

DAV University, Jalandhar
Department of Chemical Engineering

Ref. No. : DAVU/CHL/2018/16A

Dated: April 28, 2018

Subject: Minutes of 3rd meeting of Board of Studies (BoS) held on 28/04/18

The third meeting of Board of Studies (BoS) of Department of Chemical Engineering was held on 28/04/2018 at 02:00 p.m. in the committee room AD-4, Administrative Block.

Following members were present in the meeting:

- | | |
|------------------------|---|
| 1. Er. Vidya Pandey | Convener (Assistant Professor, Department of Chemical Engineering) |
| 2. Er. Sunil Kumar | Member (Assistant Professor, Department of Chemical Engineering) |
| 3. Dr. Sharanjit Singh | Member (Assistant Professor, Department of Mechanical Engineering) |
| 4. Dr. Manish Kumar | Member (Assistant Professor, Department of Chemistry) |
| 5. Prof. A. P. Toor | External Expert (Prof., Dr. SSB UICET, Panjab university, Chandigarh) |

Item 1: Approval of Course Schemes and Syllabi of 2018 batch for Bachelor of Technology - Chemical Engineering

The members of BoS discussed and approved the course scheme and syllabi of 2018 batch of Department of Chemical Engineering as per annexure-I.

Resolved: The BoS approved the Course Schemes and the Syllabi of the above mentioned course emphasizing on the following points:

- The credits of Professional Core Courses in current proposed scheme is 98, and the suggested credit for Professional core courses as per AICTE model curriculum is 48. As suggested by Dr. AP Toor, the credits of Professional Core Courses have been reduced to 85.
- The credits in Professional Core elective and Open elective in current proposed scheme are 16 and 8 respectively; and the suggested credit for Professional Core elective and Open elective as per AICTE model curriculum are 18 and 18 respectively. As suggested by Dr. AP Toor, the credits of Professional Core elective and Open elective have been changed to 19 and 16 respectively.
- The Swachhta Bharat Summer Internship Programme of credit 2 is also introduced in the summer vacation after second semester which will be evaluated in third semester.

Prof. A. P. Toor suggested the following:

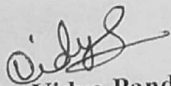
1. The course Process Engineering Economics CHL310 in VI semester can be floated as professional core elective.
2. The professional core course Environmental Engineering CHL308 in VI semester can be floated as open elective.
3. The course Industrial safety and Hazard Management CHL406 in VIII semester can be floated as open elective.

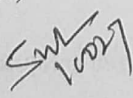
Item 2: The any other items of discussion with the permission of chair

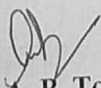
- Prof A. P. Toor advised that department should enrich its library with latest reference books and journals.
- Prof. A.P. Toor suggested that the department should organize special talks and seminars by experts from industries as well as from universities.

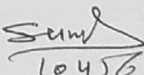
The members welcomed the suggestions of the Expert and assured her that the University would take the cognizance of her valuable input and would put up the same for the consideration of the University Academic Council.

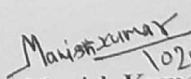
Meeting ended with thanks to the chair.


Er. Vidya Pandey
(Convener)


Dr. Sharanjit Singh
(Member)


Prof. A. P. Toor
(External Expert)


10456
Mr. Sunil Kumar
(Member)


10201
Dr. Manish Kumar
(Member)

Department of Chemical Engineering
DAV University, Jalandhar

AGENDA: Board of Studies in the Subjects of B. Tech

A meeting of the Board of Studies in the Department of Chemical Engineering is scheduled to be held on 28th April, 2018 at 02.00 p.m. in Room No. AD-4 (**Committee Room**), Administrative Block, DAV University, Jalandhar.

1. To discuss and approve the syllabi and courses for 2018 Batch admissions, for B. Tech (Chemical Engineering). The syllabi and courses are to be revised as per the guidelines of AICTE.
2. Any other item, that the members may feel relevant for discussion.



