

# **PRODUCTION AND OPERATIONS MANAGEMENT COURSES IN THE BSBA AND MBA CURRICULA, UNIVERSITY OF THE PHILIPPINES**

**By**

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The courses in Production and Operations Management offered at the University of the Philippines attempt to present a) an overall view of the complex operations of an industrial organization, b) the interrelationships of the production or operations function with other functional areas, such as accounting and control, finance, marketing, personnel, and c) the principles of management that lead toward effective coordination and control of the enterprise.

The distinctive characteristic of the functional area of Production and Operations Management is its emphasis on the decision-making process of the production or operations manager in his responsibility for performances, over time, of a complex man-machine system functioning in an organizational context. Although traditionally, cost is the most significant criterion of his successful performance, recent trends in modern operational objectives and goals point out some other significant criteria such as time; being "first" in the market; etc.

Effective operations of a modern industrial enterprise demand that those who have administrative and technical responsibilities possess a reasonable knowledge and appreciation of the traditional technical functions of production. These are product design, research and development, plant location and layout, quality control, costs reduction and control, production planning and control, methods engineering, job eval-

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uation, wage incentives and administration, labor and industrial relations. However, the cofunctional relationships with the other functional areas such as marketing, finance, accounting and personnel must be emphasized so as to avoid suboptimization of production decisions. It is only through this spread of knowledge and understanding that the industrial enterprise becomes a coordinated organism, operating effectively toward a professed goal.

A production or operations manager has direct responsibilities for the desired output of his production or operations system—either in terms of goods or services. His inputs are materials, men, money, machines and methods. The manager must bring to bear on his production or operations problems, consciously or intuitively, a diverse background of knowledge. These may concern technologies and techniques in the production field; basic disciplines in quantitative methods for business decisions; human behavior in organizations; the engineering aspects; and the legal aspects. His should be a “total systems” approach, for after all, he and only he alone is held responsible for the desired production output at reasonable inputs.

The focus of courses in Production and Operations Management, therefore, must be to offer the student a cumulative (as contrasted with disjoint technical area emphasis) set of experiences for decision-making. An important continuing problem for any decision-maker is one of *defining the problem*. Another key administrative skill (often overlooked in the preparation of teaching materials) is the ability *to devise effective means for implementing proposed solutions*.

The teaching of Production and Operations Management necessarily, should present an arena for application and refinement of skills in a) problem definition, b) analysis of various factors, c) discussion of various alternatives, d) selection of the most probable effective alternative, e) synthesis of the proposed plan of action, and f) effective implementation of the solution.

At the undergraduate level, we try to introduce the functional area of Production and Operations Management in two courses (see Appendix A). BA 105 (Production and Operations Management I) introduces the

*elements* of production and operations. BA 106 (Production and Operations Management II) attempts to make students aware of the various *techniques of controlling* costs, quality, the production system, materials; and the latest development and trends in modern operations, such as quantitative analysis and computer applications. Because of the students' lack of experience and maturity in judgment, only simple problems and case studies are discussed. However, students are given readings or technical notes in various process technologies and products.

Students who take these two required "core" courses (as contrasted to major field courses) are majors in accounting, marketing, finance or are taking the general management option. Our objective is to relate the students' knowledge in their respective major subjects as well as in general management, with the production and operations functions in an industrial enterprise and point out various decision alternatives in production that appreciably throw the other areas off-balance or vice versa. Teamwork is essential, and is emphasized.

With this understanding, in later years of practice they can avoid stepping on the professional engineering prerogatives, or judgment. At the same time, it is hoped that they can intelligently communicate with the technical men on proposed solutions of production and operations problems.

At the graduate level, the basic emphasis in the undergraduate level is reinforced with extensive readings (books, journals, bulletins), technical notes and case studies of more complex industrial problems. Case materials of the Inter-University Program for Graduate Business Education in the Philippines<sup>1</sup> are extensively used. These are published and distributed by the Philippine Case Clearing House, Inc. (PCCH). A bibliography is published yearly by the PCCH and is available at cost to graduate faculty members in business administration. In addition to these PCCH cases, we discriminately select cases from other casebooks—foreign or local.

