

WORKING DRAFT REVISION 15		REQUIREMENTS FOR INTERNATIONAL NUCLEAR MANAGEMENT PROGRAMME INMP							
		Program Theme n* 1. LICENSED NUCLEAR FACILITIES							
ASPECT GROUPS	Competency Area (CA) <i>Competency areas are both general but nuclear focused AND nuclear specific topic encompassing a set of competency elements Required to be integrated into an International Nuclear Management Programme.</i> Notes: Numbering for each Competency areas, corresponds to Appendix B detailed description of INM Requirements	Track A: Nuclearizing Managers*				Track B: Managerizing Engineers*			
		Status	Type	Depth	Hours	Status	Type	Depth	Hours
1. EXTERNAL ENVIRONMENT	3.1 Nuclear law	R	C	W	30	R	C	W	30
	3.2 International nuclear organizations	O	C	I	15	O	C	I	15
	3.3 International nuclear security and safeguards programmes	R	B	W	30	R	C	W	30
	3.4 Nuclear licensing, licensing basis, and regulatory processes	R	B	W	30	R	B	W	30
	3.5 Global nuclear energy sector, energy distribution systems etc.	O	C	I	15	O	C	I	15
	3.6 National nuclear technology policy and planning	R	C	I	15	R	C	I	15
	3.7 International regulation of trade or transport of nuclear goods/materials	R	C	I	15	R	C	I	15
	3.8 International nuclear standards	R	B	W	30	R	B	W	30
	3.9 Intellectual property (rights and management)	O	C	I	15	O	C	I	15
2. TECHNOLOGY	4.1 Nuclear plant systems (technology aspects)	R	C	W	30	Q	C	W	30
	4.2 Nuclear plant design principles (technology aspects)	R	C	I	15	Q	C	I	15
	4.3 Nuclear facility life cycle issues and ageing management	R	B	W	30	R	B	W	30
	4.4 Nuclear asset management (plant life management)	R	C	I	15	R	C	I	15
	4.5 Nuclear waste management and disposal	R	C	I	15	R	C	I	15
	4.6 Nuclear plant decommissioning, environmental remediation	R	C	I	15	R	C	I	15
	4.7 Nuclear fuel cycle (technology aspects and issues)	R	C	I	15	Q	C	I	15
	4.8 Nuclear reactivity theory, reactivity management	R	C	I	15	Q	C	I	15
	4.9 Nuclear environmental protection, monitoring and compliance	R	C	I	15	R	C	I	15
	4.10 Nuclear safety principles and safety analysis	R	B	I	15	Q	B	I	15
	4.11 Radiation safety and management	R	C	I	15	Q	C	I	15
	4.12 Nuclear medicine (imaging, pharmacology, etc.)	O	C	I	15	O	C	I	15
	4.13 Nuclear agriculture applications (e.g. pest control)	O	C	I	15	O	C	I	15
	4.14 Nuclear food-irradiation	O	C	I	15	O	C	I	15
	4.15 Industrial applications of nuclear science	O	C	I	15	O	C	I	15
4.16 Applications of nuclear isotopes (hydrology, forensics, etc)	O	C	I	15	O	C	I	15	
4.17 Systems engineering concepts applied to nuclear energy	R	C	I	15	R	C	I	15	
4.18 Nuclear facility maintenance processes and programmes	R	B	W	30	R	B	W	30	
4.19 Nuclear operations and production management	R	B	W	30	R	B	W	30	
4.20 Nuclear equipment reliability program management	R	C	I	15	R	C	I	15	
4.21 Information technology and information systems in nuclear	R	C	I	15	R	C	I	15	
4.22 Nuclear R&D and innovation management	O	C	I	15	O	C	I	15	
3. MANAGEMENT	5.1 Nuclear project management, engineering management	R	B	W	30	R	B	W	30
	5.2 Management of labour relations in nuclear	Q	B	H	45	R	B	H	45
	5.3 Nuclear event management, emergency planning and response	R	B	H	45	R	B	H	45
	5.4 Human resources development and management in nuclear	Q	B	W	30	R	B	W	30
	5.5 Systematic approach to training in nuclear organizations	R	C	W	30	R	C	W	30
	5.6 Planning and management systems in nuclear organizations	R	C	W	30	R	C	W	30
	5.7 Project planning and management	R	C	I	15	R	C	I	15
	5.8 Nuclear safety management, risk-informed decision-making	R	B	W	30	R	B	W	30
	5.9 Nuclear quality assurance programmes	R	B	W	30	R	B	W	30
	5.10 Organizational behaviour in nuclear organizations	Q	C	W	30	R	C	W	30
	5.11 Nuclear procurement and supplier management	Q	B	W	30	R	B	W	30
	5.12 Business law and contract management	Q	C	W	30	R	C	W	30
	5.13 Nuclear site security programme management	R	B	H	45	R	B	H	45
	5.14 Cultural awareness, inter-cultural communication	R	C	I	15	R	C	I	15
	5.15 Organizational culture issues in nuclear organizations	Q	C	I	15	R	C	I	15
	5.16 Operating Experience	R	B	H	45	R	B	I	15
4. LEADERSHIP	6.1 Nuclear ethics and values	R	B	I	15	R	B	I	15
	6.2 Nuclear corporate governance and oversight	R	C	W	30	R	C	W	30
	6.3 Leadership and communication in nuclear	Q	B	W	30	R	B	W	30
	6.4 Stakeholder communication and public relations in nuclear	R	B	I	15	R	B	I	15
	6.5 Change management in nuclear organizations	Q	C	I	15	R	C	I	15
	6.6 Knowledge management (i.e. NKM graduate course)	R	B	W	30	R	B	W	30
	6.7 Strategic issues and planning (nuclear case studies)	R	B	H	45	R	B	H	45

