

# HOW ARE LEARNING OUTCOMES CONCEPTUALISED AND USED IN THE WORK OF PROFESSIONAL BODIES - CHALLENGES, SUCCESSES AND KEY LESSONS LEARNED

The SACPCMP'S Perspective with  
Respect to the Construction Management  
Professions

# Background to the SACPCMP

- The South African Council for the Project and Construction Management Professions (SACPCMP) was established by the Project and Construction Management Professions Act (Act No.48 of 2000) to regulate Project and Construction Management Professionals



- SACPCMP registers, certifies, regulates and promotes the Construction Management, Construction Project Management and Construction Health and Safety fields within the built environment management professions.

# Background to the SACPCMP

- The Minister of Public Works is the executive authority of the SACPCMP through the Council for the Built Environment (CBE), which oversees the activities of all the Built Environment Councils
- The SACPCMP operates in the Built Environment alongside the:
  - South African Council for the Architectural Profession
  - Engineering Council of South Africa
  - South African Council for the Landscape Architect Profession
  - South African Council for the Quantity Surveying Profession
  - South African Council for the Property Valuers Profession



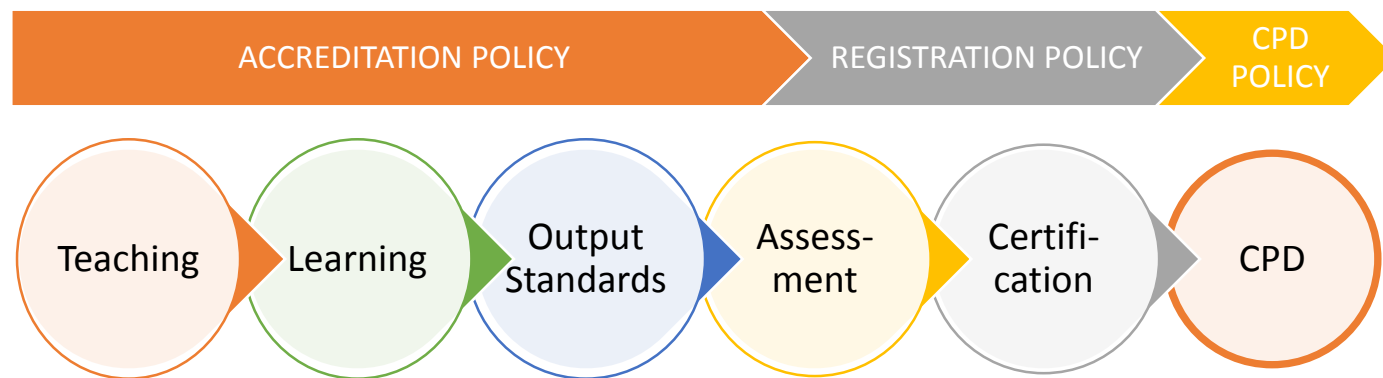
- The built environment is the:
  - “...physical world intentionally created by humans through the application of science and technology ...for the benefit of mankind”
- Professionals in the built environment interpret the technical products and procurement procedures, and:
  - “... provide the knowledge and high-level skills that plan, design, construct, maintain and eventually dispose of the physical built environment” .
- The built environment is critical because it:
  - i. directly affects the health, safety and comfort of the community;
  - ii. has a significant impact on the natural environment and resources;
  - iii. is a strong manifestation of the culture, heritage and national identity of the country and community;
  - iv. directs the social, economic and cultural growth of the community; and
  - v. facilitates the empowerment of disenfranchised sections of society

- Professional education is a formalised approach to acquiring the content knowledge, competencies and application of techniques necessary in our professions
- Professional education must help the graduate:
  - Incorporate the knowledge and values basic to our professional disciplines;
  - Understand the central concepts, principles and techniques applied in practice;
  - Attain a level of competence necessary for responsible entry into professional practice;
  - Recognise and understand the significance of continuous knowledge acquisition, professional development and personal growth; and
  - Expand the frontiers of knowledge
- In short, it should translate knowledge into learning into practice and prevent the professions from becoming obsolete.



