



# A Survey on the Present Status of the Course Plans at Tehran University of Medical Sciences: A Prelude to Future Decisions

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## Abstract

**Background and Objectives:** The development of a course plan is an essential activity before presenting each course, which enables effective education by mapping the road ahead. For this reason, the study of the status of course plans at universities is of particular importance, such that access to the documentations in this regard can lead to the discovery of the uncertainties of the status quo.

**Methods:** This was a survey study performed in two stages. In the first stage, data about the current status of course plans was collected through a researcher-made questionnaire. Then, quantitative data were analyzed using descriptive statistics in SPSS software. Secondly, the content of the course plans was examined. The data was collected using a researcher-made checklist based on review of the related texts.

**Results:** In total, 99 (92.52%) of the 107 academic departments completed the questionnaire. Of the 6926 responded units, 2251 units (32.5%) had a course plan. Of the 173 disciplines, 15 (8.7%) had provided a course plan on the faculty website. Of the 99 departments, 39 (39.4%) had a defined plan for course design and 34 (34.3%) departments had a monitoring committee. Qualitative analysis of course plans showed that 45.3% had an acceptable status, 6.2% were somewhat acceptable, 10.4% were incomplete and 38.1% were unacceptable. The general characteristics of the course (96.1%), the general description of the course (45.6%), the general objectives (87.0%), the specific goals (63.2%), and the introduction of resources (45.9%) had a “complete” and “fairly complete” status respectively and had the highest scores in course design. Also, students’ role and tasks components-role dimensions (66.4%), student’s assessment at the end of the course- summative evaluation (56.0%) and course timetable (51.8%) respectively, had the “incomplete” and “non-observance” status more than other components, and did not have a proper situation in course design.

**Conclusions:** The results of this study lead to the recognition of the current status of course plan in Tehran University of Medical Sciences and can be considered in future decisions.

**Keywords:** Design, Course Plan, Survey, Documentations, Decision-Making

## 1. Background

One of the most important educational processes that plays a major role in the development and continuation of other educational efforts is curriculum planning, and the various levels of curriculum, as a as a roadmap and a path for educators, explain the overall format of the whole educational activities.

Considering the importance of this issue and the trend of the world’s leading activities in this field, the study of course plan at the level of departments of faculties affiliated to Tehran University of Medical Sciences has always been a necessity, such that obtaining documentation about this level of the curriculum as a micro-level leads to

further study, critique and analysis of the status quo.

The problems due to the inappropriateness of the educational content with the tasks and responsibilities of individuals make it necessary to formulate a specific framework for each course (1). At the micro level, the responsibility of planning a course is typically the teacher’s duty. At this level, the instructor must design the course (2). Of course, in each university, the responsibility given to the teacher varies, but the model that gives the teacher more control over the planning and decision making of classroom materials is more common (3). In the process of designing and revising the course, faculty members are faced with at least three basic decisions: “What is being taught, how to teach it and how to ensure that students are learn-

ing what is being taught?"

Many teachers wish to enrich students with all their knowledge and provide enormous content in the course, but this does not provide students with a deep understanding. To resolve this problem, the content should be narrowed down and specific aspects of the course should be delved into.

The operational course chart should consist of all educational topics and components such as those that can be included in the course, the sequence of topics, the prerequisite courses, group sessions, and the topics appropriate for self-study. Moreover, the whole course should have a temporal framework and logical organization (4). The course plan is similar to a one-year lesson plan, but given the fact that many courses are less than one year, the lesson plan can be further elaborated (5).

In this regard, Harden believes that medical teachers should consider 10 aspects in designing a course. The needs related to course design, goals, content, content organization, educational strategies, teaching methods, students' assessment, communication between the components of the course plan, the learning environment and process management are examples of these aspects (6). This map is designed through an interactive process of analysis, in which content, educational strategies and media are selected, organized and used (7).