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<sup>1</sup> Participating institutions are Ateneo de Manila University, De La Salle College, University of the Philippines, Asian Institute of Management (AIM) and Harvard Business School.

The case studies being presented describe authentic production and operations management problems that have arisen in specific firms. Each case places the student in the role of the manager responsible for solving the case presented. The cases are prepared as base for class discussions. They are not designed to present illustrations of effective or ineffective handling of administrative problems.

When studied and then used as a basis for discussion, these case materials can make five major contributions to a student's educational preparation for a general management career, as intended in the university's MBA Program:

1. An understanding of the principal facets of the total process involved in the production of manufactured goods or necessary services, and the interrelated activities that occur within that process.
2. An appreciation of the extent to which a variety of feasible choices are likely to be present at each stage of the production process; the multiplicity of decisions that, therefore, are demanded of production or operations managers; and the varied—and often conflicting—considerations that can be germane to such decisions.
3. An insight into the interactions existing between production decisions of a given company, the activities in other sectors of the business, the practice of other concerns in that industry, and the forces affecting the entire national economy.
4. A comprehension, therefore, of the specific factors that make skill in the art of production and operations management a prime competitive advantage for the individual company—a crucially important asset for the nation.
5. An opportunity to make a beginning toward the development of such a skill.

The primary focus of the cases is upon *management activities*—the decision-making, planning, organizing, staffing, directing, controlling and implementing that must underlie effective utilization of productive re-

sources. This emphasis reflects on the conviction that the challenges confronting production, or operations managers represent the most effective pedagogic vehicle for developing the student's understanding of the production process—and of the managerial skills demanded by that process.

The management decisions called for by the cases are principally at the operating level. This is consistent with the educational objectives for which the case studies have been designed. In the context of these case situations, however, the discerning student will repeatedly observe the relationship between *top policy guidelines* and *operating decisions*. He will see evidences of the numerous ways in which the nature of specific operating problems may point a need for revisions, additions to or clarifications of existing top policies.

Another characteristic of the cases is that the case materials do not attempt to present single-dimensioned abstractions of reality. Rather, as in the real world of production and operations management, the problems dealt with are commonly characterized by a mixture of technological, economic, and human considerations. In many instances, analysis will indicate that certain of these elements are sharply in conflict.

A related characteristic is that in most case situations, the students must base his analysis not on *perfect information*, but rather on an array of facts and judgments, not all of which are invariably consistent with others. Some of these may represent only indirect evidence relative to the problem at issue. Furthermore, as in actual practice, information that would undeniably reduce or eliminate uncertainties inherent in the problem will be lacking or expensive to get.

An authentic portrayal of the degree and quality of the information available in specific production situations provides valuable opportunities for the student to gain further insights into the practical applications of modern quantitative techniques of formal analyses. These techniques presuppose the availability of certain types of data. The student is given a chance to assess the contributions such techniques can render, and to recognize the steps and costs that are required before the techniques can be employed in a specific situation.

To implement the above objectives, two core courses in Production and Operations Management are required of all MBA students. BA 240 (Production and Operations Management I) presents the scope and responsibilities of the production, or operations function, with emphasis on planning, organizing, and assembling of resources in a production or service enterprise. BA 241 (Production and Operations Management II) places emphasis on directing, and controlling the production, or operations activities.

For technologists who are pursuing the MBA degree, these courses offer an opportunity to make them more effective managers by considering the interrelationships of the production functions with other functional areas. On the other hand, the courses offer nontechnologists an understanding of the technological process and production functions in relation to their functional areas.

For the student in general management, the courses expose them to the concepts, problems and applicable techniques used by production personnel.

With this approach, hopefully the production, or operations personnel in any enterprise could communicate more effectively with general managers (and vice versa), as well as with other cofunctional departments in the achievement of company goals.