

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

Ref. No.: CSE/2220

Dated: 30-7-19

Minutes of 10th meeting of Board of Studies of Computer Science and Engineering Department held on 26.07.2019 at 10:00 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. Prof. Amanpreet Singh Brar, Associate Professor, Department of Computer Science and Engineering, GNDEC, Ludhiana (Member)
3. Prof. Amandeep Kaur Sohal, Assistant Professor, Department of Computer Science and Engineering, GNDEC, Ludhiana (Member)
4. Dr. Sumeet Kaur Sehra, Assistant Professor, Department of Computer Science and Engineering, GNDEC, Ludhiana (Member)
5. Dr. Vivek Thapar, Assistant Professor, Department of Computer Science and Engineering, GNDEC, Ludhiana (Member)
6. Mr. Rinku Garg, Senior Technical Lead, Fidelity Information Services India Pvt. Ltd., Chandigarh (Member)
7. Mr. Ravi Kumar, Assistant Professor, Department of CSE, Atal Bihari Vajpayee Govt. Institute of Engineering and Technology, Pragati Nagar, District Shimla. (Member)
8. Dr. Maninder Singh, Professor, Dept. of CSE, Thapar Institute of Engineering and Technology, Patiala (External Expert)
9. Dr. K.S. Gill, Dean Academics, GNDEC, Ludhiana.
10. Prof. Gagandeep Singh Sodhi, Training and Placement officer, GNDEC, Ludhiana.
11. Dr. Amit Kamra, Nominee, Controller of Examination, GNDEC, Ludhiana.

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

Dr. Vivek Thapar

Dr. Maninder Singh

Prof. Amanpreet Singh Brar

Nominee, COE

THD

Prof. Amandeep Kaur Sohal

Mr. Rinku Garg

Dean Academics

Dr. Sumeet Kaur Sehra

Mr. Ravi Kumar

Agenda Item 1

Discussion about course scheme 2018 of B.Tech. Computer Science and Engineering applicable to students of 2018 admission batch onwards and to finalise study scheme of 3rd and 4th semester.

Approved

Agenda Item 2


Discussion about syllabus of 3rd and 4th semester of B.Tech. Computer Science and Engineering of study scheme 2018.

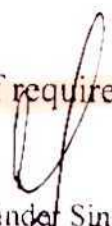
Syllabus of different subjects were discussed and following suggestions were given for different subjects.

1. Course outcomes of subjects needs to be in align with NBA standards and blooms Taxonomy
2. Encourage the students to use tools like Domjudge , Hackerrank, EBox, Packet Tracer, and NS2
3. Practical Examination duration may be changed to 2 hours.
4. Practicals should be open ended for Data structures and Object Oriented Programming.

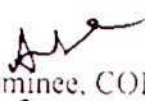
Further, Committee authorize the BOS chairman for further changes if required.


Dr. Parminder Singh

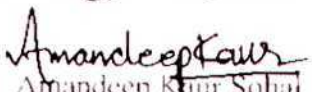

Dr. Vivek Thapar



Dr. Maninder Singh



Dr. Amanpreet Singh Brar

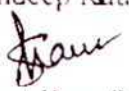

Nominee, COE



TPO


Dr. Amandeep Kaur Sohal


Mr. Rajku Garg


Dean Academics


Dr. Sumeet Kaur Sehra


Mr. Ravi Kumar

Agenda Item 3

Discussion about subjects to be offered for minor degree in Computer Science and Engineering.

1. Courses to be taken through classroom study are approved.
2. MOOC courses approved for current session and committee authorize BOS chairman along with internal members to finalize list of courses offered for minor degree from time to time and take suggestions of experts through e-mail.

Agenda Item 4

Discussion about courses to be offered through MOOC for Honour degree.

Approved for current session and committee authorize BOS chairman along with internal members to finalize list of courses offered through MOOC from time to time and take suggestions of experts through e-mail.

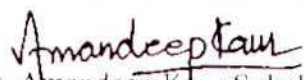
Agenda Item 5

Discussion about study scheme 2019 of M.Tech. Computer Science and Engineering applicable to students of 2019 admission batch onwards.