WORKING DRAFT REVISION 15		REQUIREMENTS FOR INTERNATIONAL NUCLEAR MANAGEMENT PROGRAMME INMP																
		Program Theme n* 1. LICENSED NUCLEAR FACILITIES																
ASPECT GROUPS	Competency Area (CA) <i>Competency areas are both general but nuclear focused AND nuclear specific topic encompassing a set of competency elements Required to be integrated into an International Nuclear Management Programme.</i> Notes: Numbering for each Competency areas, corresponds to Appendix B detailed description of INM Requirements	Track A: Nuclearizing Managers*				Track B: Managerizing Engineers*												
		Status	Type	Depth	Hours	Status	Type	Depth	Hours									
5. ADMINISTRATIVE	7.1 Cost accounting and cost control in nuclear organizations	Q	B	W	30	R	B	H	45									
	7.2 Financial management and accounting in nuclear organizations	Q	B	W	30	R	B	W	30									
	7.3 Nuclear information and records management	R	C	I	15	R	C	I	15									
	7.4 Performance monitoring and management in nuclear	R	B	W	30	R	B	W	30									
	7.5 Engineering economics, cost estimating	Q	B	I	15	R	B	I	15									
	7.6 Analytical decision-making and safety (decision science in nuclear)	Q	B	W	30	R	B	W	30									
Practicum, project, internship																		
6. PRACTICUM	8.1 IAEA Nuclear Energy Management School (2-3 weeks)	O	B	W	30	O	B	W	30									
	8.2 International nuclear leadership course (i.e., 1-week NKM, WNU or INLEP)	O	B	I	15	O	B	I	15									
	8.3 WNU Summer Institute	O	B	H	45	O	B	H	45									
	8.4 Annual INMP Student Conference (research proposal and results)	R	B	I	15	R	B	I	15									
	8.5 Master's Level Thesis or Individual Research Project	R	B	H	45	R	B	H	45									
	8.6 Work term or internship (e.g. coop study at/with NO)	R	B	H	45	R	B	H	45									
	8.7 Team project	R	B	W	30	R	B	W	30									
INDICATIVE TOTAL OF HOURS								1635										1620
LICENSED NUCLEAR FACILITIES: Summaries																		
ASPECT GROUPS for each competency area		Nuclearizing Managers*				Managerizing Engineers*												
Options		Sum (h)	Total (h)			Sum (h)	Total (h)											
E	External environment (International, Institutional, politic, legal)	195	1635			195	1620											
T	Technology related	390	1635			390	1620											
M	Management	495	1635			465	1620											
L	Leadership	180	1635			180	1620											
A	Administrative (decision making)	150	1635			165	1620											
P	Practicum, project, internship	225	1635			225	1620											
Total amount of hours (Control)		1635				1620												
STATUS of competency area		Options	Sum (h)	Total (h)			Options	Sum (h)	Total (h)									
O= Optional for the specified programme theme		O	225	1635			O	225	1620									
Q= Qualified (assumes most students will have this as pre-requisite training or experience otherwise must make up as it is a requirement)		Q	330	1635			Q	105	1620									
R= Required (core) for the specified programme theme		R	1080	1635			R	1290	1620									
Total amount of hours (Control)			1635					1620										
TYPE of approach for each competency area (CA)		Options	Sum (h)	Total (h)			Options	Sum (h)	Total (h)									
B=Both, combining elements of conceptual and practical levels		B	1020	1635			B	975	1620									
C=Conceptual level, focus on theory, processes, and awareness of methodologies		C	615	1635			C	645	1620									
S=Skill-oriented (i.e. hands-on or practical, focus on methodology, techniques, application)		S	0	1635			S	0	1620									
Total amount of hours (Control)			1635					1620										
DEPTH of coverage for each Competency area		Options	Sum (h)	Total (h)			Options	Sum (h)	Total (h)									
I= Introductory (15h)				I	495	1635		I	510	1620								
W= Well Grounded general knowledge (30h)				W	780	1635		W	750	1620								
H= Higher level of coverage (45h)				H	360	1635		H	360	1620								
Total amount of hours (Control)					1635				1620									
LEGEND																		
Numbering: The numbering for each competency areas refer to Appendix B																		
Aspect Groups (AG)																		
M: Management A: Administrative P: Practicum L: leadership E: environment T: technology																		
Weighting Factors																		
FACTOR STATUS:																		
Options: R: Required or O: optional or Q: qualified																		
FACTOR TYPE:																		
Options: C: Conceptual or S: skill-oriented, or B: Both																		
FACTOR DEPTH:																		
Options: I: Introductory or W: well grounded or H: higher depth of coverage (45 h)																		