Coordinator
Department of Chemical Engineering
Dated: 26th April, 2018

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Course Scheme & Syllabus

For

B. Tech. in Chemical Engineering

**1st TO 8th SEMESTER
Examinations 2018-2019 Session**

Syllabi Applicable For Admissions in 2018-19

DAV UNIVERSITY, JALANDHAR

4 year Curriculum structure

Undergraduate Degree in Engineering & Technology

Branch: Chemical Engineering

Total credits (4 year course): 185

I. Induction Program

Induction Program	15 days duration
Induction program for students to be offered right at the start of the first year	<ul style="list-style-type: none">• Physical activity• Creative arts• Universal human values• Literary• Proficiency Modules• Lectures by eminent people• Visit to local areas• Familiarization to department and Innovations

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II. Semester wise structure of curriculum

Scheme of Courses B. Tech. in Chemical Engineering Semester-I

S.N O.	Paper Code	Course Title	L	T	P	Cr	Nature of Course
1	MTH151A	Engineering Mathematics-I	4	0	0	4	BSC
2	CHE151A	Chemistry	4	0	0	4	BSC
3	CSE101A	Computer Fundamentals and Programming	4	0	0	4	ESC
4	EVS100A	Environmental Studies	4	0	0	0	MC/Non Credit
5	MEC101A	Engineering Drawing	2	0	4	4	ESC
6	ENG151A	Basic Communication Skills	3	0	0	3	HSMC
7	CHE152	Chemistry Lab	0	0	2	1	BSC
8	CSE103	Computer Fundamentals and Programming Lab	0	0	2	1	ESC
9	ENG152	Basic Communication Skills Lab	0	0	2	1	HSMC
Total Credit						22	

Scheme of Courses B. Tech. in Chemical Engineering Semester-II

S.N O.	Paper Code	Course Title	L	T	P	Cr	Nature of Course
1	MTH152A	Engineering Mathematics-II	4	0	0	4	BSC
2	PHY151B	Engineering Physics	4	0	0	4	BSC
3	MEC103	Mechanical Engineering Fundamentals	4	0	0	4	ESC
4	ELE105	Basic Electrical Engineering	4	0	0	4	ESC
5	SGS107	Human Values and General Studies	4	0	0	0	MC/ Non Credit
6	MEC104	Manufacturing Practice	0	0	4	2	ESC
7	PHY152	Engineering Physics Lab	0	0	2	1	ESC
8	ELE106	Electrical and Electronics Technology Lab	0	0	2	1	ESC
Total credits						20	

Note: At the end of the examination of 2nd Semester the students will undergo compulsory Swachhta Bharat Summer Internship Programme. The marks for this will be included in the 3rd Semester.

L: Lectures T: Tutorial P: Practical Cr: Credits

BSC: Basic Science Courses

HSMC: Humanities, Social Sciences including Management

ESC: Engineering Science Courses

MC: Mandatory Course

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Scheme of Courses B. Tech. in Chemical Engineering Semester-III

S.N O.	Paper Code	Course Title	L	T	P	Cr	Nature of Course
1	CHL211	Energy Engineering	3	0	0	3	PCC
2	MTH252A	Engineering Mathematics-III	4	0	0	4	BSC
3	CHL201	Mechanical Operations	4	0	0	4	PCC
4	CHL202	Chemical Process Calculations	4	0	0	4	PCC
5	CHL203	Fluid Flow	4	0	0	4	PCC
6	CHL222	Mechanical Operations Lab	0	0	3	2	PCC
7	CHL223	Fluid Flow Lab	0	0	3	2	PCC
8		Swachhta Bharat Summer Internship Programme	0	0	0	2	SI
Total Credits						25	

Scheme of Courses B. Tech. in Chemical Engineering Semester-IV

S.NO.	Paper Code	Course Title	L	T	P	Cr	Nature of Course
1	CHL204	Chemical Technology-I (Inorganic)	4	0	0	4	PCC
2	CHL205	Chemical Engineering Thermodynamics	4	0	0	4	PCC
3	CHL206	Heat Transfer	4	0	0	4	PCC
4	CHL207	Chemical Process Instrumentation	4	0	0	4	PCC
5	CHL304	Process Dynamics & Controls	4	0	0	4	PCC
6	CHL330	Instrumentation & Controls Laboratory	0	0	2	1	PCC
7	CHL227	Heat Transfer Operations Lab	0	0	2	1	PCC
Total Credits						22	

L: Lectures T: Tutorial P: Practical Cr: Credits

PCC: Professional Core Courses

BSC: Basic Science Courses

Note: At the end of the examination of 4th Semester the students will undergo compulsory industrial training for a period of 4 weeks duration in reputed industries. Every student will submit the Training Report within two weeks from the start of teaching for 5th Semester. The marks for this will be included in the 5th Semester.

