



Arab Republic of Egypt



National Authority of Quality  
Assurance and Accreditation of Education

## **National Academic Reference Standards (NARS)**

### **Physical Therapy**

May 2009

1<sup>st</sup> Edition

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## **Preface**

Based on the Presidential Decree number (82) for the year 2006, the National Authority for Quality Assurance and Accreditation of Education (NAQAAE) was founded to enhance the quality of education in Egypt.

In the light of NAQAAE's mandates, developing National Academic Reference Standards (NARS) for higher education comes on the top of its priorities. NARS are intended to set out clearly the graduate attributes and academic characteristics expected to be achieved in the academic programs of different disciplines.

The natural resources are no longer the backbone for development and prosperity; instead knowledge economy has become the main base for inducing tremendous and progressive breakthroughs in the resources of nations. In this regard, knowledge economy requires high quality education based on well defined reference standards.

The international changes and the concomitant alterations in the socio-economic conceptions obliged quality education as the main gate for human resources development. The latter, in turn, is counted as one of the most important determinants of national sustainable development.

Good practice in education should encourage students to improve their innovative and creative capabilities, employ appropriate technologies and pursue independent and life-long learning. This would necessitate setting out plans to develop the institutional

capabilities and educational efficiency. Accordingly, educational institutions have to reform their programs and courses to meet the demands of the labor market. In addition, graduates should acquire the flexibility that enables them to adapt to the future needs of the labor market.

In alignment with its functions, NAQAAE, in collaboration with the stakeholders, has developed an integrated system to assure education quality. One of the system's outcomes is a series of guides for NARS in different academic disciplines to help higher education institutions in designing their programs to meet the accreditation requirements.

*National Authority for  
Quality Assurance and  
Accreditation of Education (NAQAAE)*

## **Acknowledgements**

The National Authority for Quality Assurance in Education, (NAQAEE) would like to thank all the stakeholders involved in this work. The stakeholders included are representatives from the Ministry of Higher Education, National Syndicates, the Academic university staff members and the Private Sector. All of them were committed to make this work possible through their knowledge and experience.

The President of the National Authority for Quality Assurance in Education, Professor Magdy Kassem and Board members would like to acknowledge the efforts done by the task force group assigned to prepare this guideline for their hard work to ensure high quality graduates and to be comparable to the international standards.

**Professor Magdy Kassem**  
**NAQAEE, President**

## **Methodology**

NAQAAE has invited a group of education experts, in different academic disciplines, from state, private and Al-Azhar Universities to develop a general framework of the guide for the national academic reference standards (NARS) in the different sectors of higher education. The steps proceeded as follows:

### **1. Brain Storming**

The authority held several workshops for expert groups to discuss the general framework and elements/contents of the NARS guide and Standardization of concepts and terms used in the NARS within a definite time table.

### **2. Reviewing of the International Academic Standard**

Experts groups have reviewed the academic standards of some World accreditation institutions and standard applied in the corresponding faculties at universities from different countries in the world to have access to the global level, taking into account the need to preserve the Egyptian identity.

### **3. Reviewing the Available Academic Standards in Egypt**

The working groups have reviewed the academic standards which have been developed by the sectors of the Supreme Council of Universities - Ministry of Higher Education and Scientific Research. In accordance with the required amendments to NAQAAE, groups developed the guidelines to meet the needs of higher education institutions.

#### **4. Reviewing by Technical Committee**

Standard first drafts were reviewed by technical committees formed by NAQAAE board, to insure that standards meet the agreed essential elements as well as the technical editing of the draft.

#### **5. Stakeholders Approval**

After the completion of the draft of national academic reference standards, it was presented to representatives from stakeholders, faculty members from different universities and Al-Azhar institutions and representatives from the Ministry of Higher Education and the State for Scientific Research, to take appropriate action.

#### **6. Dissemination**

The Authority posted academic standards on its website (naqaae.org.eg), to receive feedback from students, faculty members and stakeholders.

#### **7. Endorsement of Standards**

The draft was revised according to the feedback received and introduced to NAQAAE's Board for approval.

