



# GURUGRAM UNIVERSITY, GURUGRAM

(Established under Haryana Act 17 of 2017)

**AGENDA FOR THE MEETING OF ACADEMIC COUNCIL TO BE HELD ON 25.02.2020 AT 12:00 NOON IN THE BOARD ROOM, GURUGRAM UNIVERSITY, GURUGRAM.**

- 1. To consider the recommendation of the committee constituted by the Vice Chancellor for prescribing ordinance for Ph.D program under various faculties annexure-I, page-01 to 23.**

Note: The Vice Chancellor constituted a committee comprising the following to draft the ordinance for Ph.D program under various faculties in the University. Accordingly committee deliberated on the issue at length after considering the ordinances of other Universities and also the guidelines issued by University Grants Commission from time to time.

1. Prof. Girish Chopra, Dean, Academic Affairs, Kurukshetra University, Kurukshetra.
2. Prof. Sanket Vij, Dept. of Management, B.P.S. Mahila Vishwavidyalaya, Khanpur Kalan, Sonapat.
3. Dr. Badruddin, Dept. of Law, Gurugram University, Gurugram
4. Sh. S.N. Sharma, Advisor to VC, Gurugram University, Gurugram
5. Sh. Surender Sharma, Legal Advisor, Gurugram University, Gurugram

Finally, the committee met on 09.01.2020 and prepared a draft of the said ordinance which is annexed above.

Vice Chancellor considered the report of the committee and has ordered to place it before the Academic Council for consideration.

- 2. To note the contents of letter received from Bar Council of India vide letter number BCI:D: 1169:2019 (LE/Std.16/17.11.2019) dated 26.12.2019 annexure II pages 23-30 granting approval for starting LLB three year course with intake of 60 (Sixty) seats.**

Note: The University approached the Bar Council of India for granting approval to introduce LLB three year course from the session 2020-21. Accordingly inspection was conducted by the Bar Council of India and granted approval to start LLB three year course with an intake of 60 seats from the session 2020-21 subject to the following conditions:-

1. Regular faculty of 7 teachers may be appointed before starting the session.

2. Rs. 3 lacs may be spent on purchase of books in the first half of the current session and in every succeeding year books worth Rs. 2 lacs must be purchased. Online journals like Manupatra etc. must also be subscribed to besides the periodicals/law journals.
3. The arrangement of the separate library for the law Faculty may be made in the current semester itself.
4. The Khordha Law College should maintain a register reflecting activities of legal aid centre.
5. The college should have computer lab.
6. Moot court should adequate space to provide impressive court room arrangements.
7. The college should ensure 70% attendance of students.
8. The Vice Chancellor considered the report and order to place it before the Academic council.

**3. To approve the Action taken by the Vice Chancellor in approving the report of expert committee for introducing two new specialization i.e. Health care management and Business Analytics in MBA course from the session 2019-20 annexure-III, page-31 to 41.**

Note: The expert committee in its meeting held on 24<sup>th</sup> and 25<sup>th</sup> of June, 2019 decided to introduce two specialization i.e. 1. Health care management 2. Business Analytics; in MBA two year course from the session 2019-20. The Vice Chancellor considered the said report and approved in anticipation of approval of Academic Council.

**4. To consider the proposal that following Faculties may be created and accordingly Statutes 18 of the University Act may be amended as under:-**

Existing Provision

**18. Faculties of University**

There shall be the following Faculties, namely:-

- (1) Faculty of Humanities;
- (2) Faculty of Social Sciences;
- (3) Faculty of Life Sciences;
- (4) Faculty of Education;

Proposed amendment

**18. Faculties of University**

There shall be the following Faculties, namely:-

- (1) Faculty of Humanities;
- (2) Faculty of Social Sciences;
- (3) Faculty of Life Sciences;
- (4) Faculty of Education;

(5) Faculty of Commerce and Management;  
(6) Faculty of Information Technology;  
(7) Faculty of Law; and  
(8) Such other Faculties, as the Executive Council may prescribe on the recommendation of Academic Council by the Statutes.

(5) Faculty of Commerce and Management;  
(6) Faculty of Information Technology;  
(7) Faculty of Law; and  
**(8) Faculty of Physical Sciences**

**(9) Faculty of Engineering & Technology**

**(10) Faculty of Pharmaceutical Sciences, Health and Brain Research**

(11) Such other Faculties, as the Executive Council may prescribe on the recommendation of Academic Council by the Statutes.

**NOTE:**

The Haryana Government vide notification No. S.O. 9/H.A. 17/2017/S. 4/2019 dated 15<sup>th</sup> February, 2019 published in Haryana Govt. Gaz. (Extra.), 15<sup>th</sup> February, 2019 has affiliated the Government & Non-Government colleges situated in the District Gurugram and Nuh with this University from the session 2019-20. The total colleges in this area are 76. Some colleges have filed CWP in the Punjab & Haryana High Court challenging the above notification of the Government.

However, out of these colleges, 23 colleges are functioning under this University from the session 2019-20 and the students of these colleges have appeared in first semester examinations conducted by this University.

In view of the above it is imperative to create the Faculty of Physical Sciences and Faculty of Engineering & Technology to have academic domain and regulations on these colleges. The Faculty of Pharmaceutical Sciences, Health and Brain Research is proposed to be created because the University has the Department of Pharmaceutical Sciences, which has been approved by the

Pharmacy Council of India and All India Council for Technical Education. Further, it is proposed to establish the Health and Brain Research Centre in the University **annexure-IV**.

**5. Any other item.**



**REGISTRAR**



# GURUGRAM UNIVERSITY, GURUGRAM

(Established under Haryana Act 17 of 2017)

## Proceedings of the Ph.D Ordinance Committee held on 09.01.2020 at 11:00 A.M in Gurugram University Gurugram

The followings attended the meeting:

1. Prof. Badruddin, Dept. of Law, Gurugram University, Convener
2. Prof. Girish Chopra, Prof. Zoology (Retired), KUK, Kurukshetra. Outside Expert
3. Prof. Sanket Vij, DMS, BPSMV, Khanpur Kalan. Outside Expert
4. Sh. S.N. Sharma, Advisor to VC, Gurugram University, Gurugram Member
5. Sh. Surender Sharma, Legal Advisor, Gurugram University, Gurugram Member

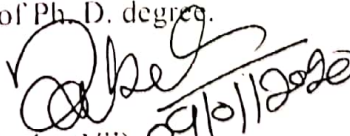
Prof. M.S. Turan, Dean Academic Affairs, Gurugram University, Gurugram attended the meeting as special invitee.

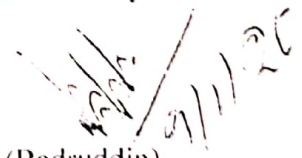
Prof. N.K. Garg, Department of Commerce, MDU, Rohrtak showed his inability to attend the meeting due to pre-engagement.

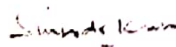
Earlier three meetings of the Committee were held on 04.10.2019 and 30.10.2019 and 22.11.2019. Ph.D Ordinance of Gurugram University, Gurugram was finalized in the light of UGC regulation 2009 and as modified in 2010, 2014, 2016 and 2018 after consulting the ordinances of other state Universities such as M.D.U, K.U.K., G.J.U. etc.

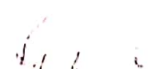
Prof. Badruddin, Convener of the committee was of the view that the UGC Notification, 5<sup>th</sup> May 2016 related to UGC (Minimum Standards and Procedure for award of M. Phil./Ph. D. Degrees) Regulations 2016, Clause No. 5.1. "All Universities and Institutions Deemed to be Universities shall admit M.Phil/Ph.D. students through an Entrance Test conducted at the level of Individual University/Institution Deemed to be a University. The University/Institution Deemed to be a University may decide separate terms and conditions for Ph.D. Entrance Test for those students who qualify UGC-NET (including JRF)/UGC-CSIR NET (including JRF)/SLET/GATE/teacher fellowship holder or have passed M.Phil programme. Similar approach may be adopted in respect of Entrance Test for M.Phil programme." may be incorporated so as to satisfy the terms and conditions of the UGC for the award of Ph. D. degree.

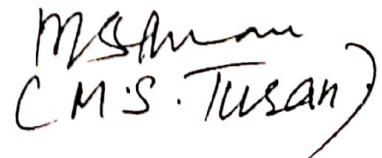
  
(Girish Chopra) 09/01/2020

  
(Sanket Vij) 09/01/2020

  
(Badruddin) 09/01/2020

  
(Surender Sharma)

  
(S.N. Sharma)

  
M.S. Turan  
C.M.S. Turan

Encl: Ph. D. Ordinance

**ORDINANCE NO. GURUGRAM/PH. D./2019/1**  
**ORDINANCE**  
**FOR**  
**DOCTORATE OF PHILOSOPHY**

**1 SHORT TITLE, APPLICATION AND COMMENCEMENT**

- 1.1 These Regulations shall be called Minimum Standards and Procedure for Award of Ph.D. Degrees Regulations, 2019 of Gurugram University.
- 1.2 These Regulations shall apply to Gurugram University (established by the State Legislative Act 17 of 2017) departments and its affiliated colleges/institutes.
- 1.3 These Regulations shall come into force from the date of notification by the Gurugram University, Gurugram.
- 1.4 The degree of Doctor of Philosophy (Ph.D.) may be awarded in the Faculties of University (Faculty of Life Sciences, Faculty of Humanities, Faculty of Commerce and Management, Faculty of Social Sciences, Faculty of Information Technology, Faculty of Education, Faculty of Law and any other Faculty approved by Executive Council) subject to general guidance of the Academic Council and general control of the faculty concerned.
- 1.5 The student enrolled/registered in Ph.D. Programme shall be called as Research Scholar.
- 1.6 Programme stands for Doctor of Philosophy (Ph. D.).
- 1.7 Course stands for individual paper
- 1.8 Credit is the weightage assigned to a course in terms of contact hours. One contact hour per week per course per semester is equivalent to one credit.

**2 ACADEMIC ELIGIBILITY**

- 2.1 Master's Degree with 55% marks in the main subject (or an examination recognized as equivalent thereto)/allied subject (or an examination recognized as equivalent thereto) OR its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed, calculations of marks as per CBCS pattern).
- 2.2 A relaxation of 5% marks of 55% marks i.e. from 55% to 52.25% marks in the aforesaid Degrees is allowed for those candidates belonging to SC/ST/BC (Block A & B) non-creamy layer)/ Differently Abled of Haryana.

