



**Nelson Mandela
Metropolitan
University**

for tomorrow



Construction Management First Year Welcoming Session

Professor John Smallwood

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Outline (1)

- **Realities of construction**
- **Programmes offered by the Department**
- **Accreditation**
- **What is academia about?**
- **Built Environment Research Centre (BERC)**
- **Department of Higher Education focus**
- **The BSc Construction Management degree programme offered at the NMMU**
- **Content of the programme**
- **Subjects per year**
- **Student performance**
- **Literature**



Outline (2)

- **Construction Management Student Society (CMSS)**
- **Construction Management culture**
- **Chartered Institute of Building (CIOB) (Africa)**
- **South African Council for the Construction and Project Management Professions (SACPCMP)**
- **Departmental notice board**
- **Communications and records**
- **Career promotion**
- **HIV and AIDS**
- **Environment**
- **Health, Safety and Security**
- **How to succeed**
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Outline (3)

- **The curse of South Africanitis**
- **Plagiarism**
- **Combating plagiarism**
- **Departmental interventions**
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Realities of construction (1)



55 + storey apartments, Surfers Paradise, Gold Coast, Australia (Smallwood, 2011)

Realities of construction (2)



Cape Town 2010 World Cup Stadium (Smallwood, 18 May 2007)

Realities of construction (3)



Tower cranes, Brisbane, Australia (Smallwood, 2011)



Programmes Offered

- **BSc (Construction Studies)**
- **BSc (Honours) (Construction Management)**
- **MSc and PhD (Construction Management) by research:**
 - Generally 2, and 3 to 4 years duration respectively
 - Enables specialisation
- **Coursework MSc (Built Environment):**
 - 5 Specialisations: Construction Management; Facilities Management; Project Management, Property Economics and Valuation, and Construction Health and Safety Management
 - 9 or 10 Modules and treatise research study
 - 18 Month programme



Accreditation

- **Chartered Institute of Building (CIOB) endorsed by the South African Council for the Construction and Project Management Professions (SACPCMP)**
 - All programmes
 - International
 - August 2008 for 5 years
- **SACPCMP:**
 - BSc (Construction Studies)
 - BSc (Honours) (Construction Management)
 - 3 MSc (Built Env) specialisations: Construction Management; Project Management, and Construction Health and Safety Management
 - August 2012 for 5 years



What is academia about? (1)

- **Not just lecturing - myth**
- **Reality – Academia is multi-dimensional and the activities are inter-related:**
 - **Career promotion (recruitment)**
 - **Research and publishing**
 - **Course development**
 - **Lecturing**
 - **Supervision and promotion of research**
 - **Community service / Engagement**
 - **Professional association**
 - **Council(s)**
 - **Administration relative to the above**

What is academia about? (2)

Activity	Activity								
	Career promotion	Research	Course development	Lecturing	Supervision of research	Community service / Engagement	Professional association	Council(s)	Administration
Career promotion	•	•	•	•	•	•	•	•	•
Research	•	•	•	•	•	•	•	•	•
Course development	•	•	•	•	•	•	•	•	•
Lecturing	•	•	•	•	•	•	•	•	•
Supervision of research	•	•	•	•	•	•	•	•	•
Community service / Engagement	•	•	•	•	•	•	•	•	•
Professional association	•	•	•	•	•	•	•	•	•
Council(s)	•	•	•	•	•	•	•	•	•
Administration	•	•	•	•	•	•	•	•	•



Built Environment Research Centre (BERC)

- **Research and publishing**
- **Host to the Centre of Excellence awarded by the Construction Industry Development Board (cidb):**
 - **Director: Prof Winston Shakantu**
 - **R1m Funding per year for three years**
 - **MSc (Constr Man) and PhD (Constr Man)**
 - **Research projects of strategic importance**



Department of Higher Education Focus

- **Throughput of students**
- **Research outputs**
- **M and D Outputs**



The BSc Construction Management degree programme offered at the NMMU (1)

- **BSc (Construction Studies) – 3 years**
- **BSc (Honours) (Construction Management) – 1 year**
- **Total of 4 years – completing Honours is important to:**
 - **Prepare construction managers to manage the business of construction and to pursue other careers**
 - **Register with the SACPCMP**
 - **Level of membership of the CIOB**



The BSc Construction Management degree programme offered at the NMMU (2)

- **Treatise of 12 000 – 15 000 words**
- **Solo endeavour unlike other universities**
- **Endeavour to publish conference, or even better, journal papers therefrom**