# Learning Outcomes - Accreditation

- Learning outcomes - statements expressed in the design of professional education programmes to describe core knowledge and competencies that must be achieved and demonstrated by learners at the end of the programme.
- Core competencies are identified through the following:
  - Local needs (needs within the South African Society)
  - Industry practice
  - Global trends (to benchmark for international recognition)
  - Then, the SACPCMP guides educational institutions on achieving competencies through its policies
- SACPCMP achieves learning outcomes through its Accreditation Policy



# The 10 Accreditation Criteria

---

- 1. Programme design**
2. Institutional structure and commitment to the construction management professions
3. Student recruitment
4. Staffing
- 5. Teaching and learning strategy**
- 6. Quality assurance**
7. Facilities
- 8. Industry liaison**
9. Postgraduate policy
10. Research

- The underpinning legal and policy frameworks:
  - SAQA Act, No 58 of 1995
  - Higher Education Act, No 101 of 1997
  - Skills Development Act, No 97 of 1998
  - NQF Act, No 67 of 2008
  - HEQF Government Notice of 2007
  - HEQSF Government Notice of 2014
  - Act no. 48 of 2000: Project and Construction Management Professions Act.  
The SACPCMP must
    - conduct accreditation visits to any educational institution which offers project and construction management educational programmes
    - unconditionally or conditionally grant, refuse or withdraw accreditation to all educational institutions and their programmes
    - consult with the CHE on matters relevant to project and construction management education
    - consult with SAQA and the voluntary associations to determine competency standards for the purpose of registration
    - advice or assist any educational institution with regard to the educational facilities, training and education of prospective registered persons.