		PROGRAM THEME N*2. DESIGN/BUILD PROJECTS (NEW BUILD OR REFURB.)							
		Track A: Nuclearizing Managers*				Track B: Managerizing Engineers*			
ASPECT GROUPS	Competency Area (CA) <i>Competency areas are both general but nuclear focused AND nuclear specific topic encompassing a set of competency elements Required to be integrated into an International Nuclear Management Programme.</i> <i>Notes: Numbering for each Competency areas, corresponds to Appendix B detailed description of INM Requirements</i>	Status	Type	Depth	Hours	Status	Type	Depth	Hours
		1. EXTERNAL ENVIRONMENT	3.1 Nuclear law	R	C	W	30	R	C
3.2 International nuclear organizations	O		C	I	15	O	C	I	15
3.3 International nuclear security and safeguards programmes	R		C	I	15	R	C	I	15
3.4 Nuclear licensing, licensing basis, and regulatory processes	R		B	H	45	R	B	H	45
3.5 Global nuclear energy sector, energy distribution systems etc.	O		C	I	15	O	C	I	15
3.6 National nuclear technology policy and planning	R		C	W	30	R	C	W	30
3.7 International regulation of trade or transport of nuclear goods/materials	R		B	H	45	R	B	H	45
3.8 International nuclear standards	R		B	H	45	R	B	H	45
3.9 Intellectual property (rights and management)	Q		B	I	15	R	B	I	15
2. TECHNOLOGY	4.1 Nuclear plant systems (technology aspects)	R	C	W	30	Q	C	W	30
	4.2 Nuclear plant design principles (technology aspects)	R	C	I	15	Q	C	I	15
	4.3 Nuclear facility life cycle issues and ageing management	R	C	I	15	R	C	I	15
	4.4 Nuclear asset management (plant life management)	O	C	I	15	O	C	I	15
	4.5 Nuclear waste management and disposal	R	C	I	15	R	C	I	15
	4.6 Nuclear plant decommissioning, environmental remediation	R	C	I	15	R	C	I	15
	4.7 Nuclear fuel cycle (technology aspects and issues)	R	C	I	15	Q	C	I	15
	4.8 Nuclear reactivity theory, reactivity management	R	C	I	15	Q	C	I	15
	4.9 Nuclear environmental protection, monitoring and compliance	R	C	I	15	R	C	I	15
	4.10 Nuclear safety principles and safety analysis	R	B	I	15	Q	B	I	15
	4.11 Radiation safety and management	R	C	I	15	Q	C	I	15
	4.12 Nuclear medicine (imaging, pharmacology, etc.)	O	C	I	15	O	C	I	15
	4.13 Nuclear agriculture applications (e.g. pest control)	O	C	I	15	O	C	I	15
	4.14 Nuclear food-irradiation	O	C	I	15	O	C	I	15
4.15 Industrial applications of nuclear science	O	C	I	15	O	C	I	15	
4.16 Applications of nuclear isotopes (hydrology, forensics, etc)	O	C	I	15	O	C	I	15	
4.17 Systems engineering concepts applied to nuclear energy	R	B	H	45	Q	B	H	45	
4.18 Nuclear facility maintenance processes and programmes	O	C	I	15	O	C	I	15	
4.19 Nuclear operations and production management	O	C	I	15	O	C	I	15	
4.20 Nuclear equipment reliability program management	O	C	I	15	O	C	I	15	
4.21 Information technology and information systems in nuclear	R	C	I	15	R	C	I	15	
4.22 Nuclear R&D and innovation management	O	C	I	15	O	C	I	15	
3. MANAGEMENT	5.1 Nuclear project management, engineering management	R	B	H	45	R	B	H	45
	5.2 Management of labour relations in nuclear	Q	B	H	45	R	B	H	45
	5.3 Nuclear event management, emergency planning and response	O	C	I	15	O	C	I	15
	5.4 Human resources development and management in nuclear	R	B	W	30	R	B	W	30
	5.5 Systematic approach to training in nuclear organizations	R	C	W	30	R	C	W	30
	5.6 Planning and management systems in nuclear organizations	R	C	W	30	R	C	H	45
	5.7 Project planning and management	R	B	H	45	R	B	H	45
	5.8 Nuclear safety management, risk-informed decision-making	R	B	W	30	R	B	W	30
	5.9 Nuclear quality assurance programmes	R	B	H	45	R	B	H	45
	5.10 Organizational behaviour in nuclear organizations	Q	C	W	30	R	C	H	45
	5.11 Nuclear procurement and supplier management	Q	B	H	45	R	B	H	45
	5.12 Business law and contract management	Q	B	H	45	R	B	H	45
	5.13 Nuclear site security programme management	O	C	I	15	O	C	I	15
	5.14 Cultural awareness, inter-cultural communication	R	C	I	15	R	C	I	15
	5.15 Organizational culture issues in nuclear organizations	Q	C	I	15	R	C	I	15
	5.16 Operating Experience	R	B	H	45	R	B	H	45

