	4
CS-14302	Computer Architecture and Organization	3	1	-	40	60	100	4
CS-14303	Digital Circuits and Logic Design	3	1	-	40	60	100	4
CS-14304	Data Structures and Algorithms	3	1	-	40	60	100	4
CS-14305	Object Oriented Programming using C++	3	1	-	40	60	100	4
CS-14306	Digital Circuits and Logic Design Lab	-	-	4	30	20	50	2
CS-14307	Data Structures and Algorithms Lab	-	-	4	30	20	50	2
CS-14308	Object Oriented Programming using C++ Lab	-	-	4	30	20	50	2
TR-14301	Workshop Training*				60	40	100	2
<b>Total</b>		<b>15</b>	<b>5</b>	<b>12</b>	<b>350</b>	<b>400</b>	<b>750</b>	<b>28</b>
		<b>Contact Hours= 32</b>						
<b>Fourth Semester</b>								
CS-14401	Discrete Structures	3	1	-	40	60	100	4
CS-14402	Operating System	3	1	-	40	60	100	4
CS-14403	Computer Networks	3	1	-	40	60	100	4
CS-14404	Microprocessor Architecture and Programming	3	1	-	40	60	100	4
CS-14405	Java Programming	3	1	-	40	60	100	4
CS-14406	Operating Systems Lab	-	-	4	30	20	50	2
CS-14407	Computer Networks Lab	-	-	4	30	20	50	2

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CS-14408	Microprocessor Architecture and Programming Lab	-	-	2	30	20	50	1
CS-14409	Java Programming Lab	-	-	4	30	20	50	2
GF-14401	General Fitness				100	-	100	1
Total		15	5	14	420	380	800	28
		Contact Hours= 34						
<b>Fifth Semester</b>								
CS-14501	Relational Database Management System	3	1	-	40	60	100	4
CS-14502	Computer Graphics	3	1	-	40	60	100	4
CS-14503	Design and Analysis of Algorithms	3	1	-	40	60	100	4
CS-14504	Web Technologies	3	1	-	40	60	100	4
DECS-145xx	Elective-I	3	1	-	40	60	100	4
CS-14511	Relational Database Management System Lab	-	-	4	30	20	50	2
CS-14512	Computer Graphics Lab	-	-	2	30	20	50	1
CS-14513	Design and Analysis of Algorithms Lab	-	-	2	30	20	50	1
CS-14514	Web Technologies Lab	-	-	4	30	20	50	2
TR-14501	Industrial Training-I				60	40	100	2
Total		15	5	12	380	420	800	28
		Contact Hours= 32						
<b>Sixth Semester</b>								
CS-14601	Theory of Computation	3	1	-	40	60	100	4
CS-14602	Advanced Database Systems	3	1	-	40	60	100	4
CS-14603	Software Engineering	3	1	-	40	60	100	4
DECS-146xx	Elective-II	3	1	-	40	60	100	4
OECS-146xx	Open Elective	3	-	-	40	60	100	3

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CS-14610	Advanced Database Systems Lab	-	-	4	30	20	50	2
CS-14611	Software Engineering Lab	-	-	4	30	20	50	2
DECS-146xx	Elective-II Lab	-	-	2	30	20	50	1
PRCS-14601	Minor Project	-	-	1	40	60	100	1
GF-14601	General Fitness				100	-	100	1
<b>Total</b>		<b>15</b>	<b>4</b>	<b>11</b>	<b>390</b>	<b>360</b>	<b>750</b>	<b>26</b>

Contact Hours= 30

**Seventh/Eighth Semester**

CS-14701	Advanced Computer Networks	3	1	-	40	60	100	4
CS-14702	Compiler Design	3	1	-	40	60	100	4
CS-14703	Cyber Laws and IPR	3	1	-	40	60	100	4
DECS-147xx	Elective-III	3	1	-	40	60	100	4
DECS-147xx	Elective-IV	3	1	-	40	60	100	4
CS-14715	Advanced Computer Networks Lab	-	-	4	30	20	50	2
PRCS-14701	Major Project	-	-	3	120	80	200	3
DECS-147xx	Elective-III Lab	-	-	2	30	20	50	1
GF-14701	General Fitness				100	-	100	1
<b>Total</b>		<b>15</b>	<b>5</b>	<b>09</b>	<b>460</b>	<b>440</b>	<b>900</b>	<b>27</b>

Contact Hours= 29

**Seventh/Eighth Semester**

TRCS-14701	Industrial Training-II <sup>1</sup>	-	-	-	450	350	800	13
TRCS-14702	Industry Oriented Training <sup>2</sup>	-	-	-	-	200	200	02
<b>Total</b>					<b>450</b>	<b>550</b>	<b>1000</b>	<b>15</b>

\*Institutional training will be imparted at the end of 2<sup>nd</sup> semester in the institute for four weeks

<sup>1</sup> This component will be based on Industrial Training/Institute Department Training/Project Work/Skill Development (Grade-6) Entrepreneurship Training facility created by IKG-PTU, Mohali.

<sup>2</sup> This component will be based on Two Weeks Workshop/Software/Latest Development through Global Initiative of Academic Networks (GIAN).