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- 2.3 In case of candidate possessing Degree equivalent to Master's Degree from a Foreign University, degree equivalence certificated issued by AIU is mandatory.

### 3 PROCEDURE FOR ADMISSION TO PRE Ph.D. COURSE

- 3.1 Applications for admission to Ph.D. programme shall be invited through advertisement once in a year normally in the month of October /November or as decided by the University.
- 3.2 The University Departments/Affiliated Colleges/Institutes shall take into account the State level Reservation Policy during admissions in Ph. D. Programme
- 3.3 Gurugram University shall notify Department wise predetermined total number of seats as recommended by the Departmental Research Committee's (DRC) of the respective department. In each department 50% seats shall be reserved for exempted category by the DRC. The Department shall prepare the roster regarding the same and in case total numbers of seats are odd in number then the department shall allocate the odd seat in two categories (exempted and entrance) alternatively in successive year.
- 3.4 Admissions to the Ph.D. Programme shall be made through an Entrance Test conducted by Controller of Examination of the University for each Discipline. The syllabus for the Entrance Test shall be laid down by the concerned Teaching Departments. The entrance test will be of three hours duration and will be for 100 marks. The question paper will have two parts. Part-1 of the question paper shall be common for all the disciplines and Part-II of the question paper shall be discipline specific. Part-I will have 25 objective-type questions carrying 25 marks related to reasoning/aptitude/current affairs/general knowledge etc. and Part-II carrying 75 marks will require the students to answer Objective-type/short answer questions in the subject concerned. There shall be no negative marking. A candidate must secure 50% marks to qualify the entrance test (47.50% for SC/ST/Differently abled candidates).
- 3.5 The following categories of candidates are exempted from Ph.D. entrance test:
- 3.5.1 UGC/CSIR-JRF (with validity period)/Teacher Fellowship holder/Inspire fellow (with validity period)/GATE (with validity period)/GPAT(with validity period) is eligible to

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submit the Application Form duly filled in all respects for admission in Ph.D. programme under Exempted Category, if otherwise eligible.

3.5.2 The admission in Ph.D. Programme under exempted category shall be made in order of merit on the basis of the following criteria :

Sr. No.	Particulars	Weightage
1.	Percentage of marks in 12th Class examination	05%
2.	Percentage of marks in UG examination	15%
3.	Percentage of marks in PG examination	25%
4.	Weightage for teaching or research professional experience as full time Assistant Professor in University/college	01 marks for each completed year* (max marks 05)
5.	Qualifying Examination from Gurugram University	05 marks
6.	Interview	10 marks

Note: The candidates who are covered under the exempted categories may also appear in the entrance test, if they so desire, to improve their weightage.

3.6 Criteria for Preparing Merit List and Admission to Ph.D. Programme through Entrance Test :

3.6.1 Those who qualify Ph. D. Entrance Test, the department shall invite them for interview, in the order of merit prepared on the basis of criteria mentioned below i.e. from Sr. No. 1 to 7, three times the total number of seats in the department.

3.6.2 The merit list for admission to Ph.D. programme shall be prepared by the DRC according to the following criteria:-

Sr. No.	Particulars	Weightage
1.	Percentage of marks in 12th Class examination	05%
2.	Percentage of marks in UG examination	15%
3.	Percentage of marks in PG examination	25%
4.	Percentage of marks in Entrance Examination	30%
5.	Candidates who have qualified NET/SLET	05 marks
6.	Weightage for teaching or research professional experience as full time Assistant Professor in University/college	01 marks for each completed year* (max marks 05)

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7.	Qualifying Examination from Gurugram University	05 marks
8.	Interview	10 marks

\* Completed year = continuous 150 days teaching in an academic session shall be considered as one year

- 3.7 The supervisor will be nominated subsequently by the Departmental Research Committee (DRC) for each admitted candidate keeping into consideration the research interest of the student and specialization of the eligible supervisors. The final approval of synopsis shall follow the successful completion of course work. In the case of subject of interdisciplinary/inter-specialty nature, the DRC may recommend the appointment of a Joint Supervisor from other Universities/Research Labs etc. or Foreign Universities & R&D Institutions. The credit will be shared in 70:30 ratio between supervisor and co-supervisor.
- 3.8 The allocation of Supervisor of student eligible for Ph.D. registration shall be made by the DRC keeping into consideration the research interest of the student submitted during selection in pre Ph.D. course work and available specialization among faculty Supervisors.
- 3.9 Only a predetermined number of students in accordance with the seats announced in the admission brochure of the university shall be admitted.
- 3.10 Those candidates who have qualified JRF (valid) conducted by the UGC/ CSIR/ DBT/ DST/ CBSE and ASRB etc. may join Ph.D. programme in the University on the recommendations of the Supervisor and Chairperson of the Department concerned at any time during the academic session and will have to qualify their Pre-Ph.D. course in the subsequent session. Such candidates shall be allocated over and above seat published in the admission brochure of the University, subject to the constraint (of the Supervisor-Scholars ratio) in the departments/institutes of the University. They shall apply through the prescribed application form given in the prospectus.
- 3.11 The candidate seeking admission to Ph.D. programme must produce NOC from his employer on or before interview.
- 3.12 All the students who are selected by the DRC for admission in Pre. Ph.D. programme are, required to deposit fee within 15 days of display of merit list. In case the candidate fails to deposit fee in the stipulated time, the seat shall be treated as vacant and shall be offered to the next candidate in order of merit.

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#### 4 PRE Ph. D. COURSE WORK

- 4.1 Each admitted student shall be required to complete the mandatory full time regular Pre. Ph. D. course work of 12 credits (03 courses) designed by the Department as per UGC Guidelines. The Pre-Ph.D. course work must include one course on research methodology which may include quantitative methods and computer applications, One Subject Elective course and One Term Paper course (Seminar in the thrust area(s) of the research work and Research assignment/ Practical/Review of literature/survey etc.).
- 4.2 If found necessary, DRC of the concerned Department may allow a candidate to undertake pre Ph.D. course work in any sister department of the University/ Laboratories of National Repute (CSIR/ICMR etc).
- 4.3 The candidate will be allowed to appear in course work examination, if he/she meets the following requirements:
- 4.3.1 Bears a good moral character
  - 4.3.2 Has been on the rolls of Department/Institute during the concerned semester.
  - 4.3.3 Has attended not less than 75% of lectures delivered in theory as well as practical's.
  - 4.3.4 Relaxation in shortage of lectures up to 20% will be allowed by the Head of the Institution/Department on the following grounds:
    - Self-illness;
    - Illness/death of parents, brother, sister or any other close family member;
    - Any other reason beyond the control of the student to the satisfaction of the Head of the Institution/Department.
- 4.4 The medium of instructions and examination shall be English/ Hindi except in case of Hindi where it shall be Hindi and in case of Sanskrit it shall be English or Hindi or Sanskrit.
- 4.5 The qualifying marks in each paper of the Pre. Ph.D. course work shall be 50% (theory/practical paper) individually and in aggregate also. In case, a candidate fails to complete the course work he/she may be permitted to complete the course work in three attempts in subsequent years from the date of admission

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in such papers in which he/she had obtained less than 50% marks. The pass Grade shall be B (50%) and higher grades.

- 4.6 Internal assessment marks of the candidate who fails in external examination shall be carried forward for next reappear examination. The external marks of candidate who fail in internal assessment shall be carried forward to next relevant examination.
- 4.7 If a candidate fails to pass Pre Ph.D. course work examination within stipulated time, his/her admission to Ph.D. programme shall be cancelled.
- 4.8 Only on satisfactory completion of mandatory full time pre Ph. D. course work, the candidate's Registration in the Ph.D. programme shall be considered.

**5 APPLICATION & REGISTRATION**

- 5.1 Application (s) for registration to Ph.D. programme from eligible candidates on the prescribed format along with the synopsis prepared in consultation with the concerned supervisor shall be considered by the Department Staff Council (DSC). The DSC may :
  - 5.1.1 recommend the synopsis of research for consideration by Department Research Committee.
  - Or
  - 5.1.2 suggest suitable changes in the synopsis of research.
  - Or
  - 5.1.3 reject the synopsis of research.
- 5.2 Head of the concerned Department, on behalf of the Department Staff Council, shall place the application(s) for registration along with the recommendations of the Department Staff Council before the Departmental Research Committee (DRC). DRC shall invite the candidate(s) to defend their research proposal(s).
- 5.3 The Department Research Committee for registration to the programme in the University Teaching Departments shall consist of the following :
  - 5.3.1 Head of the Department concerned - Chairman
  - 5.3.2 All Professors and Associate Professors.
  - 5.3.3 \*One Assistant Professor among those eligible for appointment as supervisor, by rotation for two years.
  - 5.3.4 Two outside experts to be nominated by the Vice-

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5.3.5 Chancellor for a period of two years out of the panel of six experts proposed by the Department Staff Committee.

5.3.6 Dean of the concerned Faculty.

Two/fifths of the members shall form a quorum. The proceedings of meeting of the Departmental Research Committee will be valid if at least one out of two experts attends the meeting.

The supervisor of the candidate should be a member of DRC as a special invitee for case of concerned candidate.

\*Provided that the Assistant Professor in the Department should have at least three years of full time teaching experience at the PG or five years at UG level.

5.4 All the Professors, Associate Professor and Assistant Professor\*\* serving in the concerned Department on regular basis having doctorate degree in the concerned discipline shall be eligible for nomination as research supervisor. The maximum number of Research Scholars to be registered under a supervisor/joint supervisor shall be as under: Professor = 8, Associate Professor = 6, Assistant Professor = 4

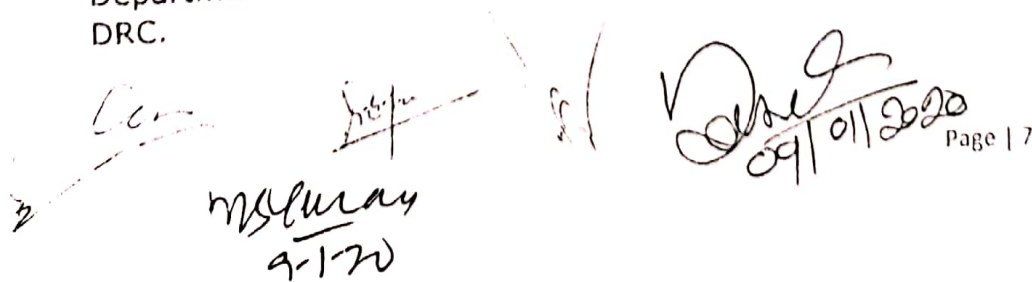
\*\*The Assistant Professor having three years post Ph.D. regular experience of P.G. Programme along with 4 research publications in UGC approved journals shall be eligible to be the supervisor of any candidate.