PROGRAM THEME N*2. DESIGN/BUILD PROJECTS (NEW BUILD OR REFURB.)

ASPECT GROUPS	Competency Area (CA) <i>Competency areas are both general but nuclear focused AND nuclear specific topic encompassing a set of competency elements Required to be integrated into an International Nuclear Management Programme.</i> <i>Notes: Numbering for each competency areas, corresponds to Appendix B detailed description of INM Requirements</i>	Track A: Nuclearizing Managers*				Track B: Managerizing Engineers*				
		Status	Type	Depth	Hours	Status	Type	Depth	Hours	
4. LEADERSHIP	6.1 Nuclear ethics and values	R	B	I	15	R	B	I	15	
	6.2 Nuclear corporate governance and oversight	R	C	I	15	R	C	I	15	
	6.3 Leadership and communication in nuclear	Q	B	W	30	R	B	W	30	
	6.4 Stakeholder communication and public relations in nuclear	R	B	I	15	R	B	I	15	
	6.5 Change management in nuclear organizations	R	B	H	45	R	B	H	45	
	6.6 Knowledge management (i.e. NKM graduate course)	R	B	W	30	R	B	W	30	
	6.7 Strategic issues and planning (nuclear case studies)	R	B	H	45	R	B	H	45	
5. ADMINISTRATIVE	7.1 Cost accounting and cost control in nuclear organizations	Q	B	H	45	R	B	H	45	
	7.2 Financial management and accounting in nuclear organizations	Q	B	W	30	R	B	W	30	
	7.3 Nuclear information and records management	R	C	I	15	R	C	I	15	
	7.4 Performance monitoring and management in nuclear	R	B	W	30	R	B	W	30	
	7.5 Engineering economics, cost estimating	Q	B	I	15	R	B	I	15	
	7.6 Analytical decision-making and safety (decision science in nuclear)	Q	B	W	30	R	B	W	30	
	Practicum, project, internship									
6. PRACTICUM	8.1 IAEA Nuclear Energy Management School (2-3 weeks)	O	B	W	30	O	B	W	30	
	8.2 International nuclear leadership course (i.e., 1-week NKM, WNU or INLEP)	O	B	I	15	O	B	I	15	
	8.3 WNU Summer Institute	O	B	H	45	O	B	H	45	
	8.4 Annual INMP Student Conference (research proposal and results)	R	B	I	15	R	B	I	15	
	8.5 Master's Level Thesis or Individual Research Project	R	B	H	45	R	B	H	45	
	8.6 Work term or internship (e.g. coop study at/with NO)	R	B	H	45	R	B	H	45	
	8.7 Team project	R	B	W	30	R	B	W	30	
INDICATIVE TOTAL OF HOURS					1740	1770				
DESIGN/ BUILD PROJECTS : Summaries										
ASPECT GROUPS for each competency area		Nuclearizing Managers*				Managerizing Engineers*				
Options		Sum (h)	Total (h)			Sum (h)	Total (h)			
E	External environment (International, Institutional, politic, legal)	255	1740			255	1770			
T	Technology related	375	1740			375	1770			
M	Management	525	1740			555	1770			
L	Leadership	195	1740			195	1770			
A	Administrative (decision making)	165	1740			165	1770			
P	Practicum, project, internship	225	1740			225	1770			
<i>Total amount of hours (Control)</i>		1740				1770				
STATUS of competency area		Options	Sum (h)	Total (h)		Options	Sum (h)	Total (h)		
O= Optional for the specified programme theme		O	300	1740		O	300	1770		
Q= Qualified (assumes most students will have this as pre-requisite training or experience otherwise must make up as it is a requirement)		Q	345	1740		Q	150	1770		
R= Required (core) for the specified programme theme		R	1095	1740		R	1320	1770		
<i>Total amount of hours (Control)</i>			1740				1770			
TYPE of approach for each competency area (CA)		Options	Sum (h)	Total (h)		Options	Sum (h)	Total (h)		
B=Both, combining elements of conceptual and practical levels		B	600	1740		B	1140	1770		
C=Conceptual level, focus on theory, processes, and awareness of methodologies		C	0	1740		C	630	1770		
S=Skill-oriented (i.e. hands-on or practical, focus on methodology, techniques, application)		S	1140	1740		S	0	1770		
<i>Total amount of hours (Control)</i>			1740				1770			
DEPTH of coverage for each Competency area		Options	Sum (h)	Total (h)		Options	Sum (h)	Total (h)		
I= Introductory (15h)		I	525	1740		I	525	1770		
W= Well Grounded general knowledge (30h)		W	450	1740		W	390	1770		
H= Higher level of coverage (45h)		H	765	1740		H	855	1770		
<i>Total amount of hours (Control)</i>			1740				1770			