Content of the programme

3 Main fields - Construction Science and Technology; Construction Economics, and Construction Management:

- **Construction Science and Technology:**
 - **Geometric Drawing; Materials and Methods; Environment and Services; Structures; Surveying; Physics; Mathematics, and Computer Science**
- **Construction Economics:**
 - **Production Analysis; Statistics; Economics; Building Economics, and Property Economics**
- **Construction Management:**
 - **Organisational Behaviour; Accounting; Business Management; Construction Management; Project Management; Commercial Law Company Law; Industrial Law, and Professional Practice**



Subjects per year (1)

- **First year of study:**
 - **Building Science (Material & Methods) 1**
 - **Building Science (Environment & Services) 1**
 - **Building Science (Structures) 1**
 - **Mathematics (Special) 1**
 - **Physics (Special) 1**
 - **Geometric Drawing 1**
 - **Basic Surveying 1**
 - **Computer Science (End User Computing)**
 - **Production Analysis 1**
 - **Information Technology for Building Disciplines 1**



Subjects per year (2)

- **Second year of study:**
 - **Building Science (Material & Methods) 2**
 - **Building Science (Environment & Services) 2**
 - **Building Science (Structures) 2**
 - **History of the Construction Industry 1**
 - **Organisational Behaviour 2**
 - **Statistics 2**
 - **Business Management 1**
 - **Production Analysis 2**
 - **Introduction to Micro Economics (Special) 1**
 - **Information Technology for Building Disciplines 2**



Subjects per year (3)

- **Third year of study:**
 - **Building Science (Material & Methods) 3**
 - **Building Science (Environment & Services) 3**
 - **Building Science (Structures) 3**
 - **Production Analysis 3**
 - **Building Economics 3**
 - **Construction Management 3**
 - **Accounting 1**



Subjects per year (4)

- **Fourth year of study – BSc (Honours):**
 - **Construction Management 4**
 - **Building Economics (Special) 3**
 - **Information Technology for Building Disciplines 3**
 - **Property Development Economics 4**
 - **Project Management 4**
 - **Building Science (Material & Methods) 4**
 - **Professional Practice for Construction Management 4**
 - **Construction Management Treatise 4**
 - **Commercial Law 1**
 - **Commercial Law (Building Disciplines) 1**
 - **Commercial Law 1**
 - **Industrial Law 1**



Student performance

- **Course:**
 - Pre-requisites
 - Promotion rules
 - Maximum amount of credit values per year of study
 - Maximum number of years per course (1 Year more than the standard length of a degree)
- **Scheduling**
- **Time management - programme and schedule studies**
- **Attendance of lectures – the NMMU is not a distance learning institution**
- **Unit for Student Counselling**
- **Reading – the pre-requisite for**
- **Prescribed books**
- **Books on short loan**



Literature

- **Journals:** *Building Research & Information; Construction Management & Economics, and Engineering, Construction & Architectural Management*
- **Magazines:** *Construction Manager; Construction World; Contact; SA Builder; SA Property; Specifier, and the Civil Engineering Contractor*



Construction Management Student Society (CMSS) (1)

- **Participation required**
- **Active**
- **Ideal activities:**
 - **Term 1:**
 - **Newsletter**
 - **Welcome function**
 - **Industry / Academia function**
 - **Societies Day**
 - **Factory visit e.g. brick manufacturing**
 - **Fabrication and sale of CMSS regalia such as shirts, peaks, and windbreakers**



Construction Management Student Society (CMSS) (2)

- **Term 2:**
 - **Newsletter**
 - **Industry / Academia function**
 - **Factory visit**
 - **Golf day**
 - **Open Day (public careers event)**

- **Term 3:**
 - **Newsletter**
 - **Industry / Academia function**
 - **Factory visit**
 - **Soccer derby**
 - **CM dinner**



Construction Management Student Society (CMSS) (3)

- AGM
- Term 4:
 - Newsletter
 - Industry / Academia function
 - Site visit
 - Publication of CMSS magazine
 - Final Year students' dinner



Construction Management culture (1)

The following are important:

- **Branding:**
 - Performance during vacation work
 - Performance of BSc (Honours) (Constr Man) graduates
 - Treatises (Research output)
 - Identity (Regalia)
- **Academic performance**
- **Active CMSS**
- **Third year 'portfolio' project**
- **Final year 'integrative' project**
- **Re-launch of CMSS magazine**



Construction Management culture (2)

- **‘Construction Management’ group visit to reinforce the identity**



Chartered Institute of Building (CIOB) (Africa)

- **Voluntary association with which Construction Management and other construction professionals associate**
- **Annual subscription - free**



South African Council for the Construction and Project Management Professions (SACPCMP)

- **Construction Managers and Construction Project Managers are required to register with the SACPCMP**
- **Act No. 48 of 2000 Construction and Project Management Professions Act**
- **Responsible for Construction and Construction Project Management accreditation**