5.5 DRC shall recommend the registration of the qualified candidates with the nominated supervisors and while recommending the registration of the candidate for consideration by Post Graduate Board of Studies (PGBoS), the DRC shall clearly state whether in its opinion,

5.5.1 The subject proposed for research is suitable or not:

5.5.2 The supervisor(s) recommended is/are eligible or not.

However, if the DRC decides so, it may either reject the proposal or may suggest suitable changes in the topic of research proposal for reasons to be recorded. In the latter case the candidate shall be given 02 months to process his/her application for registration to be routed through the Department Staff Committee for another presentation before DRC.


  
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5.6 The recommendations of the DRC for Ph.D. registration shall be placed before the PGBoS, the Faculty and the Academic Council for its consideration and approval, respectively. The date of registration of the research scholar shall be the date on which the PGBoS recommends the registration of the candidate.

5.7 All the students who are selected by the DRC for admission in Ph.D. programme are, required to deposit registration fee within 15 days of approval from academic council. In case the candidate fails to deposit fee in the stipulated time, the seat shall be treated as vacant and his/her registration shall be stand cancelled.

### 6 CHANGE OF SUPERVISOR

6.1 In case the Supervisor has expired or has left the services of the University OR the supervisor proceeds on leave/deputation of more than one year and the research scholar makes a request in writing to change the supervisor.

Or

6.2 By mutual consent of both the Supervisor and the Research Scholar.

Or

6.3 In case of extreme hardship where it becomes almost impossible for a candidate/supervisor to work together, the candidate/supervisor may submit representation to the Head of the Department for necessary action. The HoD shall refer the matter before the DRC and PGBoS for decision. However, the change in such cases shall be allowed after the approval of the Academic Council.

### 7 CHANGE OF TOPIC

A Research Scholar may, normally not later than one year after his/her registration, modify the topic of her subject on the recommendations of the DRC and P. G. Board of Studies by the Academic Council.

### 8 DURATION

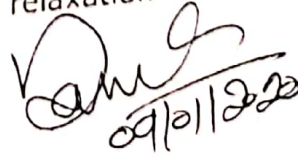
8.1 Every candidate registered for Ph.D. programme shall be required to pursue his/her research work for a minimum duration of 3 years including Pre. Ph. D. course work. The reduction in this period of 3 years from enrollment shall not be allowed under any circumstances. Provided that if the supervisor of a candidate who is registered for Ph. D. in another University recognized by

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UGC, has joined the employment of this University and the candidate registered under him/her in the same University and enrolled in the programme for not less than one year, such a candidate, if he/she fulfills the minimum qualifications (as prescribed in UGC guidelines/Ph. D. Ordinance of Gurugram University), may be permitted by the DRC and PGBoS, to be registered such candidate as a research scholar of the University with the same topic. Such a candidate may submit his/her thesis after the expiry of not less than two years in Gurugram University.

- 8.2 Every registered Research Scholar shall be required to stay at the concerned Department of the University for a minimum period of 180 working days in the entire period after Ph. D. registration. Further, out of above mentioned working days the research scholar shall be required to stay for a minimum period of 21 working days in every six months at concerned Department of the University. The concerned Supervisor/co-supervisor shall issue a certificate to this effect.
- 8.3 The candidates who are awarded fellowship by the University/outside agency to carry out Ph.D. work shall be required to stay at University headquarter for whole duration of the fellowship. The Chairperson of the Department concerned will forward the details of the stay of the candidate to R&S branch on the recommendation of the supervisor.
- 8.4 No research scholar shall join any other course of study or appear in any other examination conducted by a University leading to the award of Degree or Diploma during the period of his/her study, otherwise his/her registration for Ph.D. will be cancelled by the Vice-Chancellor on the recommendations of the P.G. Board of Studies/Board of Studies. However, the action of the Vice-Chancellor in such cases will be placed before the Academic Council for information.
- 8.5 Every candidate shall submit his/her thesis within a period of four years from the date of his/her registration, failing which his/her registration shall stand cancelled unless this period is extended by a maximum of two years by the Vice-Chancellor but not for more than one year at a time, on the recommendations of the Supervisor, the Head of the Department and Dean of the Faculty for valid reasons to be recorded.
- 8.6 The woman candidates and persons with disability (more than 40% disability) may be allowed a relaxation of two additional

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years. The woman candidates may be provided maternity leaves/Child care leaves once in the entire duration of Ph.D. for upto 240 days.

8.7 The researcher will have to apply for extension well before the expiry of permissible period including extension. If the researcher still fails to complete his/her research work within the extended period and requires more extension, his/her request can be forwarded on the prescribed form duly recommended by the Supervisor, Head of the Department and Dean of the Faculty concerned requesting the Vice-Chancellor to grant extension after six years. It will be the prerogative of the Vice-Chancellor that he/she may refer the matter to a Committee comprising the following for consideration of the request of the candidate:-

- 8.7.1 Dean Academic Affairs
- 8.7.2 Dean of the Faculty concerned
- 8.7.3 HOD, Concerned
- 8.7.4 Supervisor of the candidate

The Committee shall give its recommendations for extension of period in submission of his/her Ph.D thesis for not more than one year specifying that no extension will be allowed beyond that period with an annual prescribed fee along with late fee of Rs. 50000/-. If candidate still fail to submit the thesis within the permissible time, his/her registration of Ph.D. shall be cancelled automatically. The recommendations of the Committee shall be referred to the Academic Council for its approval.

## 9 MEDIUM

In the language subjects, the thesis may be presented in English, Hindi or the language concerned. In other subjects, the research scholar shall have the option of submitting the thesis either in English or Hindi.

## 10 MONITORING

10.1 Every research scholar shall be required to submit half yearly report on the prescribed Performa to the Department. The Supervisor of the Research Scholar will give his assessment about the progress of the scholar. The Report shall be placed before the Department Staff Council and Departmental Research Committee for its evaluation. The progress report will also be submitted to the Dean of the concerned faculty.

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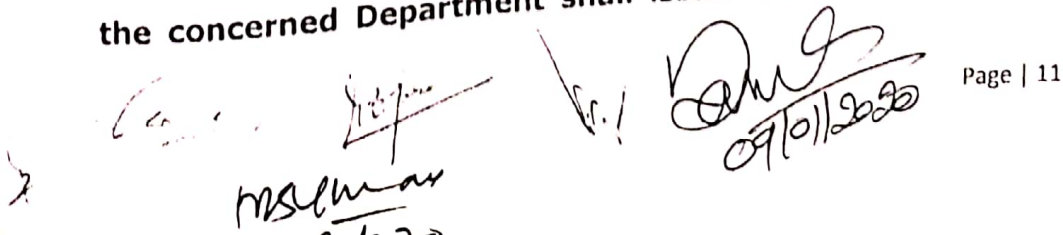
- 10.2 In case the progress of the research scholar mentioned unsatisfactory by the supervisor, the DRC shall record the reasons for the same and suggest corrective measures.
- 10.3 In case, the research scholar fails to implement the suggested corrective measures by the DRC and progress of the subsequent half year is also found unsatisfactory by the supervisor, the Head of the Department on behalf of the Department Staff Committee present the case in the upcoming meeting of DRC. The DRC may recommend, along with the observation of the Dean of the concerned faculty, to the P.G. Board of Studies for cancellation of the registration of the said candidate.
- 10.4 Every year, the Research Scholar shall present a seminar on the progress of his/her research work in the meeting of DSC. The seminar will be organized by the concerned Head of the Department.

## 11 SUBMISSION

11.1 Research Scholar shall publish at least two research papers in UGC-CARE/Scopus/Web of Science/IEEE/ABDC/NAAS Journals related to the thesis work before the submission of the thesis and produce evidence for the same in the form of acceptance letter or the reprint. The Copyrights of the published work shall be jointly shared by the Supervisor and Scholar.

Further, research scholar shall make two paper presentations in conferences/seminars before the submission of the thesis for adjudication and produce evidence for the same in the form of presentation certificates and or acceptance letters/reports.

11.2 Prior to submission of the thesis, the student shall make a Pre-submission presentation **before the Departmental Staff Council** in the Department (three months before the submission of thesis) which shall be open to all the Faculty members and research scholars for feedback. The feedback may be incorporated into the draft thesis under advice of the supervisor. **The Chairperson of the concerned Department shall issue a circular one week**

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**prior to pre submission presentation on the recommendation of the supervisor.**

- 11.3 The submitted thesis shall be an original piece of research work characterized either by discovery of new facts or enunciation of a new theory or by fresh interpretation of known facts or theories. In either case, it should evince the candidate's capacity for critical acumen and judgment.
- 11.4 The R & S Branch shall provide information regarding submission of fee for the thesis and the Research Scholar shall be required to take 'No Dues' from R&S, Accounts, Library, concerned Department and Hostel etc.. The thesis shall be accepted by the Examination Branch after production of No Dues.
- 11.5 The research scholar shall submit four printed/typed copies of his/her thesis, mentioning the name of the candidate, supervisor etc. along with two soft copies of thesis in pdf files on separate CDs.
- 11.6 The typing/printing of thesis should be done on both sides of the paper (instead of single side printing) on A-4 size paper in font size "12" in "Times New Roman format".
- 11.7 The thesis should be typed in 1 ½ space. But the bibliography/references should be typed in single space.
- 11.8 The copies of thesis meant for evaluation should be bound in paper-back form and one copy should be in hard binding, which will be sent to the library.
- 11.9 The title page of the Ph. D. thesis would be in Maroon Colour with Golden Printing on it.
- 11.10 Thesis will include a declaration from the candidate countersigned by the Supervisor of the research scholar in the following format:

**Declaration**

This is to certify that the material embodied in the present work entitled "-----" is based on my original research work. It has not been submitted in part or full for any other diploma or degree of any University.