## **Introduction**

Physical therapy is a vital form of professional patient care that can be applied in most disciplines of medicine. It emphasizes the use of physical therapy approaches in the promotion, maintenance and restoration of an individual's physical, psychological and social wellbeing and takes into account individual variations in health status. It is the newest and yet the oldest field of medical practice. It is the newest because only in the past health care eighty years has become to be recognized as an integral part of regular medical care. It is the oldest because physical agents have been used in the treatment of diseases and injuries for thousands of years. It is characterized by reflective behavior and systematic clinical reasoning, both contributing to an underpinning a problem solving approach to patient centered care. Physical therapy practice is supported and influenced by evidence of clinical effectiveness and practitioners may work independently or as members of the health care team.

In Egypt, the urgent need for physical therapy services was recognized after the tripartite invasion of Egypt in 1956, with the need to rehabilitate injured civilians and military personnel. At that time, the Military Rehabilitation Center at El Agouza was the only place in Egypt that provided this kind of services. Therapists from Sweden, Denmark and other European nations were in charge



of delivering these services in addition to occupational, orthotic and prosthetic services.

Soon after, attempts were made to modify this situation by developing Egyptian physical therapy manpower. Outstanding graduates of the High Institute of Physical Education were nominated and some were sent abroad to Germany to study physical therapy, others were later on enrolled in two years program in Egypt. These individuals formed the nucleus of the profession and paved the way for the development and dissemination of physical therapy in Egypt, both clinically and educationally.

In 1962, the High Institute of Physical Therapy was established under the supervision of the Ministry of Higher Education, and began to accept students with secondary school certificates in four years program.

In 1975, the Physical Therapy Institute was attached to Cairo University, under the supervision of, and affiliated to, the Faculty of Medicine.

In 1977, one calendar year internship was added to the physical therapy program and was mandatory to practice the profession and to join the graduate studies in Egypt.

In 1992, the Institute achieved autonomy, and was renamed the "Faculty of Physical Therapy". Since achieving autonomy, the profession has achieved the biggest growth in numbers.

In 1994, the Egyptian Physical Therapy Syndicate was established to represent the body of the profession on both the National and International scene.

In 1996 and 1998, two private educational programs were developed and established to meet urgent needs of the society.

**Physical Therapy Education:**

Physical therapy curriculum transfers knowledge, skills about patient assessment, treatment intervention, treatment outcomes, clinical analysis, discharge planning and follow up with emphasis on realistic attitudes concerning health and illness in relation to man's environment, cultural patterns and individual characteristics assuming ethical and legal responsibilities as an active participant in the profession.

The curriculum include biological and physical sciences, core profession sciences (physical therapy and clinical sciences), behavioral sciences and information technology necessary for initial practice of the profession.

**Settings of Physical therapy practice:**

**Physical therapists are working in a range of health care:**

**settings that include:**

1-Hospitals ( in and out patients clinics)

2-Rehabilitation facilities.

3-Homes care.

4-Academic and research institutions.

5-Schools and hospices.

6-Corporate and industrial health centers, industrial workplace, and other occupational environment.

7-Athletic facilities, fitness centers and sports training facilities.

**Future development of physical therapy profession**

Physical therapy profession is one of the most dynamic professions that developed to face the continuous changes and challenges in the health sector. Physical therapy profession during the last two decades has moved from only referral profession to be able to act as first contact practitioners and many patients seek direct care without referral from another health care professional.

Nowadays physical therapist are facing growing demands to validate their clinical observation and techniques with more objective scientific procedures, such

verification can be provided by the appropriate investigation techniques using advanced modern technology. The vast advances in technology gave the physical therapy practitioner an unequivocal opportunity to use advanced electronic equipments in evaluation and treatment.

Physiotherapists provide a substantial teaching and advisory role to the public and many patients and client groups. The qualified physical therapist also provides mentorship for students and colleagues and utilizes a range of communication, teaching skills, decision making, lifelong learning leadership and management skills.

Physical therapy practice is making more and more direct reference to published research evidence as well as indicators of effective intervention in the form of professional and clinical standards and clinical guidelines. Practice is informed by specific research as well as the general scientific literature by this way engages in evidence – based practice.

## **The attributes of Physical Therapy graduates**

Physical therapy students been selected for physical therapy program according to the initial screening exam must have the capabilities to:

- 1-Act as a member of health care team in restoring, maintaining and improving functions of different body systems.
- 2-Provide comprehensive practice management and maintain patient's record in complete and accurate forms.
- 3-Understand the legal responsibilities and ethical considerations of professional practice.
- 4-Communicate effectively, accurately, clearly, confidently in written and oral in both English and Arabic languages.
- 5-Be committed to continuing professional development ( life long learning ).
- 6-Recognize the importance of conducting research studies on evidence based practice.
- 7-Acquire basic administration and teaching skills for patient and care given.