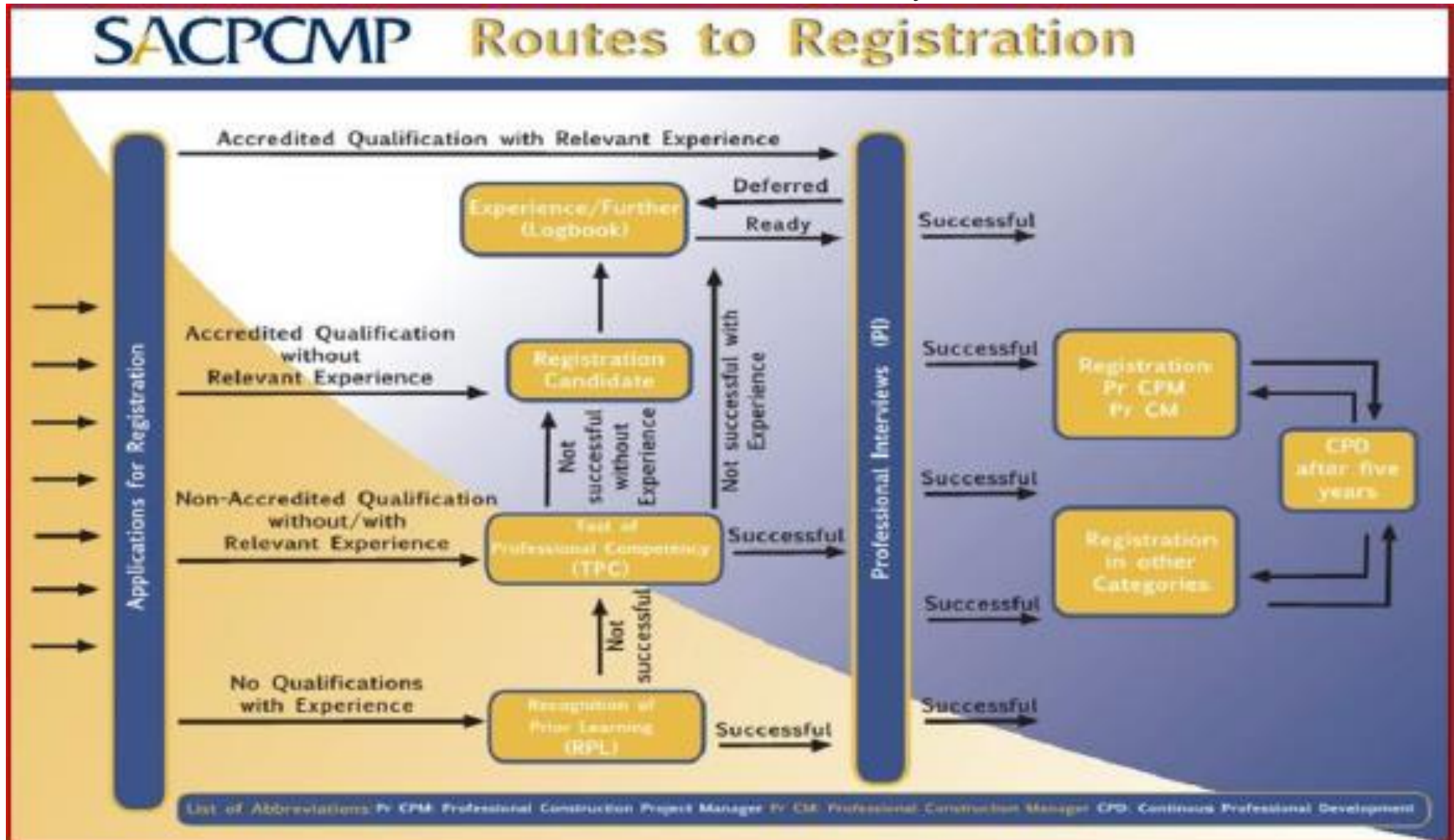


# Learning Outcomes - Conceptualisation

- As a “new” statutory body, the SACPCMP derived its accreditation policy from:
  - Review of the key issues facing the built environment in South Africa and internationally
  - A desktop analysis of construction management programmes locally and internationally to identify dominant themes
  - Consolidation into a body of knowledge that reflects the socio-economic environment prevailing in South Africa
  - Stakeholder engagement
- Themes:
  - Changes within the structure of the built environment (particularly in project and construction management) and its professions
  - Changes in education policy
  - The delivery of professional services in response to social, economic needs
  - Regulatory issues affecting the built environment
  - Prominence of ethical, health & safety, sustainability and environmental issues
  - Innovation in technology and the integration of instruction, research, & technology
  - The imperative to respond to changing industry demands and to change the industry itself

# Learning Outcomes - Conceptualisation

- A person applying for registration as a candidate in whichever category is required to have satisfied the education outcomes as determined by the Council



# Learning Outcomes - Conceptualisation

- The education framework defines the learning outcomes which then define the core competencies at each NQF level

Theme	Sub-Theme	Level 6	Level 7	Level 8
Construction Technology	Construction design and construction processes	Demonstrate knowledge and understanding of the principles, functional and performance requirements of simple designs and the standards and regulations construction technology and processes	Apply knowledge and principles to construction design and construction processes to achieve functional and performance requirements	Appraise the principles of construction design and construction processes for functional and performance requirements and advise on alternative solutions in relation to functional elements and performance.
Construction Management	Management Processes	Demonstrate knowledge of management principles as they relate to construction processes	Apply knowledge of principles of management to construction process	Appraise management principles provide solutions to problems of management in construction processes
Sustainable Construction	Aspects of sustainability	Demonstrate knowledge and understanding of all aspects of sustainability e.g. social, technical environmental and economic.	Apply knowledge of sustainable principles in the construction industry and construction processes.	Analyse the main sustainability principles and how they impact on construction processes and industry.

# Learning Outcomes - Conceptualisation

## Themes for Construction Management

Construction  
Technology

Construction  
Management

Construction  
Environment

Sustainable  
Construction

Construction  
Research  
Innovation

Health, Safety and  
Well being

# Learning Outcomes - Conceptualisation

**Qualification title: National Diploma in the Built Environment Specialisation**

**Minimum period of study: three years**

**Proposed SAQA minimum credits: 360**

## **Level descriptor**

At this level the learner is expected to be able to demonstrate knowledge relating to all active issues in project and construction management including health and safety.

