

# Best Practices for the Preparation of Academic Schedule in Higher Educational Institution



## Education

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### ABSTRACT

*The primary objective of any higher educational institution is to produce skilled manpower which lead to the development of the country. For achieving the same an academic institution must be committed to impart quality education to its students, and has to adopt best practices and standards. In an academic year many activities (including both academic and non-academic) are executed in an institute. For executing these activities in an effective manner appropriate and efficient scheduling of these activities is required. This paper identifies the best practices for scheduling of academic & non-academic activities and also defines a detailed process for the preparation of the Academic Schedule/Time-Table of Classes in a higher educational institute.*

### Introduction

Systematic and disciplined academic schedule is the back bone for successful functioning of any educational institution or university. Academic quality depends on proportionate distribution of theory, hands on practicals and professional exposure. Academic scheduling is a process of clearly stating the time table of all academic and non academic events of an Institution and University to meet the pre-determined objectives. Time Table has utmost importance in assuring smooth and effective execution of all academic programmes in the school/institute. In order to achieve mission and objectives of an institute all the activities must be carried out in the best possible way and by using best processes. This requires defining and implementing best practices and the processes for executing every academic task. The best practices and the process for the preparation of the time table or academic schedule is explained in the next sections of this paper.

### Policy for the Time-Table/Schedule

The Timetabling Policy covers the guidelines for scheduling of all learning and teaching activities, including lectures, tutorials, laboratory classes and other practical sessions, on the academic programmes of study in an institution. The policy for Academic Schedule or Time-Table defines procedures and responsibilities in respect of:

- Effective production of the Time-Table
- Optimal utilization of space and other resources for learning and teaching activities
- Optimum use of learning and teaching space for other activities

### The long-term objectives of the Timetabling Policy should be to [1] :

- Generate student-focused, consistent and clear institutional class schedule/time table which enhance student experience.
- Improve management and flow of information along with tools to support the effective use of resources.
- Improve the management of curricula and academic schedules.
- Enable more effective and efficient use of learning and teaching space.
- Create greater flexibility in managing faculty teaching time.
- Make more effective use of administrative staff resources.
- Support the flexible working policy.
- Improve curriculum enhancement and planning.

### Guiding Principles

#### The timetable of must be designed based on [2]:

- The primacy of the student learning experience which leads

to certain level of satisfaction among the students.

- The need to rationalize and make efficient use of space and resources.
- The need for equality of access to teaching facilities.
- The need to provide timely and accurate timetabling and room booking information to students and staff.

The following of factors will be taken into account when developing the timetable[2]:

- Accurate data on all teaching activities.
- Accurate data on all teaching rooms (Class Rooms, Tutorial Rooms, Lecture Theatres and Smart Class Rooms) including room capacity.
- Strength of students in a section.
- Use of Smart Class Room and the appropriate time slots.
- Student choice of elective subjects.
- Clustering / distribution of activities across the teaching week.
- Prioritization of teaching and other activities.
- Reserving time slots for faculty.
- Clashes with the Time-Tables of other institutes/departments.

### Best Practices for Time-Table

The Best practices for preparation and implementation of Time Table that should be specified and adopted by an institute are:

#### 1. Inter-Institute Scheduling

The higher educational institutions run various programmes both at undergraduate and post graduate level, and as per their course curriculum many courses may be taught by the faculty of different schools. Furthermore some faculty members from the institute may teach the courses in other schools as per the requirements raised by them. This mobility of faculty requires coordinating with different schools before preparation of Time-Table. The time slots of such faculty members are reserved in advanced and communicated to the concerned schools so that there is no conflict in the Time-Table.

#### 2. Intra-Institute Scheduling

In this step scheduling of classes belonging to the different departments of the institute is carried out. It involves only the courses taught by internal faculty members of the institute. The inter-departmental dependency is analyzed in the teaching load and then incorporated in the Time-Table. As the best practice first the time slots and rooms for elective courses are reserved and then the schedule of regular courses is prepared.

#### 3. Scheduling of Events/Activities

The best of knowledge and expertise develops from theoretical as well as practical knowledge. The students will be more

professional with industrial exposures/ interactions. Besides curriculum coverage, students should be given opportunity to sharpen their research and academic skills by involving them in following academic and associated activities and non-academic activities. The activities and events which are of greater significance and are important for the students are provided slots in the Time-Table. These events and activities include Career Competency Classes, Personality Development Sessions, Technical Training Courses, and Refresher Courses etc. The slot for mentor-mentee meetings is also provided so that mentors can spend sufficient time with the mentees and provide them guidance. This flexibility provides effective implementation of programmes along with career nurturing activities.

**Process followed for the Preparation of Time-Table/Class Schedule**

An institute of higher education must adopt a procedural approach depicted in Fig. 1 for preparation of Time-Table/Class Schedule which requires significant advanced planning and coordination, not only within each department, but also often with other institutes. This process incorporates all the best practices mentioned above and has been described under the following headings:

1. *Identification of Resources:* All the resources (Course Structure, Faculty, Class Rooms & Labs) required for implementing the Time Table should be identified well in advance. The list of department wise faculty members and course structures which are approved by the university should be available in each department. In the Time-table maximum hours per day (hours per week) that can be allocated to any programme must be specified.