In order to explain the importance of this small-scale educational map and the need for investment in research activities in this area, review of the regulations on the responsibilities of the Education Development Centers approved by the Ministry of Health and Medical Education and the standards of accreditation institutions will be helpful. According to Clause 12, Article 2 of the mentioned regulations, curriculum planning is within the authorities granted to medical universities and is among the main responsibilities of the Education Development Centers of all universities in the country. This is followed by monitoring how all steps of this process are implemented at different levels.

In this way, the current status of different curriculum levels from the macro level and the national curriculum to micro levels and layers associated with course and lesson planning all contribute to the achievement of this clause. On the other hand, given the importance of course design in the current disciplines at universities as evidence of the realization of the basic standards for global accreditation, it is important to guide and monitor their design process.

By reviewing the standards of accreditation institutions in various fields of medicine, dentistry, pharmacy, nursing and midwifery in the field of curriculum design, the importance of this issue becomes more evident and is considered as an inevitable necessity. In the field of med-

ical education, this topic has been mentioned as part of the Accreditation Council for Graduate Medical Education (ACGME) standards, which requires that for each rotation, general and specific goals, educational methods, and tools for assessing the competencies of residents be specified and presented in printed or electronic form (8).

Also, according to the accreditation standards of the Commission on Dental Accreditation (CODA), the assessment of all courses with the consideration of the defined competencies is stipulated. In fact, all course plans should be designed in such a way to include narrative descriptions of students' performance and professional behavior in each lesson, such that student and teacher interactions can allow these subtleties to be evaluated (9).

The Accreditation Council of Pharmacy Education (ACPE) also deals with the design, presentation, and monitoring of curriculums, while emphasizing the need to design and update course plans (specifically for each lesson) in a college-approved process. Monitoring curriculums during the design, implementation, evaluation and quality improvement stages has been emphasized through the collaboration of the faculty members with the provost (10).

Based on the World Health Organization's guidelines for evaluating nursing and midwifery curriculums in different parts of the world, and in describing the basic standards in curriculum structure, schools of nursing and midwifery are required to determine the content, scope and sequence of the lessons while determining the distribution of hours required for each learning unit (11). The standards of the Australian Nursing and Midwifery Council (ANMC) emphasize that the structure of a curriculum should include a guide book or equivalent, with emphasis on the details of presentation of courses, comprising the professional experience and information technology requirements (12).

Regarding the stated issues and the importance of the subject, it seems that in order to determine the basic status of the course plan in Tehran University of Medical Sciences, examining the present situation is an inevitable necessity and can provide a suitable foundation for the formation of a systematic path; in such a way that the achievement of a precise plan is based on predetermined steps of research results, and any decision for the future will be taken in the form of this plan.

## 2. Objectives

This study was considered as a necessity of high priority. Accordingly, the present study was conducted to investigate the current status of the course plans of the current disciplines in Tehran University of Medical Sciences and ac-

cess documentations to analyze the status quo and make future decisions.

### 3. Methods

This study was a survey that was carried out in two stages. In the first stage, a research was conducted to investigate the current status of the courses in the university departments in 2016. The data collection tool was a researcher-made questionnaire drafted by reviewing texts and documents. The questionnaire includes eight questions about the type of discipline, the number of courses offered in the discipline, having written course plan for each course, the course plans are available on the website of the department, the plan for designing course plans of the courses with no course plan, the main obstacles faced by the department to implement the plan, suggested solutions to remove barriers and having a department-level committee to study the course plans in terms of overlap and possible gaps.

In order to ensure the content and face validity of this questionnaire, the first draft was piloted among the four schools of Medicine, Dentistry, Pharmacy, and Advanced Technologies in Medicine to complete it and to give corrective suggestions. After collecting comments and reviewing corrective suggestions, due to the differences between the disciplines in the university and the need to adopt a different approach in designing the questionnaire, four fields of general medicine, general dentistry, general pharmacy and other disciplines were determined in this survey and some changes were applied to the questionnaire related to other disciplines. Then, the data collection tools specific to the three fields of general medicine, general dentistry and general pharmacy redesigned and were sent to the relevant faculties to receive their comments.