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Page | 12

My indebtedness to other works has been duly acknowledged at the relevant places and thesis is under similarity level zero as prescribed by UGC (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulations, 2018

(Signature of the Candidate with date)  
Countersigned by

Supervisor with date

Forwarded by:

Head of the Department with date)

11.11 A candidate shall also submit six copies of the summary of the thesis indicating how far the thesis embodies the result of his/her own research and in what respects his/her investigations appear to him/her to advance the knowledge of subject of his/her thesis. The exam branch shall send the same to the approved examiners for seeking their consent to examine the thesis.

11.12 The research scholar may incorporate in his/her thesis the contents of any work which he/she may have published on the subject. But he/she shall not submit as his/her thesis, any work for which a degree has been conferred on him/her by this or any other University.

11.13 Ph.D. Scholar Report Card submitted by the Scholar at the time of submission of thesis will be maintained by the exam branch.

11.14 However, a candidate may incorporate in his/her Ph.D. thesis the work done by him/her for his/her M.Phil. dissertation. He/she shall in that case specify the new dimensions added to his/her earlier work and indicate in what way the Ph.D. thesis amounts to a further contribution to the study of the subject of his/her research.

**12 PLAGIARISM CHECK**

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Page | 13

12.1 Every research scholar submitting thesis, dissertation, or any other such documents to the HEI shall submit an undertaking indicating that the document has been prepared by him/her and that the document is his/her original work and free of any kind of plagiarism.

12.2 Each supervisor shall also submit a certificate indicating that the work done by the researcher under his/her supervision is plagiarism free.

12.3 The Ph.D. thesis must undergo a Plagiarism check by either Turnitin/authenticate or any other software recommended by Gurugram University from time to time..

12.4 The similarity checks for plagiarism shall exclude the following:

12.4.1 All quoted work reproduced with all necessary permission and/or attribution.

12.4.2 All references, bibliography, table of content, preface and acknowledgements.

12.4.3 All generic terms, laws, standard symbols, Mathematical Formula, Supervisor name, Institutional, departments, Quotes, and standards equations.

Note: The research work carried out by the student, faculty, researcher and staff shall be based on original ideas, which shall include abstract, summary, hypothesis, observations, results, conclusions and recommendations only and shall not have any similarities. It shall exclude a common knowledge or coincidental terms, up to fourteen (14) consecutive words.

12.5 Plagiarism would be quantified into following levels in ascending order of severity for the purpose of its definition:

12.5.1 Level 0: Similarities upto 10% - Minor similarities, no penalty

12.5.2 Level 1: Similarities above 10% to 40% - Such student shall be asked to submit a revised script within a stipulated time period not exceeding 6 months.

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- 12.5.3 Level 2: Similarities above 40% to 60% - Such student shall be debarred from submitting a revised script for a period of one year.
- 12.5.4 Level 3: Similarities above 60% -Such student registration for that programme shall be cancelled.
- 12.6 Regarding self Plagiarism or cases where published work of the student is shown as similarity in the check, a certificate (Plagiarism Self Exclusion Certificate) has to be issued by the supervisor specifying and attaching the articles that have been published by the student from thesis work. Only these articles should be excluded from the check. No other article of the Supervisor or the student should be excluded from the check. This will be for reference of the library which will perform the final check.
- 12.7 The final Plagiarism check from the library is essential so that the correct report is submitted at the time of thesis submission.
- 12.8 The Chief Librarian of University shall issue the final Certificate of Plagiarism check called the Plagiarism Verification Certificate and Supervisor shall certify that the similarity index is acceptable as per UGC guidelines applicable from time to time and adopted by the University. This certificate has to be included in the thesis. This similarity index should not be more than 10%.
- 12.9 Plagiarism Report as obtained from Central Library as per parameters of UGC shall be included as an appendix in the thesis and copy of the publications of research paper shall also be included as an appendix in the thesis.

### 13 APPOINTMENT OF EXAMINERS

13.1 On receiving application/request along with an abstract of the thesis from the research scholar duly certified by the Supervisor that his/her research work is complete and ready for submission, the P.G Board of Studies/Board of Studies shall approve a panel of ten external examiners who shall not be below the rank of Professor

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to evaluate the thesis recommended by the concerned supervisor. The chairperson shall certify that no external examiner in the panel is below the rank of Professor.

13.2 The PGBoS while approving the panel of examiners shall ensure that the proposed examiners are from the same area of specialization to which Ph. D. thesis to be evaluated pertains. Efforts should be made to recommend examiners of national and international repute and from the leading Institutes/Universities in the country. The board shall ensure that at least 50% of the recommended examiners in the panel are from places outside the state. It shall be up to the P.G. Board of Studies concerned to recommend the examiners from outside the Country. In case thesis is forwarded to examiner from outside the country remuneration of \$100 shall be paid.

13.3 The candidate shall submit his/her thesis within six months from the date on which the Board of Studies has approved the appointment of examiners provided that the PGBoS may, for satisfactory reasons, extend the period by a maximum of another six months only.

**14 EVALUATION OF THESIS**

14.1 The thesis shall be referred to two examiners selected by the Vice-Chancellor out of the already approved panel. At least one examiner shall be from outside the State/Country. The examiners shall be requested to send their reports within two months.

14.2 Each examiner shall give detailed report on the thesis and make a clear-cut recommendation on the evaluation proforma supplied by the CoE whether:

The thesis be accepted.

OR

The thesis be rejected.

OR

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The research scholar be asked to resubmit the thesis with improvements/revisions.

- 14.3 In case the examiner(s) recommend the revisions/improvements of the thesis then he/she may make suggestions for such improvements/revisions as deemed fit and proper. The research scholar shall be required to submit the revised thesis within one year of communication to him/her. After revision, the thesis shall be sent to the same examiner(s) for evaluation, unless he/she expresses his/her inability.
- 14.4 If one examiner recommends award of Ph.D. degree and the other recommends rejection, then the thesis shall be sent to the third examiner for taking a final decision. In any case, there should be two positive recommendations for the award of Ph.D. degree.
- 14.5 The examiners must categorically state whether the thesis is suitable/fit for publication in its original form or in a modified form, to be spelt out by the examiners. The permission for publication of the thesis, if applied for, by the concerned research scholar may be given by the Vice-Chancellor if the examiners have recommended that the thesis is suitable/fit for publication. If there is difference of opinion between the examiners regarding the publication of the thesis, the case shall be referred to external expert nominated by the Vice Chancellor and the report of external expert shall be submitted to the Vice-Chancellor for consideration and approval.
- 14.6 The examiners shall send a set of questions that they would like the research scholar to answer in the viva-voce examination.
- 14.7 A research scholar whose thesis is rejected shall not be registered again for Ph.D. with the same topic.

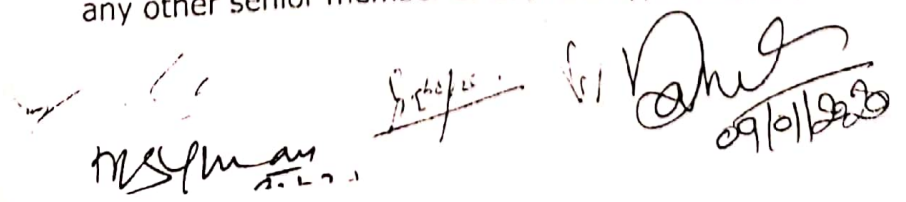
**15 VIVA-VOCE EXAMINATION AND AWARD OF DEGREE**

15.1 The viva-voce examination shall be held by a Board of Examiners consisting of Research Scholar Supervisor and one of the examiners who evaluated the thesis, to be nominated by the Vice-

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Chancellor, within a period of one month of the receipt of reports of evaluation of thesis.

- 15.2 In case both the examiners who evaluated the thesis are unable to conduct the viva voce, the Vice-Chancellor shall appoint another examiner out of the panel to conduct the viva-voce examination. The viva-voce examination shall, unless ordered otherwise by the Vice-Chancellor, be held at Gurugram in the Department concerned. The date, time and the subject of the thesis shall be notified by the Head of the Department among the teachers and the research scholars of the concerned Faculty, who may be permitted to be present at the time of the viva-voce examination, but they shall have no right to put any question to the examinee.
- 15.3 The viva-voce examination can be conducted through video conferencing on the recommendation of PGBoS on the basis of valid reasons and after approval from the Vice Chancellor and in such case the recording of the viva-voce shall be supplied by the concerned Department to the Exam Branch and the Exam Branch shall maintained the same.
- 15.4 The reports of the examiners on the thesis as well as on the viva-voce examination, shall be placed before Research Degree Committee (RDC) consisting of the Vice-Chancellor, the Dean of the Faculty, the Head of the Department concerned and Controller of Examination, within one month of the viva-voce examination. Three out of these four members shall form the quoram of the meeting. The Controller of Examinations shall issue the notification of the award of Ph.D. Degree after clearance of the case by RDC. At least one week notice shall be issued for the meeting. The Committee shall further, after considering the total process of evaluation, recommend it to the Academic Council for final consideration and approval. If the Dean or Head of the Department somehow is not able to participate in the meeting, the Vice-Chancellor will co-opt any other senior member of the Faculty, in his/her/ their place.

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- 15.5 Following the successful completion of the evaluation process and announcements of the award of Ph.D., the University shall submit a soft copy (pdf file) of Ph.D. thesis to UGC within a period of thirty days for hosting the same on INFLIBNET which shall be accessible to all Institutions/Universities.
- 15.6 Along with the Degree, the University shall issue a certificate certifying that the degree has been awarded in accordance with the provisions of the Ph.D. regulations of the UGC.
- 15.7 The publication right/copyright will be jointly shared by the supervisor and research scholar.

### 16 CANCELLATION OF REGISTRATION

The Vice-Chancellor, on the recommendation of the P. G Board of Studies of department concerned, may cancel the registration of a research scholar whose research work has been reported to be unsatisfactory by the Post Graduate Board of Studies/Board of Studies.

### 17 Fee for Ph.D. work

- 17.1 The research scholars enrolled for Ph.D. course shall deposit their fee as per fee structure notified or laid down from time to time by the University during the Ph.D. Course.
- 17.2 No fees/dues deposited by the research scholar shall not be refunded by the University in case the research scholar leaves the Ph.D. Programme at his/her own level or found ineligible.
- 17.3 Pre Ph.D. course work fee (to be paid by those who are required to complete course work):
- 17.3.1 Course work fee for Engineering & Technology Rs. 30000/-
  - 17.3.2 Course work fee for others Rs. 20000/-
- 17.4 For Ph.D. Programme every research scholar shall pay fee as under:
- 17.4.1 Registration Fee Rs.10000/-  
(In case of foreign/NRI students except for students from less

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developed countries, this fee shall be US 1000)

17.4.2 Annual Fee except for the candidates having Laboratory subjects as Rs. 10,000/-  
Annual Fee for subjects involving use of Laboratory such as psychology, Geography, science subjects such as Maths, Statistics, Physics, Chemistry, Pharmacy, Life Sciences, Engineering and Technology etc. Rs. 20,000/-

Annual Fee shall be payable within 15 days of registration and annually thereafter.