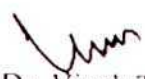
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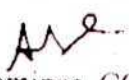

Dr. Parminder Singh



Dr. Amanpreet Singh Brar

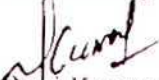

Dr. Amandeep Kaur Sohal



Dr. Sumeet Kaur Sehra


Dr. Vivek Thapar


Nominee, COE


Mr. Rinku Garg


Mr. Ravi Kumar


Dr. Maninder Singh


TPO


Dean Academics

Agenda Item 6

Discussion about syllabus of subjects of M.Tech. Computer Science and Engineering study scheme 2019.

Syllabus of different subjects were discussed and following suggestions were given for different subjects.

1. SDNs, Interplanetary networks, and Delay tolerant networks can be added in Advances in Computer Networks subject.
2. Practicals need to be changed and datasets to be added in Data warehousing and data mining laboratory.
3. ECC and Stream cipher RC5 has to be added in Cryptography.
4. WPA2 to be added in Network Security.
5. Wireshark has to be deleted from Simulation and Modelling.
6. JIRA, Mycolab and Orange Scrum (Project management tools) to be added in Project Management

Further Committee authorize the BOS chairman for any further changes if required.

Dr. Parminder Singh

Dr. Vivek Thapar

Dr. Maninder Singh

Er. Amanpreet Singh Brar

Nominee, COE

THS

Er. Amandeep Kaur Sohal

Mr. Rinku Garg

Dean Academics

Dr. Sumeet Kaur Sehra

Mr. Ravi Kumar

Course: B.Tech. Computer Science and Engineering

(Scheme - 2018 Batch Onwards)

3rd Semester

Category	Course Code	Course Name	Subject Type (Theory / Practical)	Load Allocation (per week)			Marks Distribution		Total Marks	Credits
				L	T	P	Internal	External		
Professional Core Courses	PCCS-101	Object Oriented Programming	Theory	3	0	0	40	60	100	3
Professional Core Courses	PCCS-102	Computer Networks	Theory	3	0	0	40	60	100	3
Engineering Science Courses	ESCS-101	Digital Electronics	Theory	3	0	0	40	60	100	3
Basic Science Course	BSCS-101	Mathematics-III	Theory	3	1	0	40	60	100	4
Humanities and Social Sciences including Management Courses	HSMCS-101	Human values and Professional Ethics	Theory	3	0	0	40	60	100	3
Professional Core Courses	LPCCS-101	Object Oriented Programming Laboratory	Practical	0	0	4	30	20	50	2
Professional Core Courses	LPCCS-102	Computer Networks Laboratory	Practical	0	0	2	30	20	50	1
Engineering Science Courses	LESCS-101	Digital Electronics Laboratory	Practical	0	0	2	30	20	50	1
Training	TR-101	Training-I	Practical	0	0	0	60	40	100	1
Seminar/Project	PRCS-101	Seminar and Technical Report Writing	Practical	0	0	2	50	0	50	1
Mentoring and Professional Development [#]		Mentoring and Professional Development	Practical	0	0	1	-	-	-	-
Total				15	1	11	400	400	800	22
				Contact Hours = 26+1[#]						

*Evaluation of 4 weeks institutional/industrial training held after 2nd semester in the institute.

There will be one period per week for Mentoring and Professional Development; final evaluation of this course will be done based on the combined assessment of odd and even semester of respective year of study.