LEGEND

Numbering: The numbering for each competency areas refer to Appendix B

Aspect Groups (AG)

M: Management | A: Administrative | P: Practicum | L: leadership | E: environment | T: technology

Weighting Factors

Factor Status

PROGRAM THEME N*2. DESIGN/BUILD PROJECTS (NEW BUILD OR REFURB.)

ASPECT GROUPS

Competency Area (CA)

Competency areas are both general but nuclear focused AND nuclear specific topic encompassing a set of competency elements Required to be integrated into an International Nuclear Management Programme.

Notes: Numbering for each Competency areas, corresponds to Appendix B detailed description of INM Requirements

Track A: **Nuclearizing Managers***

Track B: **Managerizing Engineers***

Status

Type

Depth

Hours

Status

Type

Depth

Hours

FACTOR STATUS:

Options: **R:** Required | or | **O:** optional | or | **Q:** qualified

FACTOR TYPE:

Options: **C:** Conceptual | or | **S:** skill-oriented, | or | **B:** Both

FACTOR DEPTH:

Options: **I:** Introductory | or | **W:** well grounded | or | **H:** higher depth of coverage (45 h)

PROGRAM THEME N* 3. NUCLEAR TECHNOLOGY

ASPECT GROUPS	Competency Area (CA) <i>Competency areas are both general but nuclear focused AND nuclear specific topic encompassing a set of competency elements Required to be integrated into an International Nuclear Management Programme.</i> Notes: Numbering for each competency areas, corresponds to Appendix B detailed description of INM Requirements	Track A: Nuclearizing Managers*				Track B: Managerizing Engineers*			
		Status	Type	Depth	Hours	Status	Type	Depth	Hours
1. EXTERNAL ENVIRONMENT	3.1 Nuclear law	R	C	I	15	R	C	I	15
	3.2 International nuclear organizations	O	C	I	15	O	C	I	15
	3.3 International nuclear security and safeguards programmes	R	C	I	15	R	C	I	15
	3.4 Nuclear licensing, licensing basis, and regulatory processes	R	B	W	30	R	B	W	30
	3.5 Global nuclear energy sector, energy distribution systems etc.	O	C	I	15	O	C	I	15
	3.6 National nuclear technology policy and planning	R	C	I	15	R	C	I	15
	3.7 International regulation of trade or transport of nuclear goods/materials	O	C	I	15	O	C	I	15
	3.8 International nuclear standards	R	B	H	45	R	B	H	45
	3.9 Intellectual property (rights and management)	R	B	W	30	R	B	W	30
2. TECHNOLOGY	4.1 Nuclear plant systems (technology aspects)	R	C	W	30	Q	C	W	30
	4.2 Nuclear plant design principles (technology aspects)	R	C	I	15	Q	C	I	15
	4.3 Nuclear facility life cycle issues and ageing management	R	C	I	15	R	C	I	15
	4.4 Nuclear asset management (plant life management)	O	C	I	15	O	C	I	15
	4.5 Nuclear waste management and disposal	R	C	I	15	R	C	I	15
	4.6 Nuclear plant decommissioning, environmental remediation	R	C	I	15	R	C	I	15
	4.7 Nuclear fuel cycle (technology aspects and issues)	R	C	I	15	Q	C	I	15
	4.8 Nuclear reactivity theory, reactivity management	R	C	I	15	Q	C	I	15
	4.9 Nuclear environmental protection, monitoring and compliance	R	C	I	15	R	C	I	15
	4.10 Nuclear safety principles and safety analysis	R	B	W	30	Q	B	W	30
	4.11 Radiation safety and management	R	C	I	15	Q	C	I	15
	4.12 Nuclear medicine (imaging, pharmacology, etc.)	O	C	I	15	O	C	I	15
	4.13 Nuclear agriculture applications (e.g. pest control)	O	C	I	15	O	C	I	15
	4.14 Nuclear food-irradiation	O	C	I	15	O	C	I	15
	4.15 Industrial applications of nuclear science	O	C	I	15	O	C	I	15
	4.16 Applications of nuclear isotopes (hydrology, forensics, etc)	O	C	I	15	O	C	I	15
	4.17 Systems engineering concepts applied to nuclear energy	R	B	H	45	R	B	H	45
	4.18 Nuclear facility maintenance processes and programmes	O	C	I	15	O	C	I	15
	4.19 Nuclear operations and production management	O	C	I	15	O	C	I	15
	4.20 Nuclear equipment reliability program management	O	C	I	15	O	C	I	15
	4.21 Information technology and information systems in nuclear	R	C	I	15	R	C	I	15
	4.22 Nuclear R&D and innovation management	R	B	H	45	R	B	H	45
3. MANAGEMENT	5.1 Nuclear project management, engineering management	R	C	I	15	R	C	I	15
	5.2 Management of labour relations in nuclear	Q	B	H	45	R	B	H	45
	5.3 Nuclear event management, emergency planning and response	O	C	I	15	O	C	I	15
	5.4 Human resources development and management in nuclear	R	B	W	30	R	B	W	30
	5.5 Systematic approach to training in nuclear organizations	R	C	I	15	R	C	I	15
	5.6 Planning and management systems in nuclear organizations	R	C	W	30	R	C	W	30
	5.7 Project planning and management	R	C	I	15	R	C	I	15
	5.8 Nuclear safety management, risk-informed decision-making	R	B	W	30	R	B	W	30
	5.9 Nuclear quality assurance programmes	R	C	W	30	R	C	W	30
	5.10 Organizational behaviour in nuclear organizations	Q	C	W	30	R	C	H	45
	5.11 Nuclear procurement and supplier management	Q	C	I	15	R	C	I	15
	5.12 Business law and contract management	Q	C	W	30	R	C	W	30
	5.13 Nuclear site security programme management	O	C	I	15	O	C	I	15
	5.14 Cultural awareness, inter-cultural communication	R	C	I	15	R	C	I	15
	5.15 Organizational culture issues in nuclear organizations	Q	C	I	15	R	C	I	15
	5.16 Operating Experience	R	B	H	45	R	B	H	45