17.4.3 Evaluation fee to be charged at the time of submission of Ph.D. thesis Rs.10000/-

17.4.4 Late fee for delayed payment of annual fee:

17.4.4.1 upto six months Rs.1000/- p.m.

17.4.4.2 beyond six months Rs.2000/- p.m.

\*In case of foreign/NRI students except for students from less developed countries this fee shall be US \$ 1000.

17.5 The fees shall be subject to changes as decided by the University from time to time.

**18 REMUNERATION FOR THE EXAMINERS**

Each examiner shall be paid the remuneration of Rs.5000/- for evaluating the thesis and Rs.3000/- for conducting viva-voce. A foreign examiner shall be paid US\$ 100 or its equivalent in Indian currency. However, these rates shall be subject to changes as decided by the University from time to time.

**19 CONDUCT OF RESEARCH SCHOLAR**

19.1 After enrolment in Ph. D. Programme, the research scholar work and conduct shall be under the general disciplinary control of the Department/Institute/college.

19.2 The Vice-Chancellor shall have the power to cancel the admission of a research scholar at any time, after the issue of a due show-cause notice, on disciplinary or any other grounds which are considered not to be in consonance with the dignity and behaviour of a research scholar or non-payment of requisite fee or any other dues or any other reason(s).

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Date: 09/10/2020

**19.3** Ragging in the Department/Institute at the Campus of Gurugram University is strictly prohibited and the research scholar is required to abide by the Anti-Ragging rules/instructions of the Gurugram University.

## **20 LEGAL JURISDICTION**

Any legal dispute relating to Ph.D. admission/registration of a research scholar will be subject to Court(s) at Gurugram or Court(s) having jurisdiction in Gurugram.

## **21 GENERAL GUIDELINES**

- 21.1 Where this document is silent about any rule, the University Ordinance/UGC guidelines from time to time will be applicable.
- 21.2 The Programme fee shall be paid by the candidate as prescribed by the University from time to time.
- 21.3 Eligibility Criteria, Fee Structure, Academic Calendar, Examination Schedule, Sports Calendar and Cultural Calendar for the academic year shall be given in the University Prospectus.
- 21.4 All academic problems of the students other than those affecting the University rules and regulations framed from time to time may be looked into by the Dean of Academic Affairs.
- 21.5 No re-evaluation shall be permitted of the answer books of Entrance Test of Pre-Ph.D. Examinations.
- 21.6 Notwithstanding anything in this ordinance, the Vice-Chancellor may take such measures as may be necessary in respect of candidates registered with the University.

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mail : info@barcouncilofindia.org  
site : www.barcouncilofindia.org



*Signature*

Tel. : (91) 011-4922 5000  
Fax : (91) 011-4922 5011

*Handwritten notes:*  
HOD of Law Faculty  
member of the Bar Council of India  
affiliated

# भारतीय विधिज्ञ परिषद् BAR COUNCIL OF INDIA

(Statutory Body Constituted under the Advocates Act, 1961)

#) dro 21/12/20  
21/12/20  
21, Rouse Avenue Institutional Area, Near Bal Bhawan, New Delhi - 110002

BCD. B. : 2019 (LE/Std. 16/17.11.2019)

26.12.2019

*Handwritten:* please  
The Registrar,  
Gurugram University,  
Mayfield Garden, Sector-51,  
Gurugram, Haryana - 122 003  
gurugramuniv@gmail.com

*Handwritten:* on lead  
The Principal/Head of the Deptt.,  
Faculty of Law,  
Gurugram University,  
Mayfield Garden, Sector-51,  
Gurugram (Gurgaon),  
Haryana - 122 003

ESTABLISHMENT BRANCH  
Diary No. 1084  
Date: 21-01-2020  
Gurugram University Gurgaon

REGISTRAR OFFICE  
Diary No. 1156  
Date: 28/01/2020  
Gurugram University Gurgaon

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6/2/20  
Dean-Law

## Interim Consent Letter

- Sub: 1) Declining of approval of affiliation of three year LL.B course for the academic year 2019-2020.  
2) Recognition to Gurugram University, Gurugram (Gurgaon), Haryana as per Section 7(1)(i) of the Advocates Act, 1961 for the purpose of conferring the degrees in law and further its its Faculty of Law, Gurugram University, Gurugram (Gurgaon), Haryana be granted approval for imparting three year LLB course with intake of one section of 60 students for a period of one year i.e. for the academic year 2020-2021.

Sir,

The Standing Committee of the Legal Education Committee of the Bar Council of India at its meeting held on 16<sup>th</sup> and 17<sup>th</sup> November, 2019 considered the inspection report of Faculty of Law, Gurugram University Gurugram(Gurgaon), Haryana submitted by the inspection team of the Bar Council of India.

After consideration, Committee is of the view that as per Section 7(1)(i) of the Advocates Act, 1961, Gurugram University, Gurugram (Gurgaon), Haryana be granted recognition for the purpose of conferring the degrees in law in respect of three year LLB course and its Faculty of Law, Gurugram University, Gurugram (Gurgaon), Haryana be granted approval for imparting three year LLB course with intake of one section of 60 students for a period of one year i.e. for the academic year 2020-2021.

The University wanted to run 3 years law course. The inspection Report shows five conditions i.e.

Firstly Regular faculty of 7 teachers may be appointed before starting the session.

Secondly the library is common while under the Statutory Rules has to be separate.

It has only 184 books and how can new University start with law course with such poor condition of the library. To start with as per the statutory rules, University has to follow by making available the requisite number of books.

Further it is also recorded that there are common rooms for both boys and girls at the ground floor, though it was for the use of other faculties. The University has to construct a separate common room for boys and girls.

Further the faculty shown does not reveal the term of their appointment. Under the statutory rule, the appointment of faculty Member should be on regular basis and salary should be on UGC scale and paid through Bank.

**The University has to file an undertaking as aforesaid before starting the said course. Thus approval for the year 2019-20 cannot be approved. The approval could only be considered for the academic year 2020-2021 after the aforesaid compliance. On receipt of the same, the matter will be placed before the Committee for consideration. The University has also to apply for the UGC approval.**

**Specific conditions imposed by the inspection team and approved by the Committee :-**

1. Regular faculty of 7 teachers may be appointed before starting the session.
2. Rs. 3 lacs may be spent on purchase of books in the first half of the current session and in every succeeding year books worth Rs. 2 lacs must be purchased. Online journals like Manupatra etc. must also be subscribed to besides the periodicals/law journals.
3. The arrangement of the separate library for the law faculty may be made in the current semester itself.
4. The Khordha Law College should maintain a register reflecting activities of legal aid centre.
5. The college should have computer lab.
6. Moot court should adequate space to provide impressive court room arrangements.
7. The college should ensure 70% attendance of students.

**The University/College is directed to fulfill the conditions stipulated as per the inspection report and as per Legal Education Rules 2008, failure of which may lead to subsequent necessary and proper action being taken in this regard :-**

*other standard setting body as the discipline is allotted to by any Act, statute, or Rules of the Government of India or of a State.*

*For the Three Year Bachelor of Law degree course only with two sections without the Honour program, there shall be minimum of 4 core faculty in the first year six in the second and eight in the third year in addition to the Principal/Head or Dean as the case may be.*

*Provided that an institution intending to run any specialized or honours course must have at least three faculty in the group in which specialization and honours courses are offered.*

*Provided further that each full time faculty shall take as many classes in the subject or subjects as may be assigned to them on the basis of standard prescribed by 'the standard setting institution' like UGC.*

*Provided further, if any institution of a University, which was already affiliated to the University and approved to run professional courses of either scheme or both by the Bar Council of India after inspection of the University, falls short of required full time faculty, the new admission in courses may be required to remain suspended until new required number of faculty is procured. The University shall before starting a new academic session, notify which institutions are only be allowed to admit fresh students.*

*Provided further that if while inspecting the University it was found that in any institution of the University adequate number of full time faculty was not there in the staff, the Bar Council after giving notice to the University might give a public notice directing the University not to admit students in the new academic year in that institution.*

**Rule -18 Minimum weekly class program per subject (paper):.**

*There shall be for each paper (with 4 credit) Four class-hours for one hour duration each and one hour of tutorial/moot court/project work per week.*

**Institution should submit affidavit in compliance of all the conditions stipulated in the letter with adequate proof of such compliance within six weeks. The same shall be verified during the next inspection.**

*You are requested to kindly note that you will be required to seek extension of approval of affiliation for imparting three year LL.B degree course from the next academic year onwards by way of filing an application in such respect alongwith affiliation order of the concerned University before the Bar Council of India.*

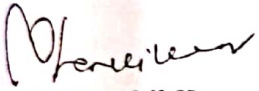
**This letter is subject to final approval/confirmation of the Legal Education Committee and General Council of the Bar Council of India.**

**You are also requested to attach a copy of this letter with your compliance report/reply.**

**Very Important :-** Please henceforth ensure to send any compliance affidavit/reply and affiliation orders separately to [complianceaffiliationle@gmail.com](mailto:complianceaffiliationle@gmail.com), apart from copying it to [dlebci@gmail.com](mailto:dlebci@gmail.com). Please do not send any e-mail/s to [legaeducationdepartmentbci@gmail.com](mailto:legaeducationdepartmentbci@gmail.com).

**For any other query/ies you can send an e-mail to [dlebci@gmail.com](mailto:dlebci@gmail.com)**

This is for your information and necessary action.