4th Semester

Category	Course Code	Course Name	Subject Type (Theory / Practical)	Load Allocation (per week)			Marks Distribution		Total Marks	Credits
				L	T	P	Internal	External		
Professional Core Courses	PCCS-103	Discrete Mathematics	Theory	3	1	0	40	60	100	4
Professional Core Courses	PCCS-104	Computer Architecture and Microprocessor	Theory	3	0	0	40	60	100	3
Professional Core Courses	PCCS-105	Operating Systems	Theory	3	1	0	40	60	100	4
Professional Core Courses	PCCS-106	Data Structures	Theory	3	0	0	40	60	100	3
Professional Core Courses	PCCS-107	Software Engineering	Theory	3	1	0	40	60	100	4
Professional Core Courses	LPCCS-103	Computer Architecture and Microprocessor Laboratory	Practical	0	0	2	30	20	50	1
Professional Core Courses	LPCCS-104	Operating Systems Laboratory	Practical	0	0	2	30	20	50	1
Professional Core Courses	LPCCS-105	Data Structures Laboratory	Practical	0	0	4	30	20	50	2
Mandatory Courses	MCI-101	Environmental Sciences	Theory	2	0	0	50	0	50	0
Mentoring and Professional Development #	MPD-102	Mentoring and Professional Development	Practical	0	0	1	100	0	100	1
Total				17	3	9	440	360	800	23
Contact Hours = 28+1[#]										

There will be one period per week for Mentoring and Professional Development; final evaluation of this course will be done based on the combined assessment of odd and even semester of respective year of study.

M.Tech. Computer Science and Engineering (Scheme-2019)

Total Credits=19+17+16+16=68

SEMESTER 1

Sr. No.	Category	Course Code	Subject Name	Subject Type	Load Per Week			Marks Distribution			Credits
					L	T	P	Int.	Ext.	Total	
1	Programme Core	MCS-101	Mathematical Foundations of Computer Science	Theory	3	0	0	50	100	150	3
2	Programme Core	MCS-102	Advanced Data Structures	Theory	3	0	0	50	100	150	3
3	Programme Core	MRM-101	Research Methodology and IPR	Theory	3	0	0	50	100	150	3
4	Programme Elective	MCS-11X	Elective -1	Theory	3	0	0	50	100	150	3
5	Programme Elective	MCS-12X	Elective -2	Theory	3	0	0	50	100	150	3
6	Programme Core	LMCS-102	Advanced Data Structures Laboratory	Practical	0	0	4	50	50	100	2
7	Programme Elective	LMCS-11X	Elective -1 Laboratory	Practical	0	0	2	50	50	100	1
8	Programme Elective	LMCS-12X	Elective -2 Laboratory	Practical	0	0	2	50	50	100	1
9	Audit Course*	MAC-XXX	Audit Course	Theory	2	0	0	50	0	50	S/US
					17	0	8	450	650	1100	19
TOTAL Contact Hours: 25											

SEMESTER 2

Sr. No.	Category	Course Code	Subject Name	Subject Type	Scheme of Studies Per Week			Marks Distribution			Credits
					L	T	P	Int.	Ext.	Total	
1	Programme Core	MCS-103	Advance Algorithms	Theory	3	0	0	50	100	150	3
2	Programme Core	MCS-104	Soft Computing	Theory	3	0	0	50	100	150	3
3	Programme Elective	MCS-13X	Elective-3	Theory	3	0	0	50	100	150	3
4	Programme Elective	MCS-14X	Elective-4	Theory	3	0	0	50	100	150	3
5	Programme Core	LMCS-103	Advance Algorithms Laboratory	Practical	0	0	2	50	50	100	1
6	Programme Core	LMCS-104	Soft Computing Laboratory	Practical	0	0	2	50	50	100	1
7	Programme Elective	LMCS-XXX	Based on Electives-3	Theory	0	0	2	50	50	100	1
8	Core	LMPCS-101	Project	Practical	0	0	4	50	50	100	2
9	Audit Course*	MAC-XXX	Audit Course	Theory	2	0	0	50	0	50	S/US
					16	0	6	450	600	1050	17
TOTAL Contact Hours: 26											

**M. Tech (CSE) Scheme
(2019 Batch Onwards)
SEMESTER 3**

Sr. No.	Category	Course Code	Subject Name	Subject Type	Load Per Week			Marks Distribution			Credits
					L	T	P	Int.	Ext.	Total	
1	Programme Elective	MCS-15X	Elective -5	Theory	3	0	0	50	100	150	3
2	Open Elective	MOCS-XXX	Open Elective	Theory	3	0	0	50	100	150	3
3	Pre Thesis	MPTCS-XXX	Formulation of Research Problem	Practical	0	0	20 (2#+18*)	100	100	200	10
					6	0	20	200	300	500	16
TOTAL Contact Hours: 8											