## **Appropriate learning outcomes for the programme:**

Learners credited with this unit standard are expected to be able to:

- a) demonstrate a grasp of the basic technical skills required in the interpretation and preparation of drawing, measurement and quantity determination, construction methods, construction techniques or any related subjects;
- b) demonstrate knowledge of the general purpose and principles of construction management;

# Learning Outcomes - Conceptualisation

**Qualification Title: Bachelor of Science in Construction Management**

**Minimum period of study: three years**

**Proposed SAQA credits: 360**

**Level descriptor**

At the end of this level, the graduate is expected to conceptualise, plan and supervise construction work in a full project cycle.

## ***Purpose or learning outcome of the programme***

Learners credited with this framework are able to:

- 1) demonstrate knowledge of construction methods and techniques;
- 2) demonstrate knowledge in measurement, description and specification for construction work;
- 3) perform cost estimation techniques and preparation of tenders;  
demonstrate knowledge of basic management and planning and supervision processes in the entire project cycle;



# Learning Outcomes - Conceptualisation

**Qualification title: Bachelor of Science Construction Management**

**Minimum period of study: Four years or Honours or three years Bachelor plus one year Honours**

**Proposed SAQA minimum credits: 480 or 360 +120**

## **Descriptor**

At this level the learner must demonstrate the ability to undertake all project planning design and management activities such as construction management, procurement, financial management, interpretation of contracts and legal opinions and interpretation of environmental impact assessment reports, in addition to being able to conceptualise, plan and supervise a civil construction work in a full project cycle. The qualifying learner is also expected to be competent enough to undertake research work.

## **Purpose or expected learning outcomes of the programme**

This is for people who undertake full project management in construction projects and must be complemented by sufficient practical orientation/work experience. In addition to the learning outcomes stipulated in the three-year bachelors programme, learners credited with this framework are able to:

# Learning Outcomes - Conceptualisation

**Qualification Title: Master of Science (Construction Management)**

**Minimum Period of Study: one year**

**Proposed SAQA Credits: 180**

## **Level descriptor**

Demonstration of advanced knowledge and skills in project management, research in

- 1 All project planning design and management activities such as construction management, procurement, financial management, interpretation of contracts and legal opinions and interpretation of environmental impact assessment reports.
- 2 Conceptualisation, planning and supervising construction work in a full project cycle.

## ***Purpose or expected learning outcomes of the programme***

People credited with this unit standard are able to:

- i. undertake multiple level project management on mega scales and have advanced knowledge and skills in all the core areas of project management and full contract specification for civil infrastructure projects;

- Sustainability of the policy incorporates monitoring:
  - Programme Improvements
  - Student Admission
  - Staff Development
  - Placement in the Industry
  - Research Output
  - Quality Improvement
- SACPCMP accreditation processes are:
  - Peer-driven
  - Guided by a widely constituted Programme Accreditation Committee
  - Developmental approach-based (mentoring non-complaint institutions)

- Achieving the link between the needs of the profession and the programmes
  - The state of knowledge transfer between the universities, industry and learners
- Educational framework requires constant improvement, for instance many institutions have not addressed the 4th industrial revolution outcomes in their programmes
  - Teaching new, emerging directions and trends such as Building Information Modelling, environmental literacy and green building principles
- Teaching project/ construction management to student of today who differ from previous generations - reflecting generational changes and approaches to learning
  - Adopting new techniques to teach key aspects of construction management to students, such as simulation games, web-based learning systems, etc.?
  - Aptitude and attitude
- Reflecting changes in the body of knowledge
- Teaching our failures, e.g. the mall and bridge collapses, and learning from them
- Teach our project/ construction managers in such a way that they can operate globally, and relate their technical expertise to societal needs wherever they are
- Continuing Professional Development - creating professionals who are motivated to learn, committed to fostering personal growth and maintaining high quality standards

# Achievements

- The SACPCMP Accreditation Policy has been hailed by peers as rigorous and inclusive.
- It has improved institutions' quality process and programmes
- Has created awareness especially for emerging universities
- A learning curve for SACPCMP to improve its processes