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Scheme of Courses B. Tech. in Chemical Engineering Semester-V

S. NO.	Paper Code	Course Title	L	T	P	Cr	Nature of Course
1	CHL301	Mass Transfer I	4	0	0	4	PCC
2	CHL302	Chemical Reaction Engineering I	4	0	0	4	PCC
3	CHL303A	Chemical Technology-II (Organic)	3	0	0	3	PCC
4	CHL208	Material Science and Technology	3	0	0	3	PCC
5	MTH256A	Numerical Methods	3	0	0	3	BSC
6	CHL323	Chemical Technology Laboratory	0	0	3	2	PCC
7	MTH257A	Numerical Methods Lab with C/C++	0	0	2	1	BSC
8	CHL300	Industrial Training	0	0	0	2	SI
Total Credits						22	

Scheme of Courses B. Tech. in Chemical Engineering Semester-VI

S. NO.	Paper Code	Course Title	L	T	P	Cr	Nature of Course
1	CHL305	Mass Transfer II	4	0	0	4	PCC
2	CHL306	Chemical Reaction Engineering II	4	0	0	4	PCC
3		Professional Core Elective-I	3	0	0	3	PCC
4		Professional Core Elective-II	4	0	0	4	PCC
5		Open Elective-I	4	0	0	4	PEC
6	CHL325	Mass Transfer Lab	0	0	3	2	PCC
7	CHL327	Reaction Engineering Lab	0	0	2	1	PCC
8	CHL329	Environment Technology Lab	0	0	2	1	PCC
Total Credits						23	

L: Lectures T: Tutorial P: Practical Cr: Credits

PCC: Professional Core Courses

BSC: Basic Science Courses

SI: Summer Internship

PEC: Professional Elective Courses

Note:

- Professional Core Elective -I & II should be from the basket of Professional Core Elective -I & II
- Open elective-I should be from the "Open Elective Basket."
- At the end of the examination of 6th Semester the students will undergo compulsory industrial training for a period of 6 weeks duration in reputed industries. Every student will submit the training report within two weeks from the start of teaching of 7th Semester. The marks for this will be included in the 7th semester.

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Scheme of Courses B. Tech. in Chemical Engineering Semester-VII

S. NO.	Paper Code	Course Title	L	T	P	Cr	Nature of Course
1	CHL402	Transport Phenomenon	4	0	0	4	PCC
2	CHL404	Process Engineering Design-I	4	0	0	4	PCC
3		Professional Core Elective -III	4	0	0	4	PEC
4		Open Elective-II	4	0	0	4	OEC
5		Open Elective-III	4	0	0	4	SI
6	CHL400	Industrial Training	0	0	0	2	Proj
7	CHL500	Project	0	0	8	4	
Total Credits						26	

Note:

- Professional Core Elective -III should be from the basket of "Professional Core Elective -III".
- Open elective-II & III should be from the "Open Elective Basket"

Scheme of Courses B. Tech. in Chemical Engineering Semester-VIII

S. NO.	Paper Code	Course Title	L	T	P	Cr	Nature of Course
1		Professional Core Elective -IV	4	0	0	4	PEC
2		Professional Core Elective -V	4	0	0	4	PEC
3		Open Elective-IV	4	0	0	4	OEC
4	CHL405A	Process Modeling & Simulation	3	0	0	3	PCC
5	CHL407	Process Engineering Design-II	4	0	0	4	PCC
6	CHL425	Process Modeling & Simulation Lab	0	0	2	1	PCC
7	CHL450	Seminar	0	0	4	2	HSMS
8	ENG351	Technical Communication	3	0	0	3	HSMS
Total Credits						25	