#Maximum hours for Teacher

*Independent study Hours

SEMESTER 4

Sr. No.	Category	Course Code	Subject Name	Subject Type	Load Per Week			Marks Distribution			Credits
					L	T	P	Int.	Ext.	Total	
1	Programme Core	MTCS-101	Thesis	Practical	0	0	32 (4#+28*)	100	200	300	16
					0	0	20	100	200	300	16
TOTAL Contact Hours: 4											

#Maximum hours for Teacher

*Independent study Hours

LIST OF ELECTIVES

List of Elective-1

Sr. No.	Course Code	Subject Name
1	MCS-111	Machine Learning
2	MCS-112	Advances in Artificial Intelligence
3	MCS-113	Wireless and Mobile Networks
4	MCS-114	Advances in Computer Networks
5	MCS-115	Advanced Operating Systems
6	LMCS-111	Machine Learning Laboratory
7	LMCS-112	Advances in Artificial Intelligence Laboratory
8	LMCS-113	Wireless and Mobile Networks Laboratory
9	LMCS-114	Advances in Computer Networks Laboratory
10	LMCS-115	Advanced Operating Systems Laboratory

List of Elective-2

Sr. No.	Course Code	Subject Name
1	MCS-121	Data Ware House & Data Mining
2	MCS-122	Advance Data Base System Concepts
3	MCS-123	Software Engineering Methodologies
4	MCS-124	Cloud Computing and Security
5	MCS-125	Digital Image Processing
6	LMCS-121	Data Ware House and Data Mining Laboratory
7	LMCS-122	Advance Data Base System Concepts Laboratory
8	LMCS-123	Software Engineering Methodologies Laboratory
9	LMCS-124	Cloud Computing and Security Laboratory
10	LMCS-125	Digital Image Processing Laboratory

List of Elective-3

Sr. No.	Course Code	Subject Name
1	MCS-131	Cryptography
2	MCS-132	Wireless Sensor Networks
3	MCS-133	Network Security
4	MCS-134	Data Science
5	MCS-135	Web Crawler and Search Engines
6	MCS-136	Software Testing and Quality Assurance
7	LMCS-131	Cryptography Laboratory
8	LMCS-132	Wireless Sensor Networks Laboratory
9	LMCS-133	Network Security Laboratory
10	LMCS-134	Data Science Laboratory
11	LMCS-135	Web Crawler and Search Engines Laboratory
12	LMCS-136	Software Testing and Quality Assurance Laboratory

List of Elective-4

Sr. No.	Course Code	Subject Name
1	MCS-141	Agile Software Development Approaches
2	MCS-142	Human and Computer Interaction
3	MCS-143	Natural Language Processing
4	MCS-144	Information Storage and Management
5	MCS-145	Introduction to Intelligent System
6	MCS-146	Computer Vision

List of Elective-5

Sr. No.	Course Code	Subject Name
1	MCS-151	Optimization Techniques
2	MCS-152	Social Network Analysis
3	MCS-153	Distributed Systems
4	MCS-154	Neural Networks and Fuzzy Logic
5	MCS-155	Data Preparation and Analysis
6	MCS-156	Smart Sensors and Internet of Things

List Of Open Electives offered to other Departments

Sr. No.	Course Code	Subject Name
1	MOCS-101	Simulation and Modeling
2	MOCS-102	Project Management
3	MOCS-103	Business Information System
4	MOCS-104	Human Resources Development and Training Methods
5	MOCS-105	Multimedia Communications

LIST OF AUDIT COURSES

Sr. No.	Course Code	Subject Name
1.	MAC-101	English for Research Paper Writing
2.	MAC-102	Disaster Management
3.	MAC-103	Sanskrit for Technical Knowledge
4.	MAC-104	Value Education
5.	MAC-105	Constitution of India
6.	MAC-106	Pedagogy Studies
7.	MAC-107	Stress Management
8.	MAC-108	Personality Development through Life Enlightenment Skills
