The How's and Why's of Master Curriculum Development

The master curriculum – the documentation of your organization's educational process – is indeed the backbone of your surgical technology program. It is the strength of any educational process.

Every Surgical Technology program should have an independently developed master curriculum, reflecting the methods and practices of that particular institution. To become accredited or maintain accreditation, your school must provide faculty and student with "a clear description of the program and its content, including learning goals, course objectives, supervised clinical practice assignments, and competencies for graduation."[1]

This includes course syllabi that describe learning objectives. In addition, your school must show documented student evaluation and periodic program evaluation as part of the accreditation process.

The master curriculum is a guiding tool for planning the details of the education process, so that students can learn in an organized, orderly, and sequenced manner. A master curriculum guides the program in a number of ways. First, the curriculum organizes program objectives into groups of like information or informational foci. From these foci, the faculty can develop courses that assist and support the program's overall educational objectives.

A master curriculum also guides in the area of informational sequencing. Basic or introductory information can be assigned as prerequisites or entry-level courses so the instructional method advances from simple to complex.

A master curriculum guides and focuses the instructor or instructional team enabling them to support and accomplish the overall educational goals of the program. It also encourages consistency in the information presented during the learning process. Standardization of topic presentations assures that each instructor is aware of the required information and objectives of a given course. Without this consistency in the educational process, a school can not ensure a comprehensive knowledge base and presentation, because positive overall program assessment and outcomes would be difficult to measure and interpret.

Once the master curriculum is developed, it should be validated by representatives of industry and business, advisory boards, a consultant or an accreditation process. Validation provides one source of feedback to assure that the materials are both current and comprehensive. Curriculum review should be performed periodically to assure timeliness of the concepts and comprehensiveness of the material. This is particularly true in the field of Surgical Technology where the technology information base evolve at a rapid pace. Through evolution and revision of the curriculum, faculty can incorporate successful teaching methodologies, leading to more professional and skilled students. Continued evaluation and revision will provide a tool that accurately reflects the practices

of today's allied health arena and teaches that information using the most successful means available.

Even though voluminous, a master curriculum should be a dynamic tool – one easily changed and updated.

Master Curriculum Development – An Overview

A program's master curriculum contains three areas of documentation development – the program overview, the course syllabus, and the course lesson plan.

A program overview should be developed first. The overview contains basic components, written to reflect the broad nature of the educational process. The format for developing a program overview should follow the same format prescribed by similarly focused programs within your institution.

The program title and institutional division, if applicable, is listed first. The curriculum title reflects the name or classification of the profession being educated. This is followed by a program summary – a "thumbnail sketch" of the length, goals, and the general means used to accomplish these goals. The condition maybe formulated as an overall statement; such as "Upon the completion of the didactic and clinical components, the graduate will be able to…" The performance addresses the target population, usually referred to as the learner or the graduate, in the area of information or skill to be demonstrated. An action verb should detail the type of learning that will occur. Examples of action verbs commonly used in a Surgical Technology curriculum include: perform, demonstrate, prepare, describe, apply, identify, differentiated, and complete. The standard is defined as a means to indicate how well the performance is to be demonstrated in order to quality as successful.

Performance objectives should include foci and skills in the three domains of learning: cognitive or knowledge, understanding and thinking skills; psychomotor or manipulative, hands-on skills; and affective skills or interests, attitudes, appreciation and values. These master objectives will later become the springboard for the development of courses and lesson plans.

The program overview, in an abbreviated form, may be published in the institution's catalog or informational brochure. All students entering the program of study should be provided with this information prior to being admitted to the program, or during the orientation period. This document serves to provide the student with insight into the educational focus of the program and instructional methodologies used to assist him or her in gaining knowledge and skills.

Master Curriculum Development – Clusters and Syllabi

Program course listings are used to divide program objectives into specific, clearly defined areas of focus. Programs may choose to cluster topics in several ways: time, topic or task progression. When using time, each course covers a percentage of all the information and/or skills defined in the program overview (e.g. Surgical Tech I, II, III, and IV). Programs may cluster by topic, such as Pharmacology, Operating Room Techniques, and Perioperative Issues. Programs may also use task progression (simple to complex) to form a cluster (e.g. Principles of O.R. Practice and Advanced Principles of O.R. Practice).

However, clusters are divided, each segment of the program objective must be defined by the cognitive, psychomotor, and affective skills presented. Information must be presented in a simple-to-complex manner, and the methods of the competency measurement must be defined clearly.

When developing the number and nature of the courses, consider the following concepts. Using more courses to present the information gives the educator a means to more easily identify areas for student remediation. Separate grades for the courses help student identify areas of strength and weakness. Fewer course offerings help student easily organize their workloads, but the "all the eggs in one basket" philosophy may place undue stress on the student. Including a clinical component in a theory class will require equity when developing outcome measurements rationales, as clinical grades may carry more weight than didactic/theory grades.

Once clusters have been developed, the next step in creating a master curriculum is creating syllabi for each course or cluster division. The format for syllabus development is similar to that of the program overview but will involve greater detail. A syllabus contains the following areas: course title, course overview, course specific learning objectives, teaching and learning methodologies, a list of required optional texts, and methods to measure or evaluate outcomes.

The course title section should include a short, but descriptive course name. Institutions may also assign a course number. This section lists the hours assigned for the course and the credits given for successful completion. Typically, each 15 hours of theory is awarded one credit hour. Laboratory and clinical experiences are awarded fewer credits (30 – 45 hours equals' one credit hour). If known, the instructor's name and credential are included. The course overview is a brief summary of the learning focus and activity during the course. The overview gives the student information about course offerings. It is written in narrative form and is commonly used both in the syllabus and as the course description in the program overview section.

The learning objectives present a summary of the skills and information learned during the course. The objectives, like the program objectives, must address the cognitive, psychomotor, and affective skills related to the selected course and must include the

condition, the performance, and the standard. The objectives are written using action verbs and must be measurable.

Teaching methodologies are listed and may include the following: lecture; demonstration/return demonstration; written or reading assignments; journal article review or research; oral presentations; audiovisual aids; computer-assisted instruction; activity packages; and externships or internships. Teaching methodologies should address the needs of the auditory, visual, and kinesthetic learner.

The syllabus should provide a comprehensive list of reading materials and equipment required for the course. The list should include the author, title, edition, publisher, and ISBN number of required texts. The manufacturer's name and the style number of specific equipment and supplies should also be listed.

A list of topics presented during the course should then be completed. This list will later be more formally developed into lesson plans. The instructor may choose to include the following information: the dates or number of classes; reading assignments; laboratory assignments; or other assignments and the outcome assessment tool used to determine successful completion.

The topic listing helps the student understand the focus and assists them in completing the learning objectives of the course.

The last component of the syllabus is outcome assessment. This describes the types of activities that contribute to the formulation of the student's grade. These activities are listed and weighted based on a scale of 100%. This section gives the student knowledge of how his/her grade will be determined, as well as the weight of each grade or activity. With this information, students can monitor their progress throughout the course.