**(N. Senthil Kumar)**  
Asstt. Secretary  
Head of the Deptt.

Yours Sincerely,



**(Srimanto Sen)**  
Secretary

*Legislatures and Parliament, Other Legal Functionaries, Market Institutions, Law Firms, Companies, Local Self Government and other such bodies as the University shall stipulate, where law is practiced either in action or in dispute resolution or in management.*

*Provided that internship in any year cannot be for a continuous period of more than Four Weeks and all students shall at least gone through once in the entire academic period with Trial and Appellate Advocates.*

*(b) Each student shall keep Internship diary in such form as may be stipulated by the University concerned and the same shall be evaluated by the Guide in Internship and also a Core Faculty member of the staff each time. The total mark shall be assessed in the Final Semester of the course in the 4<sup>th</sup> Clinical course as stipulated under the Rules in Schedule II.*

College/University should also follow Rule-10 of Legal Education Rules 2008 which is quoted hereunder :-

#### 10. Semester system

*The course leading to either degree in law, unitary or on integrated double degree, shall be conducted in semester system in not less than 15 weeks for unitary degree course or not less than 18 weeks in double degree integrated course with not less than 30 class-hours per week including tutorials, moot court room exercise and seminars provided there shall be at least 24 lecture hours per week.*

*Provided further that in case of specialized and/or honours law courses there shall be not less than 36 class-hours per week including seminar, moot court and tutorial classes and 30 minimum lecture hours per week.*

*Provided further that Universities are free to adopt trimester system with appropriate division of courses per trimester with each of the trimester not less than 12 weeks.*

College/University should also follow Rule 17 and Rule 18 of Schedule III of Legal Education Rules 2008 which is quoted hereunder :-

#### Rule 17. Core Faculty:

*There shall be sufficient number of full time faculty members in each Centre of Legal Education ( i.e. ,Department, constituent or affiliated college ) to teach each subject at all point of time for running courses who can be supported by part time or visiting faculty. Such a core faculty shall in no case be less than six in the first year of the approval with both streams in operation, eight in the second year and ten in the case of third year of law courses. In addition, for the integrated course there shall be adequate faculty in the subjects offered in the liberal educational subjects as part of the course by the institution. These faculties in the liberal educational discipline in Arts, Science, Management, Commerce, Engineering, Technology or any other discipline shall possess qualification as is required under the UGC guideline or under such*

7. Minimum marks in qualifying examination for admission: Bar Council of India may from time to time, stipulate the minimum percentage of marks not below 45% of the total marks in case of general category applicants, 42% for OBC category and 40% of the total marks in case of SC and ST applicants, to be obtained for the qualifying examination, such as +2 Examination in case of Integrated Five Years' course or Degree course in any discipline for Three years' LL.B. course, for the purpose of applying for and getting admitted into a Law Degree Program of any recognized University in either of the streams.

Provided that such a minimum qualifying marks shall not automatically entitle a person to get admission into an institution but only shall entitle the person concerned to fulfill other institutional criteria notified by the institution concerned or by the government concerned from time to time to apply for admission.

College to reply within six weeks whether they are following Clause-24, Schedule-II of Legal Education Rule-2008 lays down Moot Court exercises and Internship: Clause-25, Schedule-III lays down Minimum period of Internship which is quoted hereunder.

**24. Moot court exercise and Internship:**

*This paper may have three components of 30 marks each and a viva for 10 marks.*

*(a) Moot Court (30 Marks). Every student may be required to do at least three moot courts in a year with 10 marks for each. The moot court work will be on assigned problem and it will be evaluated for 5 marks for written submissions and 5 marks for oral advocacy.*

*(b) Observance of Trial in two cases, one Civil and one Criminal (30 marks):*

*Students may be required to attend two trials in the course of the last two or three years of LL.B. studies. They will maintain a record and enter the various steps observed during their attendance on different days in the court assignment. This scheme will carry 30 marks.*

*(c) Interviewing techniques and Pre-trial preparations and Internship diary (30 marks):*

*Each student will observe two interviewing sessions of clients at the Lawyer's Office/Legal Aid Office and record the proceedings in a diary, which will carry 15 marks. Each student will further observe the preparation of documents and court papers by the Advocate and the procedure for the filing of the suit/petition. This will be recorded in the diary, which will carry 15 marks.*

*(d) The fourth component of this paper will be Viva Voce examination on all the above three aspects. This will carry 10 marks.*

*25. Minimum Period of Internship: (a) Each registered student shall have completed minimum of twelve weeks internship for Three Year Course stream and twenty weeks in case of Five Year Course Stream during the entire period of legal studies under NGO, Trial and Appellate Advocates, Judiciary, Legal Regulatory authorities,*

9. A Centre of Legal Education must ensure that not less than three percent seats are reserved for persons with disabilities.
10. Centre of Legal Education shall equip itself to provide appropriate facilities in terms of the physical infrastructure, academic infrastructure and any other facilities required for the effective participation of disabled students, teachers and staff in their respective activities. For e.g. (a) ramps in public buildings and (b) Braille symbols and auditory signals in elevators or lifts.

Further, the University/College must specify the timing of the college which has not been given. College should also maintain the timing which has to be minimum 5 ½ hours with half an hour break. **College is directed to file an affidavit to the Bar Council of India within six weeks mentioning the timing of the classes.** The relevant rules of Legal Education which are mandatory to be ensured are as follows :-

**Rule (xxiii), Chapter I**

**“(xxiii) “Regular Course of Study” means and includes a course which runs for at least five hours a day continuously with an additional half an hour recess every day and running not less than thirty hours of working schedule per week.”**

**Rule 5 of Schedule III**

**“Classes may be conducted between 8 a.m. to 7 p.m. in a Centre of Legal Education, which is not fully residential. However the Library may remain open till 10 p.m.”**

Further, the institution should follow the attendance rule and file affidavit that they are following the aforesaid rule. The next inspection team shall also see whether the said rules are being followed by the university or not. The relevant Rule 12 is given below :-

***“12. End Semester Test: No student of any of the degree program shall be allowed to take the end semester test in a subject if the student concerned has not attended minimum of 70% of the classes held in the subject concerned as also the moot court room exercises, tutorials and practical training conducted in the subject taken together.***

***Provided that if a student for any exceptional reasons fail to attend 70% of the classes held in any subject, the Dean of the University or the Principal of the Centre of Legal Education, as the case may be, may allow the student to take the test if the student concerned attended at least 65% of the classes held in the subject concerned and attended 70% of classes in all the subjects taken together. The similar power shall rest with the Vice Chancellor or Director of a National Law University, or his authorized representative in the absence of the Dean of Law.***

***Provided further that a list of such students allowed to take the test with reasons recorded be forwarded to the Bar Council of India.”***

University/College should also admit students as per the below mentioned Rule:

1. The Institution is directed to establish the Legal Aid Centre as per Clause-11, Schedule-III of Rule-11 of the Part-IV of the Legal Education Rules – 2008. CLE should activate Legal Aid Clinic.
2. CLE must teach clinical subjects and give marks as per the schedule.
3. Institution should ensure the payment of salary to teachers as per Rules 22 schedule III, Part IV of BCI Rules.
4. The library should be furnished as per Clause 15 of Schedule III of Legal Education Rules 2008 given below :-

**Minimum Library requirement: To start with, a Law Library shall have a set of AIR manual, Combo offer of CD of AIR Pvt. Ltd. (containing electronic version of AIR Supreme Court and High Court Data bases Research 1950-2015 (four connections each) Cr. L.J. Data Base 1950-2015(four connections) AIR Privy Council Data Base 1900-1950 (four connections) AIR Mannual latest 6<sup>th</sup> Edition(1-45 Vols.) AIR Journal 2015, Cr. L.J. 2015, L.I.C. 2015, AIR Civil Cases 2015, AIR Law Lines 2015, AIR Cheque Dishonour Reports 2015, AIR Accident Claims and compensation 2015, Institution shall get electronic versions updated every year by AIR Pvt. Ltd. Central Acts and Local Acts, Criminal law journal, SCC, Company cases, Indian Bar Review, selected Judgements on Professional Ethics and Journals with the back volumes for at least ten years and also such number of text books in each subjects taught during the period according to the minimum standard ratio of ten books for each registered students. For running integrated program, text books of such other subjects are also to be kept in the similar minimum ratio.**

5. The institution should keep in mind that minimum 10 sets of Indian Bar Review, selected judgments and professional Ethics published by Bar Council of India Trust and the AIR volumes/set must be promptly ordered for the library if not already ordered, as it is an essential requirement to run a law college which is stipulated by Bar Council of India, Legal Education Rules 2008 framed under a Parliament Act.
6. The institution is directed to make a minimum investment as provided below for upgrading it's library as per the following guideline :-

***"Today with the increasing cost of journals, books, wi-fi, e-library and online facilities including I.T. facilities, the minimum investment by each university should be Rs. 10 lakhs for each year. However for any university/deemed university in rural area, the investment should be Rs. 5 Lakh and for all other affiliated colleges in the urban area it should be Rs. 2 lakhs and in rural area it should be Rs. 1 lakh."***

7. Teacher Student ratio shall be as per Schedule-III, Rule-11, Clause-17, Part-IV of Bar Council of India Rules.
8. Institution is directed to inform the timings of the classes.

## PROCEEDINGS OF THE MEETING

The expert committee meeting for the MBA course curriculum was held on 24<sup>th</sup> and 25<sup>th</sup> of June, 2019 at 10 am in the office of Dean, Faculty of Commerce and Management, at Gurugram University.

The following members were present:

1. Prof. M S Turan (Dean, Faculty of Commerce and Management)
2. Prof. Bal Krishan
3. Dr Geetika Malik Chandra
4. Dr Jyoti Ahluwalia

The members held long discussions on the nomenclature of the papers and contents of syllabus relating thereto with respect to the following specializations to be introduced from the academic session 2019-2020.

1. Health Care Management
2. Business Analytics

The above specializations will be in addition to the existing specializations already mentioned in the MBA syllabus as per the ordinance of the University. The committee is also of the opinion that the nomenclature of the specialization Data Analytics should be renamed as Business Analytics.

The following recommendations were made:

1. In case of **Health Care Management**, the following nomenclature of the courses/papers are suggested

Semester III

- (a) Essentials of Healthcare system - 17IMG23G01
- (b) Health Economics - 17IMG23G02

Semester IV

- (a) Medical and Health Laws - 17IMG24G01
- (b) Hospital Planning - 17IMG24G02

2. In **Business Analytics**, the following nomenclature of the courses/papers are suggested

Semester III


- (a) Data Analytics - 17IMG23GD1
- (b) Predictive Analytics - 17IMG23GD2

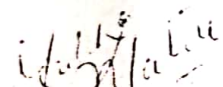
Semester IV

- (a) Applied Data Analytics - 17IMG24GD1
- (b) Applied Predictive Analytics - 17IMG24GD2

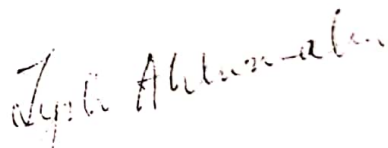
The committee also proposed the detailed syllabus of the above-mentioned courses/papers and the same are attached herewith for consideration.