## **I. National Academic Reference Standards (NARS)**

The physical therapy institution must provide a comprehensive curriculum plane that ensure Knowledge and understanding, intellectual skills, professional skills and general skills.

### **1. Knowledge and Understanding:**

**The award holder must be able to demonstrate knowledge and understanding of:**

1.1.Human anatomy and physiology (emphasizing the dynamic relationships of human structure and function).

1.2.Human growth and development across life span.

1.3.Basic principles and theories from physics, biomechanics, electrophysiology and applied exercise sciences that can be utilized in physical therapy.

1.4.Principles of movement and function analysis based on anatomical, physiological and mechanical understanding considerations.

1.5.The effects of pharmacological intervention and its impact on physical therapy procedures.

1.6.Clinical sequel of pathology and their relationship to physical therapy intervention.

1.7.Principles of physical therapy assessment and treatment (tools & techniques).

1.8.Medical and surgical interventions for different body systems and tissues as it related to physical therapy field.

1.9.Psychological and social factors that influence an individual in health and illness and their impact on physical therapy practice.

1.10.Different theories of motor learning and motor control.

1.11.Principles of research and evidence based physical therapy practice.

1.12.The legal responsibilities and ethical considerations of professional practice.

## **2. Intellectual skills:**

**The award holder must be able to practice the following skills:**

2.1.Integrate basic anatomical, physiological and biomechanical knowledge with clinical data.

2.2.Conduct a comprehensive examination and evaluation to reach a physical therapy diagnosis.

2.3.Synthesize relevant obtained data to predict prognosis.

2.4.Formulate plan of care to achieve realistic goals.

2.5.Write concise, accurate and understandable patient's problems.

2.6. Justify indications for, and proper use of orthotics and prosthetic devices.

2.7. Extract data from literature, using information technology and library resources to solve patients problems.

2.8. Utilize scientific thinking in solving problems related to patients, work management, and among rehabilitation team.

2.9. Value the framework of quality assurance mechanisms within physical therapy practice.

### **3. Professional skills:**

**The award holder must be able to practice the following skills through A series or interrelated steps that enable the physical therapist to plan and implement effective treatment program compatible with the needs of the patient is made.**

**These steps are as follows:**

3.1. Performance of definitive physical therapy examinations.

3.2. Construct the problem list, strengths, abilities and buffers.

3.3. Formulation of physical therapy diagnosis.

3.4. Design and manage a specific physical therapy Plan of care.

3.5. Implement in a safe and effective manner a specific physical therapy plan of care.

3.6. Conduction initial and periodical patient's evaluation.



3.7.Modify physical therapy program, terminate intervention and induce discharge plan as related to changes in physical status.

3.8.Acknowledge cross-professional boundaries and limitations.

3.9.Employ appropriate referral procedures.

3.10.Cope with his/her own emotional reactions in different situation.

#### **4. General Skills:**

**The award holder must be able to practice the following skills:**

4.1.Demonstrate competence in the use of computer based information.

4.2.Manage time, personal emotion stress, and prioritize work loads.

4.3.Display the potential for leadership and team skills.

4.4.Comply with infection control principles and sterile procedures.

4.5.Enhance personal and rapport with patients and family members.

4.6.Teach patients, families and significant others to perform or assist with selected physical therapy procedures.

4.7..Respond appropriately to individual and cultural differences in all aspects of physical therapy services.

4.8.Communicate verbally and non verbally with patient health care delivery personnel and others in an effective, appropriate and capable manner.

## II. NARS Characterization for the Physical Therapy

Subjects	Range
Biological and physical sciences	20 - 22
Behavioral Sciences	10 - 12
Core Professional sciences	53 – 55
Information Technology (IT)	3 - 4
Total	86 - 93

Out of 170- 180 credit hours, these subjects are weighted:

1. **Biological and physical sciences** : These include necessary sciences for initial practice of the profession (e.g. anatomy, histology, physiology, physics, exercise physiology, applied exercise sciences, electrophysiology, biomechanics, neuroscience, pathology, and pharmacology) and learning experiences that include laboratory or other practical experiences involving quantitative and qualitative observations.
2. **Behavioral Sciences:** These include applied psychology, applied sociology, communication, ethics and laws, management, teaching and learning, language, clinical reasoning, evidence-based practice, research and applied statistics.
3. **Core Professional sciences:** These include both medical and physical therapy sciences of the neuromuscular, musculoskeletal, cardiovascular/pulmonary, integumentary, women health, growth and development in addition to medical and surgical condition frequently seen by physical therapists.