The requirement of no. of Lecture Theatres, Class Rooms and Tutorial Rooms must be calculated by finding out the average load (hours per day) for each room. Similarly the requirement of laboratories should be analyzed. By performing this analysis the additional requirement of rooms or laboratories is known. The existing rooms (Lecture Theatres, Class Rooms and Tutorial Rooms) and laboratories which belong to the institute must be utilized for scheduling of classes. If there is requirement for additional rooms and laboratories for a new course to be launched by the institute or for some other academic purpose, then is put before the higher authorities for approval well in advance.

2. *Compilation of Teaching Load:* The teaching load from all the departments in the institutes is collected and compiled which serves as major input for the Time Table. As the best practice three pre-defined formats for the teaching load should be followed in compiling the teaching load. The first format of teaching load is for the departments within the institute and is shown in Table 1.



**Fig. 1: Process for the Preparation of Time-Table/Class Schedule**

Sr No.	Faculty	Designation	Program & Semester	Courses	No of Sec.	L	T	P	Research Load	Total load (sec*(L+T)+sec*P/2)	Contact Hrs	Additional Responsibilities
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Faculty Name	For (Deptt. Name)	Program & Semester	Course & School Name	No of Sec.	L	T	P	Contact Hrs	Load (sec*(L+T)+sec*P/2)
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Faculty From (School Name)	For (Deptt. Name)	Program & Semester	Courses	No of Sec.	L	T	P	Contact Hrs	Load (sec*(L+T)+sec*P/2)
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The second format format of teaching load shown in Table 2, is used if the faculty of an institute is assigned classes in other institute of the university. The third format may be used to raise the requirement of faculty members from other institutes and depicted in Table 3. These three formats of teaching load ensure the systematic and organized collection of information required to prepare academic schedule.

3. *Mapping with approved course structure:* The Time Table for each section of every course must be matched with the course structure duly approved by the university. The numbers of hours should match with the credits assigned to every course.

4. *Applying Constraints and Conditions:* In a bigger institution the Time-Table preparation much more complex. Different constraints and conditions should be applied as per received by different departments in order to avoid any conflict. It involves fixing up the time slots for elective Courses and those received by different departments and institutes. Furthermore the time slots for the faculty members involved in administrative tasks should be reserved in advance.

5. *Balancing Theory & Practical Sessions:* Theory and Practical sessions in every day schedule should be balanced wherever possible. This makes execution of academic programmes more effective. For this the course structure of every programme is completely analyzed to see how best schedule can be prepared.

6. *Time slots for Mentor Session:* An institute of higher education should have a strong mentoring system and thus some slots per week in every class should be reserved for mentoring. This gives mentor and mentee an opportunity to meet and discuss various issues.

7. *Supporting Career & Nurturing Activities:* If some slots in a week in some sections are vacant then they may be utilized for organizing career and nurturing activities with the approval of the competent authorities.

8. *Preparation of Schedule:* After considering all the requirements and applying constraints the schedule of classes for all sections in different programmes can be prepared. While preparing the schedule it must be ensured that every slot mentioned in the Time-Table has the course name, room no and faculty name and no significant information is missing which is important for the students.

9. *Verification & checking:* After the preparation of the Time Table/Schedule for each section of every course must be verified and checked first by the Time Table Management Team and then by the respective Programme Coordinators. This two level verification and checking ensures error free schedule of classes.

10. *Publishing & Disseminating Time-Table/Class Schedule:* Timetables should be available to those who need them, in a clear and accessible way. The institute should aim to provide complete, accurate and up-to-date timetables, published in advance of the start of the semester and maintained throughout the semester.

After preparation of the complete Time-Table/Class Schedule it must be verified and checked at multiple levels. After assuring that all things are correct and every aspect has been taken care of the next thing is to disseminate the Time-Table to all concerned Faculty, Students, Staff and Administrative Authorities. For this the Time-Table (Class Wise, Faculty Wise and Room Wise) should be circulated to all the concerned persons in the institute. For students the Time-Table must be uploaded on the web portal of the institute and the hard copy should be displayed on all notice boards.

### **Conclusion**

The preparation of Time Table/Academic Schedule plays an important role in achieving mission and objectives of an educational institute. Effective and efficient preparation of Time Table/Academic Schedule is a must for an educational institute. This paper describes best practices for the preparation of the academic schedule and if any institute or university will adopt these practices and the process, certainly the same will experience a great improvement and quality in preparing and execution of the academic schedule. The work presented in this paper has great importance for academic leaders at every level (Teachers, Deans, Directors, HODs, Vice Chancellors etc.) and the researchers working in the areas of higher education.

### **References**

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2. Timetabling Policy, Version 4, University of Strathclyde, Glasgow UK, May 2012.