The meeting ended with a vote of thanks to the Chair.

  
Prof. M S Turan  
(Dean, Faculty of Commerce and Management)

  
Dr. Geetika Malik Chandra

  
Prof. Bal Krishan

  
Dr. Jyoti Ahluwalia

Discipline Specific Elective Courses (Specialization Areas Offered Under Dual Specialization Scheme)

2<sup>nd</sup> year: 3<sup>rd</sup> Semester

Healthcare Management

Course code	Title of the course	External marks	Internal marks	Practical marks	Total marks	Credits
17IMG23GC1	Essentials of Healthcare System	80	20	-	100	3-1-0
17IMG23GC2	Health Economics	80	20	-	100	3-1-0

2<sup>nd</sup> year: 4<sup>th</sup> Semester

Course code	Title of the course	External marks	Internal marks	Practical marks	Total marks	Credits
17IMG24GC1	Medical & Health laws	80	20	-	100	3-1-0
17IMG24GC2	Hospital Planning	80	20	-	100	3-1-0

2<sup>nd</sup> year: 3<sup>rd</sup> Semester

Business Analytics

Course code	Title of the course	External marks	Internal marks	Practical marks	Total marks	Credits
17IMG23GD1	Data Analytics	80	20	-	100	3-1-0
17IMG23GD2	Predictive Analytics	80	20	-	100	3-1-0

2<sup>nd</sup> year: 4<sup>th</sup> Semester

Course code	Title of the course	External marks	Internal marks	Practical marks	Total marks	Credits
17IMG24GD1	Applied Data Analytics	80	20	-	100	3-1-0
17IMG24GD2	Applied Predictive Analytics	80	20	-	100	3-1-0

L-T-P  
3-1-0

External Marks: 80  
Sessional Marks: 20  
Time Allowed: 3 Hours

**Essentials of Healthcare System**  
Course Code: 171MG2JGC1

**Course Objective:** To apprise the students of the important the dimensions of health care systems prevailing in India and abroad

**Course Outcome:** After undergoing this course the learners will be able to make a comparison in health service system right from the grass root level to the global level. They will also be able to enrich their knowledge regarding center and state government initiatives.

**Unit-I Health and Disease**

Concept, Definitions & Dimensions of health, Wellbeing, Determinants of health, Evolution of medicine, Public Health, Health indicators, Health service philosophies, Disease & causation, Natural history of disease, Disease control & prevention, Changing patterns of disease, Disease classification and International Health (WHO, WB, UN), Medical sociology –Introduction, Sociological perspective of health, illness and healing, Institutional perspective and Organizational perspective.

**Unit II Public and Private Health Care Services in India**

Evolution of public health systems in India (ancient, colonial & post independence), Health Planning in India (Committees, Planning commission, Five year plans, National Health Policies), Public health systems in India (Center, State, District & Village level), Rural development, Corporate philosophy, Evolution and organization of private health systems in India and Current trends in private health care in India

**Unit III Global Health Service Systems**

Introduction to the global health scenario, Health System Models: Full State provision and funding model, NHS Model, Social health insurance model, Minimal State intervention mode

**Unit IV Population Health**

Introduction to population studies, Issues of Indian society & culture, Reproductive health, Population and Development (policies, programs & evaluation), diseases (CHD, Cancer, Diabetes & Obesity), Introduction to epidemiology (concept, terms, aims & uses), epidemiological methods, Epidemiology of communicable diseases (chicken pox, measles, diphtheria, TB, polio & HIV/AIDS) and Epidemiology of Non communicable

**Suggested Readings:**

1. K Park, Preventive and Social Medicine, Bansari Das Bhanot Publishing House
2. Maxcy-Rosenau-Last, Public Health & Preventive Medicine, 14th Edition Ed Robert Wallace
3. Brijesh C Purohit, Health Care System in India: Towards Measuring Efficiency in Delivery of Services
4. Eugenia L. Siegler, Saeid Mira Fzali, Janice Foust, An Introduction to Hospitals and Inpatient Care
5. Leon Gordis - Textbook of epidemiology
6. Oxford text book of public health -Oxford Medical Publication
7. David Armstrong - An outline of sociology as applied to medicine
8. Morris - Uses of epidemiology
9. Barker - Practical epidemiology

**Instructions for External Examiner:**

The question paper shall be divided in two sections. Section 'A' shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section 'B' shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

L-T-P  
3-1-0

External Marks: 80  
Sessional Marks: 20  
Time Allowed: 3 Hours

**Health Economics**  
Course Code: 17IMG23GC2

**Course Objective:** To acquaint the students of the important concepts and elements of micro economics applicable to health sector.

**Course Outcome:** After completion of this course the learners will be able to apply the micro economic concepts in health economics and to evaluate the medical care markets, which is the most challenging job in the present era

**Unit I: Nature and scope of Economics**

Basic Economic Concepts - Using Economics to study Health Issues. Understanding of macroeconomic environment for making decision in our organization that provide health care. Nature and relevance of Economics to Health and Medical care. Concept of Health- Health Determinants, Valuation & Measurement of Health Demand analysis.

**Unit II: Utility Analysis**

Laws of Demand and Supply, The Demand for Health Capital, The Demand for Medical Care, Concept of Elasticity, Cost functions, Policies to Contain Costs Supply and cost analysis

**Unit III: Demand and Supply**

Market forms- Demand and Supply of Medical and Healthcare Services. Price determination under various configurations. Indian Healthcare system - Expenditure and Allocations under Five-Year Plans. Economics of Health Policy & Planning

**Unit IV: Analyzing Medical care Markets**

Medical Care Market Place, The competitive market Model, Market Failure in Medical Markets. Government Intervention in Medical Markets.  
Market for Medical Professionals and medical services, Alternative Models of Hospital Behavior- Utility Maximizing Model, Physician Control Models, Trends towards Multi Hospital Systems.  
Role of Private Sector and PPP

**Suggested Readings:**

1. Ceri J Phillips. Health Economics- An introduction for health professionals, Blackwell Publishing
2. Venkat Raman, A., & Bjorkman, J. W.(2009). Public Private Partnership in Health Care in India. London: Routledge.
3. Clewer Ann and D Perkins. Economics for healthcare management, Prentice Hall.
4. Folland S, A.C. Goodman, and M. Stano, The economics of health & Healthcare, Prentice Hall
5. Principles of Health Economics for developing countries, The World Bank.
6. Salvatore, Dominick, Managerial Economics in a Global Economy, Thomson Learning, Hyderabad
7. Hirschey, Mark, Managerial Economics, Thomson Learning, Bangalore
8. Monroe, Kent B., Pricing-Making Profitable Decisions, Mac Graw-Hill, New York
9. Keat, Paul B., and Philip K.Y. Young, Managerial Economics - Economic Tools for Today's Decision Makers, Pearson Education, Delhi

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section 'A' shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section 'B' shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

L-T-P  
3-1-0

External Marks: 80  
Sessional Marks: 20  
Time Allowed: 3 Hours

**Medical and Health Laws**  
Course Code: 171MG24GC1

**Course Objective:** To impart learning of the relevant provisions of important laws relating to medical and health sector enacted in India from time to time.

**Course Outcome:** After completion of this course the learners will be able to know health care rights of individuals and obligations on the part of health care service providers.

**Unit 1**

Law and establishment of hospitals- Private and Public, legal requirements under Medical Council Acts, Medical ethics, basic issues, importance- code of conduct

**Unit 2**

Transplantation of Human Organs Act, 1994  
Pre-conception and Pre-natal diagnostic techniques Act, 1994  
The Medical Termination of Pregnancy Act, 1971

**Unit 3**

Basics of Drugs and Cosmetics Act, 1940  
Consumer Protection Act, 1986  
Human Experimentation, Clinical Trials, Doctor Patient Rights under the Indian Contract Act, 1872- legal remedies available to patients

**Unit 4**

Legal Liability of Hospitals-Criminal, Civil and Tortuous, liability for negligence, absolute liability and vicarious liability, Confidentiality and professional secrecy,

**Suggested Readings :**

Bare Act -Transplantation of Human Organs Act, 1994  
Bare Act -Pre-conception and Pre-natal diagnostic techniques Act, 1994  
Bare Act -The Medical Termination of Pregnancy Act, 1971  
Bare Act -Basics of Drugs and Cosmetics Act, 1940  
Bare Act -Consumer Protection Act, 1986  
Sharma R. C., Medico-legal Aspects of Patient Care, 3rd Edition, Peepee Publishers & Distributers- 2008

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section 'A' shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section 'B' shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks

L-T-P  
3-1-0

External Marks: 80  
Sessional Marks: 20  
Time Allowed: 3 Hours

**Hospital Planning**  
**Course Code: 17IMG24GC2**

**Course Objective:** To enrich the students regarding the planning and operation of hospitals in a detailed manner and the technicalities of medical record/maintenance system.

**Course Outcomes:** After completion of this course the learners will be able to know the planning of a hospital, maintenance of emergency services, day care services, surgical units and maintenance of laboratories in the hospital

**Unit I: Introduction to Hospital Planning**

Conception of idea, formation of hospital planning team, market survey, feasibility study, selection of location, Financial planning of hospitals, Macro level planning  
Conception to commissioning- site development, architects brief working drawings and specifications, engineering drawing, equipment planning, bed distribution, space allocation, interior designing and construction of building - commissioning, shake down period

**Unit II**

Planning for the out-patient services and emergency services, day care services  
Planning for patient care units –Inpatient services and intensive care units  
Planning for surgical suites.  
Planning for labor and delivery suites-LDRP suites

**Unit III**

Planning for laboratory service, blood banking and blood transfusion services, Radiological services, Mortuary services Planning for supportive services-medical gases, HVAC, House-keeping, CSSD, Food and beverages, Safety issue in hospital building – fire safety, lighting, disaster management issues

**Unit IV**

Medical Records: Definition, characteristics of good medical record, Medical record forms and their content, Incomplete record control, utility and functions of Medical Records, Basic knowledge of legal aspects of Medical records.