After applying the comments, the final versions of the questionnaires were sent to different departments through separate official letters and it was stipulated that if the course plans were not accessible through the websites of the departments, a copy of the course plan along with completed questionnaires be sent to Education Development Center. The respondents were chosen through the census sampling method and included the deans of all the educational departments affiliated to Tehran University of Medical Sciences.

In the second stage, we analyzed all the 307 course plans offered by the departments in the second semester of the academic year 2015 - 2016. The data were collected using a researcher-made checklist, which was designed based on the review of relevant texts, reviewed by three medical education specialists, and finalized after applying their views (13-15). The checklist included nine effective

components and twelve criteria for assessing the course plan.

In order to observe ethical considerations, all the information in the departments was regarded as completely confidential and not focusing on the results in the evaluation process of the faculties and their faculty members was emphasized. This was mentioned in a letter to the deputies for education of the faculties and then in the questionnaire guide. Data were analyzed using descriptive statistics (frequency and percentage) in SPSS version 18 (SPSS Inc., Chicago, IL).

### 4. Results

Out of the 11 colleges and four dedicated research sub-groups, despite repeated correspondences and follow-ups, one of the sub-groups did not send any fulfilled questionnaire. In total, of 107 departments, 99 (92.5%) completed the questionnaires. Also, of all the responded units (6926), 2251 (32.5%) had a course plan. Of the 173 disciplines, only 15 (8.7%) provided their course plans on the faculty's website. Among 99 participating departments, 39 (39.4%) had a specific program for course design, and 34 departments (34.3%) had a committee to monitor the process of course design. Quantitative data were analyzed using descriptive statistics (Table 1).

In the second stage, after qualitative analysis of the course plans, 45.3% of them had an acceptable status, 6.2% had a somewhat acceptable status, 10.4% had an incomplete status and 38.1% had an unacceptable status. Also, the components of the general characteristics of the course (96.1%), general description of the course (45.6%), general objectives (87.0%), specific course objectives (63.2%), and introduction of resources (45.9%) respectively had the "complete" and "fairly complete" status more than the other components, and consequently, had the highest scores and the best status in course planning. Student roles and responsibilities - role dimensions (66.4%), student assessment at the end of the course - summative assessment (56.0%) and course timetable (51.8%) were classified as "incomplete" and "non-observable" more than the other components, and they did not have a proper status in course planning. Also, in analyzing the overall course plan in terms of having a real structure, 40.1% of the course plans were complete and 16.9% were relatively complete (Table 2).

### 5. Discussion

This study aimed to investigate the current status of the course plans of the current disciplines in Tehran University of Medical Sciences. Out of the total number of the

responded courses, only one-third of them had a course plan. However, the item of disciplines with course plans on the website had the lowest rate among the other items under review. In the second stage, all the course plans presented to the Education Development Center and analyzed their contents at the curriculum Planning division.

In the analysis of course plans, it was found that half of them had an acceptable or somewhat acceptable status. Also, the components of the general characteristics and general description of the course, the general objectives and the specific objectives of the course and the introduction of resources had the highest scores and the best situation with regards to the principles of the course design. The components of student roles and duties - role dimensions, student assessment at the end of the course (summative assessment) and the course timetable also had the highest deficiency and the lowest scores (Table 2).

Few studies have been conducted in relation to the course design in Iran, which each of them has addressed this issue with respect to one of the dimensions of the current study, and the most widely addressed aspect has been the qualitative analysis of the content of the course plan. In other words, none of these studies has simultaneously addressed all these dimensions at all faculties of a university. However, the results of the present study are in some cases similar and in some others different from the findings of other national studies (16-21).

The results of a study which aimed to assess the quality of lesson plans of the selected faculties of nursing and midwifery in Iran showed that the most commonly considered elements in the lesson plans were respectively the contents, specific objectives, and the resource determination, while the least specified components were the teaching methods, the teaching aids and their use, and behavioral goals (16). Results of another study showed that the general and specific objectives, assessment methods, and resource introduction are, in most cases, the main weaknesses of course plans (17).