PROGRAM THEME N* 3. NUCLEAR TECHNOLOGY

ASPECT GROUPS	Competency Area (CA) <i>Competency areas are both general but nuclear focused AND nuclear specific topic encompassing a set of competency elements Required to be integrated into an International Nuclear Management Programme.</i> Notes: Numbering for each competency areas, corresponds to Appendix B detailed description of INM Requirements	Track A: Nuclearizing Managers*				Track B: Managerizing Engineers*				
		Status	Type	Depth	Hours	Status	Type	Depth	Hours	
		4. LEADERSHIP	6.1 Nuclear ethics and values	R	B	I	15	R	B	I
6.2 Nuclear corporate governance and oversight	R		C	I	15	R	C	I	15	
6.3 Leadership and communication in nuclear	Q		B	W	30	R	B	W	30	
6.4 Stakeholder communication and public relations in nuclear	R		B	I	15	R	B	I	15	
6.5 Change management in nuclear organizations	R		C	I	15	R	C	I	15	
6.6 Knowledge management (i.e. NKM graduate course)	R		B	W	30	R	B	W	30	
6.7 Strategic issues and planning (nuclear case studies)	R		B	H	45	R	B	H	45	
5. ADMINISTRATIVE	7.1 Cost accounting and cost control in nuclear organizations	Q	B	W	30	R	B	H	45	
	7.2 Financial management and accounting in nuclear organizations	Q	B	W	30	R	B	W	30	
	7.3 Nuclear information and records management	R	C	I	15	R	C	I	15	
	7.4 Performance monitoring and management in nuclear	R	B	W	30	R	B	W	30	
	7.5 Engineering economics, cost estimating	Q	B	I	15	R	B	I	15	
	7.6 Analytical decision-making and safety (decision science in nuclear)	Q	B	W	30	R	B	W	30	
	Practicum, project, internship									
6. PRACTICUM	8.1 IAEA Nuclear Energy Management School (2-3 weeks)	O	B	W	30	O	B	W	30	
	8.2 International nuclear leadership course (i.e., 1-week NKM, WNU or INLEP)	O	B	I	15	O	B	I	15	
	8.3 WNU Summer Institute	O	B	H	45	O	B	H	45	
	8.4 Annual INMP Student Conference (research proposal and results)	R	B	I	15	R	B	I	15	
	8.5 Master's Level Thesis or Individual Research Project	R	B	H	45	R	B	H	45	
	8.6 Work term or internship (e.g. coop study at/with NO)	R	B	H	45	R	B	H	45	
	8.7 Team project	R	B	W	30	R	B	W	30	
	INDICATIVE TOTAL OF HOURS					1545	1575			