Departmental notice board

- **Outside department entrance (Ground Floor, Block C, Summerstrand North Campus)**
- **For the students**
- **Contributions required**
- **Department and CMSS responsible**



Communications and records

- **Oral communication is the No. 1 Construction Management skill**
- **However, written communication is critical in the built environment and construction**
- **Memorandum system**
- **E-mail**
- **Apologies**
- **Attendance registers – do not sign for other students**
- **Format, grammar, and spelling**
- **Language**
- **Professionalism**



Career promotion

- **Should be the No. 1 activity**
- **School specific visits – role models required**
- **NMMU Open Day – CMSS and senior students**



HIV and AIDS

- **Contrary to popular belief there is a link**
- **Safe sex and other activities**



Environment

- **NMMU is a nature reserve**
- **Control your speed $\leq 60\text{km/h}$ or $\leq 40 \text{ km/h}$ (buck)**
- **Respect animals (evil deeds result in bad karma)**
- **Do not litter**
- **No smoking policy**
- **Recycling – paper and envelopes**



Health, Safety and Security (1)

- **Daily exercise**
- **Diet:**
 - **Nutrients e.g. the tomato is the No. 1 power food**
 - **No junk food**
- **Weight – know your body mass index (BMI)**
- **Smoking – ‘the absence of a cough does not indicate that smoking is healthy’**
- **Drugs – ‘do not do drugs’**
- **Sex – ‘safe sex’**
- **Personal safety**
- **Back up your laptop and / or desktop and memory stick**



Health, Safety and Security (2)

- **Generic Departmental health and safety (H&S)**
- **Construction H&S:**
 - You should be inducted when you visit a site (Construction Regulations)
 - You must wear:
 - A hard hat
 - Safety footwear
 - A high visibility vest



How to succeed?

- **Optimum mental and physical health**
- **Lecture attendance (100%)**
- **Daily study – 5 days a week plus**
- **‘Chisel away’**
- **Address problems immediately - communicate!**
- **Plan your work and work your plan!**
- **Read voraciously**
- **Develop your command of the English language – no: ‘in’; ‘on’; ‘over’; ‘about’; ‘feel’, and ‘like’**
- **Take ownership**



NMMU 'values'

- **Respect for diversity**
- **Excellence**
- ***Ubuntu***
- **Integrity**
- **Respect for the natural environment**
- **Taking responsibility**



Departmental 'values'

- **'Adult behaviour'**
- **Professionalism**
- **Global orientation**
- **Multi-cultural**
- **Respect for people**
- **'Right first time'**
- **'Get the job done'**
- **Written communication**
- **Resolve problems and meet challenges**



The curse of South Africanitis (1)

- **‘If’, ‘but’, ‘maybe’, ‘when’, ‘can’t’, and other words**
- **“The referee was against us”**
- **“It is’s fault”**
- **Range of other excuses – ‘excusitis’**
- **Shortcuts**
- **Not taking ownership**
- **‘Shifting the blame’**
- **‘Stories’**
- **Bullshitting**
- **Lying**
- **Non-delivery**



The curse of South Africanitis (2)

- **Late delivery**
- **Plagiarism**
- **Littering**
- **Jaywalking**
- **Generally not following procedures**
- **Crime – ‘if it does not belong to you do not touch it!’**
- **General lack of respect**
- **Ringling mobile phones during a meeting (then some people still talk)**



Plagiarism

- **What is plagiarism?**
 - Unintentionally using someone else's work without acknowledgement
 - Deliberately pretending someone else's work is your own
- **NMMU rules with respect to plagiarism:**
 - The NMMU prospectus refers to plagiarism as misconduct: "Commits an act of plagiarism, including the copying of another student's assignment, or copyright infringement."
 - 0% will be awarded
 - Disciplinary hearing with plagiarism offence can lead to:

Serious Offence	First Offence	Second Offence
Plagiarism	Suspension for a period of 1 year	Expulsion



Combating plagiarism

- **No internet references**
- **Monitoring:**
 - **Scanning**
 - **Google**
 - **Sophisticated plagiarism software such as Turnitin**



Departmental 'interventions'

- **Mentoring of first year students:**
 - Quarterly contact meetings between the Department and students
- **Student / Department consultative committee :**
 - Meets quarterly
 - Year representatives and HoD and Acting-HoD



Contact details (1)

- **HoD - Professor John Smallwood (24 / 7 / 52):**
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- **Acting-HoD (in absence of HoD) - Dr Brink Botha:**
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 - Room C113a



Contact details (2)

- **Web page: www.nmmu.ac.za/construction**
- **The official NMMU Construction Management Facebook page:
<https://www.facebook.com/#!/LM1984>**