L: Lectures T: Tutorial P: Practical Cr: Credit

PCC: Professional Core Courses

SI: Summer Internship

OEC: Open Elective Courses

HSMC: Humanities, Social Sciences including Management

PEC: Professional Elective Courses

Proj: Project

Note:

- Professional Core Elective -IV & V should be from the basket of "Professional Core Elective -IV & V" respectively.
- Open elective-IV should be from the "Open Elective Basket"

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Professional Elective Courses -I

S. No.	Paper Code	Course Title	L	T	P	Cr
1	CHL310	Process Engineering and Economics	3	0	0	3
2	CHL350	Water conservation and management	3	0	0	3
3	CHL351	Sustainability Engineering	3	0	0	3

Professional Elective Courses -II

S. No.	Paper Code	Course Title	L	T	P	Cr
1	CHL446	Optimization Techniques	4	0	0	4
2	CHL447	Electrochemical Technology	4	0	0	4
3	CHL457A	Alternate Energy Technology	4	0	0	4

Professional Elective Courses -III

S. No.	Paper Code	Course Title	L	T	P	Cr
1	CHL451A	Biochemical Engineering	4	0	0	4
2	CHL452A	Membrane Separation	4	0	0	4
3	CHL453A	Polymer Processing	4	0	0	4

Professional Elective Courses -IV

S. No.	Paper Code	Course Title	L	T	P	Cr
1	CHL454A	Fertilizer Technology	4	0	0	4
2	CHL455A	Petrochemical Technology	4	0	0	4
3	CHL456A	Corrosion Engineering	4	0	0	4

Professional Elective Courses -V

S. No.	Paper Code	Course Title	L	T	P	Cr
1	CHL459	Paint Technology	4	0	0	4
2	CHL460	Advanced Separation Processes	4	0	0	4
3	CHL461	Application of Nano Technology in Chemical Engineering	4	0	0	4

L: Lectures T: Tutorial P: Practical Cr: Credits

Open Elective Basket*

S.NO.	Paper Code	Course Title	L	T	P	Cr
1	ELE801	Electro-Mechanical Energy Conversion	4	0	0	4
2	ELE802	Transducers and Signal Conditioning	4	0	0	4
3	ELE466	MATLAB-State of the Art	4	0	0	4
4	CHL308	Environmental Engineering	4	0	0	4
5	CHL406	Industrial Safety and Hazard Management	4	0	0	4
6	CHL801	Industrial Pollution Control	4	0	0	4
7	CHL802	Fuel Cell Technology	4	0	0	4
8	MEC801	Industrial Engineering Techniques	4	0	0	4
9	MEC802	Energy Resources	4	0	0	4
10	CSE801	Software Engineering & Project Management	4	0	0	4
11	CSE802	Computer Networks	4	0	0	4
12	ECE801	Communication and Media Foundations	4	0	0	4
13	ECE802	Electronic Displays	4	0	0	4
14	ECE803	Everyday Electronics	4	0	0	4
15	CIV801	Construction Materials and Techniques	4	0	0	4
16	CIV802	Railway and Tunnel Engineering	4	0	0	4
17	MGT151A	Fundamentals of Management	4	0	0	4
18	MGT152	Fundamentals of Advertising	4	0	0	4
19	MGT153	Fundamentals of Stock Market	4	0	0	4
20	MGT154	Fundamentals of Research Methods	4	0	0	4
21	MGT155	Fundamentals of Accounting & Finance	4	0	0	4

L: Lectures T: Tutorial P: Practical Cr: Credits

*The open elective basket is subjected to change in accordance with the BOS of other departments.

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B Tech Course Structure

S. No.	Category	Suggested Break up of credits (AICTE 2018)	Credits
1	Humanities and Social Sciences including Management courses	12	9
2	Basic Science courses	25	25
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc	24	21
4	Professional core courses	48	85
5	Professional Elective courses relevant to chosen specialization/branch	18	19
6	Open subjects – Electives from other technical and /or emerging subjects	18	16
7	Project work, seminar and internship in industry or elsewhere	15	10
8	Mandatory Courses [Environmental Sciences, Induction Program, Indian Constitution, Essence of Indian Traditional Knowledge]	(Non credit)	(non-credit)