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## List of Electives

### Elective-I

DECS-14505 Advanced Computer Architecture

DECS-14506 Cryptography and Network Security

DECS-14507 Wireless Networks

DECS-14508 Ethical Hacking

DECS-14509 Network Protocols

DECS-14510 Embedded Systems

### Elective-II

DECS-14604 Simulation and Modelling

DECS-14605 Digital Image Processing

DECS-14606 Artificial Intelligence

DECS-14607 Advanced Java

DECS-14608 .NET Technologies

DECS-14609 Linux Administration

DECS-14613 Simulation and Modelling Lab

DECS-14614 Digital Image Processing Lab

DECS-14615 Artificial Intelligence Lab

DECS-14616 Advanced Java Lab

DECS-14617 .NET Technologies Lab

DECS-14618 Linux Administration Lab

### Elective-III

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DECS-14704 Parallel Computing

DECS-14705 Mobile Computing

DECS-14706 Cloud Computing

DECS-14707 Big Data and Business Analytics

DECS-14708 Data Warehouse and Data Mining

DECS-14717 Parallel Computing Lab

DECS-14718 Mobile Computing Lab

DECS-14719 Cloud Computing Lab

DECS-14720 Big Data and Business Analytics Lab

DECS-14721 Data Warehouse and Data Mining Lab

#### Elective-IV

DECS-14709 Natural Language Processing

DECS-14710 Machine Learning

DECS-14711 Software Testing and Quality Assurance

DECS-14712 Information Security

DECS-14713 Soft Computing

DECS-14714 Agile Software Development

#### Open Electives

OECS-14601 Software Project Management

OECE-14602 Object Oriented Programming using JAVA

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### Agenda Item 3

#### **Finalizing the syllabus of subjects of 7<sup>th</sup>/8<sup>th</sup> semester of B.Tech. Computer Science and Engineering (Batch 2014 Onwards)**

After discussion and deliberation, certain modifications have been done and others recommendations will be incorporated in the proposed Syllabi of subjects of B.Tech. Computer Science and Engineering.

Committee approved the syllabi and authorized Chairman BOS for further changes if required.

The followings suggestions are given:

SEVENTH SEMESTER		
Course Code	Course Name	Suggestions
CS-14702	Compiler Design	<ul style="list-style-type: none"><li>To check the syllabus of Theory of Computation offered in 6<sup>th</sup> semester for repetition</li></ul>
CS-14703	Cyber Laws and IPR	<ul style="list-style-type: none"><li>To include the latest amendment of IT Act 2000.</li><li>Case studies related to breach of cyber laws in different categories.</li><li>Books related with case studies to be explored.</li></ul>
DECS-14704	Parallel Computing	<ul style="list-style-type: none"><li>Parallel programming support environments used in laboratory work to be explored in detail in theory e.g. OpenMP, and MPI.</li></ul>
DECS-14707	Big Data and Business Analytics	<ul style="list-style-type: none"><li>Business Analytics portion should be included and machine learning portion can be reduced.</li></ul>
DECS-14708	Data Warehouse and Data Mining	<ul style="list-style-type: none"><li>Sequencing of topics of first section to be checked.</li><li>Terms used in second section to be checked.</li><li>In last section specify data warehousing applications and data mining trends</li></ul>
DECS-14709	Natural Language Processing	<ul style="list-style-type: none"><li>In recommended book section, book of author Rajeev Sangal, PHI publication to be included.</li><li>Section corresponding to Application of Natural Language Processing to be incorporated.</li></ul>
DECS-14710	Machine Learning	<ul style="list-style-type: none"><li>Section corresponding to Application of Machine Learning to be incorporated.</li><li>Hidden Markov model to be included.</li><li>Introduction to Deep Learning concept to be included in Artificial Neural Networks Section</li></ul>
DECS-14711	Software Testing and Quality Assurance	<ul style="list-style-type: none"><li>In introduction section software testing and quality assurance topics to be incorporated</li></ul>

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		<ul style="list-style-type: none"> <li>• Sequencing of second, third and fifth section to be checked.</li> <li>• Debugging and defect management should be included in one section.</li> <li>• Testing automation may be included.</li> </ul>
DECS-14712	Information Security	<ul style="list-style-type: none"> <li>• Sniffing network traffic topic to be incorporated in information security hurdles section</li> <li>• In cryptography section reorganization of topics should be done.</li> <li>• Book of author Frozen to be incorporated in recommended books section.</li> <li>• Repetition of topics to be checked.</li> </ul>
DECS-14713	Soft Computing	<ul style="list-style-type: none"> <li>• Section other computing techniques should be renamed as optimization techniques.</li> </ul>
DECS-14714	Agile Software Development	<ul style="list-style-type: none"> <li>• Section Agile Design should be renamed as Design principles</li> <li>• Section Agile Testing should be renamed as Testing</li> <li>• Reorganization of topics should be done and section heading should be renamed.</li> </ul>
DECS-14719	Cloud Computing Lab	<ul style="list-style-type: none"> <li>• Practical V iCanCloud can be skipped.</li> </ul>
DECS-14721	Data Warehouse and Data Mining Lab	<ul style="list-style-type: none"> <li>• Simple calculator program can be skipped</li> </ul>
OECS-14601	Software Project Management	<ul style="list-style-type: none"> <li>• Staffing pattern should be included along with recruitment process</li> <li>• No. of lectures should be mentioned</li> </ul>
OECS-14602	Object Oriented Programming using Java	<ul style="list-style-type: none"> <li>• Inheritance section should be splitted into two sections and polymorphism topic should be included in the second section.</li> </ul>

#### Agenda Item 4

Approval of panel of external question paper setters for end semester examinations of B.Tech.and M.Tech.

**Approved**

Committee approved the Panel and authorized Chairman BOS for further changes if required.

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