**Suggested Readings:**

1. Kunders G.D. Hospitals: Facilities Planning and Management. Tata McGraw Hill
2. Gupta Shakti Kumar, Sunil Kant, R Chandra Shekhar, Sidharth Satpathy, Modern Trends in Planning & Designing of Hospitals: Principles and Practice. Jaypee –2007
3. Charles Butler, Addison Erdman, Hospital Planning
4. Dr Malhotra's series Step by Step – Hospital designing & Planning, Jaypee 2007
5. Rockwell Schulz, Alton C. Johnson, Management of Hospitals & Health services: Strategic issues and performance.
6. Goel S.L., R. Kumar, Hospital Managerial Services, Volume -4
7. Kumar R & S. L. Goel, Hospital Core Services: Hospital administration in 21st century Vol 1  
Malhotra A.K, Hospital Management, , Global India Publications Pvt. Ltd, New Delhi
8. Howard S. Roland, Beatrice L. Rowland, Hospital Management : A Guide to Departments
9. Shakharkar B.M., Principles of Hospital Administration and Planning

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section 'A' shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section 'B' shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks

L-T-P  
3-1-0

External Marks: 80  
Sessional Marks: 20  
Time Allowed: 3 Hours

**Data Analytics**  
**Course Code: 171MG23GD1**

**Course outcomes**

After completing the course, students would be able to:

- *make use of business statistics for solving quantitative and qualitative business decisions*
- *understand process of problem recognition and hypothesis testing for data driven decisions*
- *use the software for conducting robust and rigorous interpretation of data*
- *examine the relationship between variables using tools of correlation, patterns, variations*

**Unit I**

**Importing and Understanding data:** Importing, plotting, understanding and cleaning the data. Understand Univariate and multivariate, categorical and quantitative data, visual presentations of data, descriptive statistics, data tables, interpretation from graphical charts-bar plots, box plots, scatter diagrams. Hands on case study using software.

**Unit II**

**Dealing with outliers and missing data and correlation:** Identification and handling of missing values and outliers, cap and floor outliers, correct data formats, data standardization, data normalization, bin creation, adding indicator variables. Scatter graph, Pearson correlation, Spearman's correlation, Kendall's Tau (non-parametric), biserial and point biserial correlation, partial correlation, semi-partial (part) correlation, multiple correlation, warning about interpretation (causality). Hands on case study using software.

**Unit III**

**Importance of distributions, normal distribution, central limit theorem, test for normality, basics of sampling distribution, Type 1 and Type 2 errors, Hypothesis testing- Z test and t test. Confidence interval, one tail and two tail tests. Chi square test, test of independence and test of goodness of fit. Hands on case study using software**

**Unit IV**

**Non-parametric tests and ANOVA-**Comparing two independent samples-Wilcoxon rank sum test and Mann-Whitney test, comparing two related conditions-Wilcoxon signed rank test, difference between several independent groups- Kruskal-Wallis test, difference between several related groups- Friedman's ANOVA, analysis of variance, application of one way ANOVA. Hands on case study using software

**Suggested Readings:**

1. Levin & Rubin, Statistics for Business, Prentice Hall of India, N Delhi.
2. Anderson, Quantitative Methods in Business, Thomson Learning, Bombay.
3. Anderson, Statistics for Business & Economics, Thomson Learning, Bombay.
4. Kothari C R, Quantitative Techniques, Vikas Publishing House, New Delhi
5. Andy Field, Discovering Statistics Using SPSS, Pearson Press
6. Damodar Gujrati, Basic Econometrics, McGraw Hill Education, 5th Edition
7. Joseph F. Hair Jr, William C. Black, Barry J. Babin, Rolph E. Anderson, Multivariate Data Analysis, Pearson Press

**Instructions for External Examiner:** The question paper shall be divided in two sections. Section 'A' shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section 'B' shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks question from each unit.

L-T-P  
3-1-0

External Marks: 80  
Sessional Marks: 20  
Time Allowed: 3 Hours

**Predictive Analytics**  
**Course Code: 17IMG2JGD2**

**Course outcomes**

After completing the course, students would be able to:

- draw inferences from data and computer output and its application for business decision
- understand the use of statistics from modelling perspective
- use regression and model fit for better decision making
- understand the use of variables and their roles in regression models

**Unit I**

**Regression** Introduction to regression, simple regression, method of least square, goodness of fit  $R^2$ , interpretation of regression coefficients, testing the significance of coefficients. Hands on case study using software.

**Unit II**

**Multiple regression model**, sample size in regression, estimating partial regression coefficients, testing of the model fit, interpretation of ANOVA results of regression, testing of regression coefficients, method of regression-hierarchical (block wise entry), forced entry, stepwise regression, forward pass, backward pass, Interpretation of beta values. Interpretation of computer output and report writing

**Unit III**

Assumptions of multiple regression-linearity, normality, autocorrelation, multi-co linearity-VIF and tolerance, condition index, homogeneity of variance (heteroscedasticity), regression plots, accuracy of regression modal-checking outliers, leverage and influence (case wise diagnosis). Interpretation of computer output and report writing

**Unit IV**

Curvilinear regression-method of fitting the model, checking the assumptions and interpretation of computer output. Concept of Dummy variable in regression, use of dummy variables in seasonal analysis, piecewise linear regression, interaction effect of predictive variables and interpretation of results. Interpretation of computer output and report writing

**Suggested Readings:**

1. Levin & Rubin, Statistics for Business, Prentice Hall of India, New Delhi
2. Anderson, Quantitative Methods in Business, Thomson Learning, Bombay
3. Anderson, Statistics for Business & Economics, Thomson Learning, Bombay
4. Kothari C.R., Quantitative Techniques, Vikas Publishing House, New Delhi
5. Andy Field, Discovering Statistics Using SPSS, Pearson Press
6. Damodar Gujrati, Basic Econometrics, McGraw Hill Education, 5th Edition
7. Joseph F. Hair Jr, William C. Black, Barry J. Babin, Rolph E. Anderson, Multivariate Data Analysis, Pearson Press

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L-T-P  
3-1-0

External Marks: 80  
Sessional Marks: 20  
Time Allowed: 3 Hours

**Applied Data Analytics**  
**Course Code: 17IMG24GD1**

**Course outcomes**

After completing the course, students would be able to:

- *draw inferences from data and computer output and its application for business decision.*
- *understand how data can be used for solving business decisions*
- *understand the role of General Linear Models in business decisions*
- *understand the use of variables and their roles in General Linear Models*

**Unit I**

Comparing several means: ANOVA (General linear model), Inflated error, assumption of ANOVA, running one way ANOVA, multi comparison tests-post hoc tests, Factorial ANOVA-building model graphical interpretation, assumption, post hoc tests, interaction effect, Computing ANCOVA through statistical software. Interpretation of computer output and report writing

**Unit II**

MANOVA: Concept of MANOVA –Principle of the MANOVA , assumptions of MANOVA, interpretation of MANOVA results Interpretation of computer output and report writing

**Unit III**

Repeated measure test: Assumptions of sphericity, model building, post hoc tests, effect size, graphical interactions. Interpretation of computer output and report writing

**Unit IV**

Exploratory factor analysis: Community, factor analysis vs. principle component analysis, theory of principle component analysis, factor extraction, eigen values and scree plot, factor rotation-orthogonal and oblique rotation, sample size, saving the factor scores reliability analysis- measures of reliability. Interpretation of computer output and report writing

**Suggested Readings:**

- 8 Levin & Rubin, Statistics for Business, Prentice Hall of India, New Delhi
- 9 Anderson, Quantitative Methods in Business, Thomson Learning, Bombay
- 10 Anderson, Statistics for Business & Economics, Thomson Learning, Bombay
- 11 Kothari C R , Quantitative Techniques, Vikas Publishing House, New Delhi
- 12 Andy Field, Discovering Statistics Using SPSS, Pearson Press.
- 13 Damodar Gujarati, Basic Econometrics, McGraw Hill Education, 5th Edition
- 14 Joseph F. Hair Jr, William C. Black, Barry J. Babin, Rolph E. Anderson, Multivariate Data Analysis, Pearson Press

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L-T-P  
3-1-0

External Marks: 80  
Sessional Marks: 20  
Time Allowed: 3 Hours

Applied Predictive Analytics  
Course Code: 17IMG24GD2

**Course outcomes**

After completing the course, students would be able to

- *understand the different algorithms to make predictions and classifications*
- *understand strength & weakness of particular supervised & unsupervised learning methods*
- *understand how data is accessed from various sources and issues involved in data acquisition*

**Unit I**

Use of Data Analytics in different industries. Understanding growth of data and methods of data access. Issues of data and privacy, regulations regarding data privacy. Introduction to big data, 4vs model, unstructured and structured data. Hadoop. Understanding Supervised and Unsupervised methods.

**Unit II**

Regression and Classification: Application of supervised learning methods for classification and regression. k-nearest neighbors, linear regression, logistic regression, discriminant analysis, support vector machines, decision trees and their applications and the use of cross-validation for model evaluation. Pros and cons of each method, model performance evaluation, effect of key parameters on the accuracy of different classification and regression models. Case study and interpretation of results.

**Unit III**

Classification Clustering. Application of unsupervised learning methods, understanding hierarchical clustering, K-means clustering, random forest: ensemble modeling, random forest algorithm, building and measuring random forest model. Neural Networks. Neural Networks & its Application, Single & Multi-Layer Neural network. Case study and interpretation of results

**Unit IV**

**Model Evaluation and Selection:** Training, test and validation datasets, framework for model selection and evaluation, measure and understand model accuracy, accuracy for imbalanced data, binary prediction outcomes, ROC plot, confusion matrix and basic evaluation parameters, precision-recall tradeoff, over fitting and generalization, handling unbalanced data, SMOTE, bias variance trade-off, boosting, model validation, cross validation. Hands on case study using software

**Suggested Readings:**

1. Levin & Rubin, Statistics for Business, Prentice Hall of India, New Delhi
2. Anderson, Quantitative Methods in Business, Thomson Learning, Bombay.
3. Anderson, Statistics for Business & Economics, Thomson Learning, Bombay
4. Kothari C R, Quantitative Techniques, Vikas Publishing House, New Delhi
5. Andy Field, Discovering Statistics Using SPSS, Pearson Press
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7. Joseph F. Hair Jr, William C. Black, Barry J. Babin, Rolph E. Anderson, Multivariate Data Analysis, Pearson Press

Instructions for External Examiner: The question paper shall be divided in two sections. Section 'A' shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. Section 'B' shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks question from each unit