Delgoshaei et al. conducted a study at Ilam University of Medical Sciences and concluded that the different results in qualitative analysis of course design in various studies could be due to the different methods of lesson plan assessment, the differences in the number of samples examined, the existence of previous training in the relation with lesson plans and incomplete lesson plans. According to their findings, workload of faculty members, especially those with managerial positions, is one of the reasons for writing unbalanced and inaccurate lesson plans (18).

Results of a study performed in Babol University of Medical Sciences showed that 88% of the faculty members agreed with drafting a lesson plan before the outset of the

Table 1. The Current Status of the Course Plans in the Departments of Tehran University of Medical Sciences in the Second Semester of the Academic Year 2015 - 2016

Faculty <sup>a</sup>	The Number of Depart-ments	The Number of Participating Departments	The Number of Disciplines	The total Number of Completed Forms	Response Rate	The Total Number of Units	The Number of Units with a Course Plan	The Percentage of Units with a Course Plan	Presentation on the Website	Developmental Plan in the Department <sup>c</sup>	Surveillance Committee <sup>c</sup>	Course Design Processing (Percentage)				
												Acceptable	Somewhat Acceptable	Incomplete	Unacceptable	
1	11	11	40	37	93	1338	410	30	0 (0)	4 (36)	2 (18)	75.0	-	-	4.0	21.0
2	7	7	13	13	100	532	334	63	9 (69)	4 (57)	4 (57)	100	-	-	-	-
3 graduate	10	5	23	12	52	336	257	76	1 (4)	2 (40)	3 (60)	93.0	-	-	9.0	-
3 general	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	8	8	22	22	100	1251	49	4	0 (0)	5 (100)	3 (60)	67	0/22	5.0	5	-
5	4	4	12	12	100	701	85	12	0 (0)	3 (75)	4 (100)	-	-	-	-	-
6 graduate	13	13	14	14	100	326	215	66	3 (21)	6 (46)	6 (46)	-	-	-	-	100
6 general	13	12	1	1	92.3	212	197	93	-	-	-	-	-	-	-	100
7 specialized	12	10	22	19	86	193	276	23	0 (0)	5 (50)	3 (30)	26	15	5	54	-
7 general	13	13	1	1	100	217	86	40	-	-	-	24	3	30	43	-
8	3	3	3	3	100	125	48	38	0 (0)	2 (66.6)	3 (100)	100	-	-	-	-
9	3	3	9	9	100	290	48	17	0 (0)	3 (100)	1 (33)	-	-	-	-	-
9	3	3	9	9	100	290	48	17	0 (0)	3 (100)	1 (33)	-	-	-	-	-
10	5	5	9	9	100	219	127	58	1 (1)	2 (50)	3 (75)	21	-	-	-	79
11	5	5	6	6	100	166	119	72	1 (6)	2 (40)	2 (40.0)	100	-	-	-	-
Total	107	99	173	147	87.3	6936	2251	32.5	15 (8.2)	39 (39.4)	34 (34.3)	45.3	6.2	10.4	38.1	-

<sup>a</sup>In the case of faculties with departments of education in general and postgraduate areas, the results of each of them were reported separately.  
<sup>b</sup>The calculation of the percentage of units with a course plan was performed based on the number of units of the disciplines that responded the questionnaire.  
<sup>c</sup>Values are expressed as No. (%).

**Table 2.** The Results of the Components of the Course Plans Presented by the Departments of Tehran University of Medical Sciences<sup>a</sup>