## **Glossary**

### **Academic Standards:**

Academic standards decided by the institution and informed by external references and including minimum knowledge and skills to be gained by the graduate from the program and fulfilling the stated mission of the institution.

### **Assessment:**

The collection of information related to a patient's condition, taking account of the full range of relevant contextual factors that is needed to make physical therapy diagnosis and a plan of management.

### **Benchmark statements:**

Benchmark statements set out expectation about standards of degrees in a range of subject areas. They describe what gives a discipline, its coherence and identity. They define what can be expected of a graduate in terms of the ability and skills needed to develop understanding of competence in the subject. Benchmark statements do not represent a national curriculum in a subject area, rather they allow for flexibility and innovation in program design, within an overall conceptual framework established by an academic subject community.

**Clinical guidelines:**

Statements developed through systemic processes to assist practitioners and individuals in making decisions about appropriate forms of health care in particular clinical areas, taking account of individual circumstances and needs.

**Clinical reasoning:**

The critical and analytical thinking associated with the process of making clinical decisions.

**Clinical Sciences:**

Include physiotherapeutic sciences, medical sciences, and other sciences applied to physical therapy practice.

**Codes of practice:**

These are established by the physical therapy profession or incorporated into national rules and laws. They include ethical rules and principles that form an obligatory part of professional practice.

**Competences:**

The set of characteristics expected of a graduate who draw upon the acquired knowledge, understanding and skills for employment and/or further education and academic research at an appropriate level field.

**General Physical Therapy Syndicate (GPTS):**

The government initiated EPTS to provide a framework through which health services organizations are accountable for continuously improving the quality of services they deliver.

**Evaluation:**

Review and assessment of the quality of care in order to identify areas for improvement (clinical judgment).

**Evidence-based practice:**

A commitment to use the best available evidence to inform decision-making about the care of individuals that involves integrating practitioners, individual professional judgment with evidence gained through systematic research.

**Health professions framework:**

The minimum range of expectations necessary to provide safe and competent practice for patients/clients, common to all registered professionals within a variety of health and social care settings.

**Intellectual skills:**

The process of solving problems with thinking and reasoning.

**Learning theories:**

Established ideas of how learning can be promoted.

**Lifelong learning:**

The process of constant learning and development that incorporates continuous professional development, in which all individuals need to be engaged in a time of rapid change.

**Multidisciplinary:**

One or more disciplines working collaboratively.

**Non-discriminatory practice:**

Professional practice within which individuals, teams and organizations actively seek to ensure that no-one (including patients, careers, colleagues or students) is either directly or indirectly treated less favorably than others are, or would be, treated in the same or similar circumstances, on the grounds of age, color, creed, criminal convictions, culture, disability, ethnic or national origin, gender, marital status, medical condition, mental health, nationality, physical appearance, political beliefs, race, religion, responsibility for dependants, sexual identity, sexual orientation or social class.

**Non verbal communication:**

The use of eyes, smiles, frown, the tone of voice, the position head of arms trunk and legs, how close stand is, and whether there is touch or not, all indicate non – verbal messages to the person talking to.

**Physical Therapy /Physiotherapy:**

Synonymous terms to identify the profession. The professional title and term used to describe the profession's practice which depends largely on the historical roots of the profession.

**Physical Therapy diagnosis:**

Is arrived at either independently of or in conjunction with a medical diagnosis. It is generally expressed in terms of how a condition compromises the functioning of a patient.

**Problem solving:**

Exercises and processes that enable students to interrogate their existing knowledge and develop their learning to formulate a solution to a presented question or issue and that should deepen students learning, as well as developing their conceptual and methodological skills, thereby enhancing their overall approach to professional practice.

**Professional autonomy:**

The power to make decisions regarding the management of the patient / client based on own professional knowledge and expertise.

**Quality assurance:**

System of recognized procedures for establishing standards and includes procedures for reaching standards.

**Rehabilitation:**

Rehabilitation is a goal-oriented treatment process intended to maximize independence in individuals with compromised function that results from primary pathological processes and resultant impairments. Rehabilitation generally addresses the sequel of pathology rather than the pathology itself.

**Self-directed learning:**

Independent learning that is initiated by the student.



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