Component, Assessment Criteria	The Status of the Course Plans According to the Criteria			
	Complete	Somewhat Complete	Incomplete	Not Observed
<b>General characteristics of the course</b>				
The general characteristics have been mentioned	295 (96.1)	-	-	12 (13.9)
<b>General description of the course</b>				
The course has been described in one or two paragraphs	240 (45.6)	-	-	67 (21.8)
<b>Objectives</b>				
The general objective has been written in the right format	267 (87.0)	-	-	40 (13)
The specific objectives have been written in the correct format	190 (61.9)	4 (1.3)	-	113 (36.8)
<b>Teaching method</b>				
The teaching and learning methods have been specified.	133 (43.3)	110 (35.8)	64 (20.8)	-
<b>Course timetable</b>				
The course timetable has been fully completed.	88 (28.7)	60 (19.5)	45 (14.6)	114 (37.1)
<b>Student's roles and tasks</b>				
The various dimensions that each student shows in dealing with different educational, research, service, advisory, and therapeutic situations have been precisely defined.	30 (9.8)	73 (23.8)	10 (3.2)	194 (63.2)
Students' responsibilities have been defined in the form of each role.	30 (9.8)	82 (26.7)	30 (9.8)	65 (21.2)
<b>Students' assessment</b>				
The student's assessment during the course has been indicated by the activities that the student carries out independently or with the guidance of the teacher.	68 (22.1)	44 (14.3)	62 (20.2)	33 (10.7)
The student assessment methods at the end of the course has been determined (summative assessment) and the assessment tools and the score of each student activity in the final assessment has been defined.	71 (23.1)	64 (20.8)	112 (36.5)	60 (19.5)
<b>Resources</b>				
Textbooks, specialized journals, related articles and related electronic resources have been introduced.	141 (45.9)	31 (10.1)	3 (1.0)	32 (10.4)
<b>The general structure of the course plan</b>				
The course plan has the actual structure	123 (40.1)	52 (16.9)	56 (18.2)	76 (24.7)
<b>The general status of the course plans</b>				
	Acceptable 139 (45.3)	Somewhat acceptable 19 (6.2)	Incomplete 32 (10.4)	Unacceptable 117 (38.1)

<sup>a</sup>Values are reported as No. (%).

course, but the work overload and the lack of motivation hindered the preparation of a lesson plan (19). In the study of Bazrafkan and Shokrpour, according to the faculty members' points of view, the large number of students is an obstacle to the implementation of a lesson plan (20). The results of a research carried out in Kerman University of Medical Sciences indicated that the knowledge of the faculty members was not satisfactory, and their attitude towards the design of a lesson plan was not positive, which is mostly because most of the faculty members had not participated in any formal course or educational workshops to promote their knowledge and change their attitude (21).

The common obstacles to designing a course plan in most faculties of Tehran University of Medical Sciences were the low availability of faculty members and their various activities, the resistance of some professors and reluctance to formulate course plans, teaching lessons by other departments or faculties (professors outside the department), the lack of recognition of the need to formulate course plans among senior lecturers, the impossibility

of establishing a curriculum monitoring committee due to the involvement of faculty members in various educational activities, lack of human resources, including faculty members and experts, lack of awareness of the definition of course plan and lack of its discrimination from other levels of curriculum, the lack of a sense of necessity for its implementation by the faculty or department, lack of adequate education and information for faculty members and students regarding the benefits and uses of a course and lesson plan, lack of incentive and a regulatory mechanism and lack of a standard format for course plan.

In their research, Adib et al. stated that holding workshops related to teaching methods and curriculum planning for professors and motivating them can lead to the improvement of the quality of lesson plan (16). According to the results of Jokar et al., holding related educational workshops, provide standard formats for designing a lesson plan and proper monitoring by Education Development Centers of universities on how to formulate, present and implement a lesson plan can play a significant role in

designing optimal lesson plans (17). According to the results of a research carried out at Ilam University of Medical Sciences, holding related training courses for faculty members and providing standard draft forms can provide a good basis for designing lesson plans (18).

The results of the present study, in addition to the clarification of the findings of previous studies and relative agreement with them, revealed new solutions to the existing obstacles. The following paragraph delineates the proposed strategies by the departments in Tehran University of Medical Sciences to improve course plans.

Considering the course plan item in the faculty members' evaluation, such that if they do not provide a course plan, they would not obtain the relevant points, providing educational support and having a plan for training faculty members, providing a university-approved framework for course plans, the formal request of the matter by the deputy for education of the university or faculties, having regulations in faculties, whereby all faculty members are required to submit a course plan, create a culture for course design based on scientific principles, having incentive mechanisms for faculty members, holding relevant workshops by the Education Development Center or Education Development Offices, reviewing the proposed course plans by the Education Development Offices and providing feedback to organize the course plans, having a program for monitoring in the form of a four-year college-level program for the regular configuration of future work, activating the Education Development Offices and appointing active and interested faculty members as the head of them, more interaction between the deans of schools and academic departments by establishing a two-way communication, evaluation of Education Development Offices and careful supervision by EDCs, reinforcing human resources, giving sufficient knowledge to faculty members on how to design course plans, and finally, appointing a committee for monitoring the process of course design, which can improve the status quo.

Given the current situation and the upcoming trend, the use of solutions tailored to both the needs of the country and the credible global practices in this field can be effective in solving the existing challenges and barriers in the near future. The findings from the extensive research project conducted by Kennedy et al. on the 21st Century European Medical Education Curriculum emphasize the move towards a new attitude towards students as participants in the learning process and avoids looking at them as customers or consumers. In this type of view, students should be involved with the curriculum, and this can be done by employing them in the curriculum committees. Also, the results of their study suggest the importance of educational support from faculty members in the field of

education and incentive mechanisms and rewards for participating in education as future trends (22). The solutions presented in this study are in accordance with some of the results of the mentioned research.

One of the advantages of this study was examining the status of course planning in all the departments of Tehran University of Medical Sciences. The authors, in view of the differences in the nature of the disciplines in the university and the need to adopt different approaches to designing a questionnaire, planned to implement this survey in four sub-domains (general medicine, general dentistry, general pharmacy and other disciplines in the university), and data collection tools tailored to these sub-domains were also designed. Also, in addition to obtaining information based on self-report of academic departments, in order to achieve comprehensive information, all course plans were analyzed using a researcher-made checklist.

### 5.1. Limitations

One of the limitations of the present study was the lack of cooperation of the sub-domain of medicine, which seems to be due to differences in the study environment in this area. In addition, due to the difference in the nature and complexity of residency subdomain and various aspects of it, it was not possible to address it in this study. Due to the importance of examining the status quo in this field, it is suggested to design and implement a separate research with a qualitative methodology and to select an exploratory sequential mixed method research (MMR) design.

The lack of familiarity with the concept of the course planning and lack of its clear distinction from other curriculum levels in the university departments was a general limitation of the present study. After conducting a pilot and taking into account the views of the faculty members participating at that stage, the authors tried to some extent to resolve this issue by providing a brief explanation of the definition of the course plan and its elements in the questionnaire's footnote.

### 5.2. Conclusions

The present study was conducted to investigate the current status of the course plans of the current disciplines taught in Tehran University of Medical Sciences and discover the unknown and existing barriers in this field. Our findings can be considered as a solid foundation for future planning and decision making.

The results of this study were used to design and elaborate a mega plan for the preparation of course plans in Tehran University of Medical Sciences. This program was designed to develop a vision, define and prioritize and

identify the desired outcomes, provide a suitable platform for improving the status quo, and map out the path ahead for a targeted change. In this regard, due to the necessity of publishing the results, the findings of the present study were presented in the form of a comprehensive report to the Deputy of Education and President of Tehran University of Medical Sciences. Undoubtedly, the optimal use of the results of this research requires the elaboration and explanation of the necessity of trying to improve the status of the university to make the next steps possible. Based on this plan, one of these basic steps is to compile, approve and introduce a bylaw for organizing course plans in Tehran University of Medical Sciences in order to integrate and organize all activities in this area.

### Supplementary Material

Supplementary material(s) is available [here](#) [To read supplementary materials, please refer to the journal website and open PDF/HTML].

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### Footnotes

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**Ethical Considerations:** In order to observe ethical considerations, all the information of the faculties' departments is considered to be completely confidential and emphasize at all stages on the preservation of the information presented and the lack of use of the results in the assessment process of the educational groups and their faculty members. This issue was first mentioned at the beginning of the process and then in the questionnaire's guide.

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