Nuclear technology development: Summaries

ASPECT GROUPS for each competency area		Nuclearizing Managers*				Managerizing Engineers*							
Options		Sum (h)		Total (h)		Sum (h)		Total (h)					
E	External environment (International, Institutional, politic, legal)	195	1545			195	1575						
T	Technology related	420	1545			420	1575						
M	Management	390	1545			405	1575						
L	Leadership	165	1545			165	1575						
A	Administrative (decision making)	150	1545			165	1575						
P	Practicum, project, internship	225	1545			225	1575						
Total amount of hours (Control)		1545				1575							
STATUS of competency area		Options		Sum (h)		Total (h)		Options		Sum (h)		Total (h)	
O= Optional for the specified programme theme		O	300	1545		O	300	1575					
Q= Qualified (assumes most students will have this as pre-requisite training or experience otherwise must make up as it is a requirement)		Q	270	1545		Q	120	1575					
R= Required (core) for the specified programme theme		R	975	1545		R	1155	1575					
Total amount of hours (Control)			1545				1575						
TYPE of approach for each competency area (CA)		Options		Sum (h)		Total (h)		Options		Sum (h)		Total (h)	
B=Both, combining elements of conceptual and practical levels		B	870	1545		B	885	1575					
C=Conceptual level, focus on theory, processes, and awareness of methodologies		C	675	1545		C	690	1575					
S=Skill-oriented (i.e. hands-on or practical, focus on methodology, techniques, application)		S	0	1545		S	0	1575					
Total amount of hours (Control)			1545				1575						
DEPTH of coverage for each Competency area		Options		Sum (h)		Total (h)		Options		Sum (h)		Total (h)	
I = Introductory (15h)			I	600	1545		I	600					
W= Well Grounded general knowledge (30h)			W	540	1545		W	480					
H= Higher level of coverage (45h)			H	405	1545		H	495					
Total amount of hours (Control)				1545				1575					

LEGEND

Numbering: The numbering for each competency areas refer to Appendix B

Aspect Groups (AG)

M: Management | A: Administrative | P: Practicum | L: leadership | E: environment | T: technology

Weighting Factors

FACTOR STATUS:

Options: R: Required | or | O: optional | or | Q: qualified

FACTOR TYPE:

Options: C: Conceptual | or | S: skill-oriented, | or | B: Both

FACTOR DEPTH:

WORKING DRAFT REVISION 15		REQUIREMENTS FOR INTERNATIONAL NUCLEAR MANAGEMENT PROGRAM							
		INMP PROGRAM THEME N* 4. DECOMMISSIONING, WASTE MANAGEMENT, ENVIRONMENTAL REMEDIATION							
ASPECT GROUPS	Competency Area (CA) <i>Competency areas are both general but nuclear focused AND nuclear specific topic encompassing a set of competency elements Required to be integrated into an International Nuclear Management Programme.</i> Notes: Numbering for each Competency areas, corresponds to Appendix B detailed description of INM Requirements	Track A: Nuclearizing Managers*				Track B: Managerizing Engineers*			
		Status	Type	Depth	Hours	Status	Type	Depth	Hours
1. EXTERNAL ENVIRONMENT	3.1 Nuclear law	R	C	W	30	R	C	W	30
	3.2 International nuclear organizations	R	C	I	15	R	C	I	15
	3.3 International nuclear security and safeguards programmes	R	B	H	45	R	B	H	45
	3.4 Nuclear licensing, licensing basis, and regulatory processes	R	C	W	30	R	C	W	30
	3.5 Global nuclear energy sector, energy distribution systems etc.	O	C	I	15	O	C	I	15
	3.6 National nuclear technology policy and planning	R	C	I	15	R	C	I	15
	3.7 International regulation of trade or transport of nuclear goods/materials	R	B	H	45	R	B	H	45
	3.8 International nuclear standards	R	C	I	15	R	C	I	15
	3.9 Intellectual property (rights and management)	O	C	I	15	O	C	I	15
2. TECHNOLOGY	4.1 Nuclear plant systems (technology aspects)	R	C	I	15	Q	C	I	15
	4.2 Nuclear plant design principles (technology aspects)	R	C	I	15	Q	C	I	15
	4.3 Nuclear facility life cycle issues and ageing management	R	B	W	30	R	B	W	30
	4.4 Nuclear asset management (plant life management)	R	B	W	30	R	B	W	30
	4.5 Nuclear waste management and disposal	R	B	H	45	R	B	H	45
	4.6 Nuclear plant decommissioning, environmental remediation	R	C	H	45	R	C	H	45
	4.7 Nuclear fuel cycle (technology aspects and issues)	R	C	W	30	Q	C	W	30
	4.8 Nuclear reactivity theory, reactivity management	R	C	I	15	Q	C	I	15
	4.9 Nuclear environmental protection, monitoring and compliance	R	B	H	45	R	B	H	45
	4.10 Nuclear safety principles and safety analysis	R	B	I	15	Q	B	I	15
	4.11 Radiation safety and management	R	C	I	15	Q	C	I	15
	4.12 Nuclear medicine (imaging, pharmacology, etc.)	O	C	I	15	O	C	I	15
	4.13 Nuclear agriculture applications (e.g. pest control)	O	C	I	15	O	C	I	15
	4.14 Nuclear food-irradiation	O	C	I	15	O	C	I	15
	4.15 Industrial applications of nuclear science	O	C	I	15	O	C	I	15
	4.16 Applications of nuclear isotopes (hydrology, forensics, etc)	O	C	I	15	O	C	I	15
	4.17 Systems engineering concepts applied to nuclear energy	R	C	I	15	R	C	I	15
	4.18 Nuclear facility maintenance processes and programmes	R	B	W	30	R	B	W	30
	4.19 Nuclear operations and production management	R	B	W	30	R	B	W	30
	4.20 Nuclear equipment reliability program management	R	C	I	15	R	C	I	15
	4.21 Information technology and information systems in nuclear	R	C	I	15	R	C	I	15
	4.22 Nuclear R&D and innovation management	O	C	I	15	O	C	I	15
3. MANAGEMENT	5.1 Nuclear project management, engineering management	R	B	H	45	R	B	H	45
	5.2 Management of labour relations in nuclear	Q	B	H	45	R	B	H	45
	5.3 Nuclear event management, emergency planning and response	R	B	W	30	R	B	W	30
	5.4 Human resources development and management in nuclear	R	B	W	30	R	B	W	30
	5.5 Systematic approach to training in nuclear organizations	R	C	W	30	R	C	W	30
	5.6 Planning and management systems in nuclear organizations	R	C	W	30	R	C	W	30
	5.7 Project planning and management	R	C	I	15	R	C	I	15
	5.8 Nuclear safety management, risk-informed decision-making	R	B	W	30	R	B	W	30
	5.9 Nuclear quality assurance programmes	R	C	W	30	R	C	W	30
	5.10 Organizational behaviour in nuclear organizations	Q	C	I	15	R	C	I	15
	5.11 Nuclear procurement and supplier management	Q	C	W	30	R	C	I	15
	5.12 Business law and contract management	Q	C	W	30	R	C	W	30
	5.13 Nuclear site security programme management	R	B	H	45	R	B	H	45
	5.14 Cultural awareness, inter-cultural communication	R	C	I	15	R	C	I	15
	5.15 Organizational culture issues in nuclear organizations	Q	C	I	15	R	C	I	15
	5.16 Operating Experience	R	B	H	45	R	B	H	45

PROGRAM THEME N* 4. DECOMMISSIONING, WASTE MANAGEMENT, ENVIRONMENTAL REMEDIATION

ASPECT GROUPS	Competency Area (CA) <i>Competency areas are both general but nuclear focused AND nuclear specific topic encompassing a set of competency elements Required to be integrated into an International Nuclear Management Programme.</i> Notes: Numbering for each Competency areas, corresponds to Appendix B detailed description of INM Requirements	Track A: Nuclearizing Managers*				Track B: Managerizing Engineers*			
		Status	Type	Depth	Hours	Status	Type	Depth	Hours

4. LEADERSHIP	6.1 Nuclear ethics and values	R	B	I	15	R	B	I	15
	6.2 Nuclear corporate governance and oversight	R	C	W	30	R	C	W	30
	6.3 Leadership and communication in nuclear	Q	B	W	30	R	B	W	30
	6.4 Stakeholder communication and public relations in nuclear	R	B	I	15	R	B	I	15
	6.5 Change management in nuclear organizations	R	C	I	15	R	C	I	15
	6.6 Knowledge management (i.e. NKM graduate course)	R	B	W	30	R	B	W	30
	6.7 Strategic issues and planning (nuclear case studies)	R	B	H	45	R	B	H	45
5. ADMINISTRATIVE	7.1 Cost accounting and cost control in nuclear organizations	Q	B	W	30	R	B	H	45
	7.2 Financial management and accounting in nuclear organizations	Q	B	W	30	R	B	W	30
	7.3 Nuclear information and records management	R	C	I	15	R	C	I	15
	7.4 Performance monitoring and management in nuclear	R	B	W	30	R	B	W	30
	7.5 Engineering economics, cost estimating	Q	B	I	15	R	B	I	15
	7.6 Analytical decision-making and safety (decision science in nuclear)	Q	B	W	30	R	B	W	30

6. PRACTICUM	8.1 IAEA Nuclear Energy Management School (2-3 weeks)	O	B	W	30	O	B	W	30
	8.2 International nuclear leadership course (i.e., 1-week NKM, WNU or INLEP)	O	B	I	15	O	B	I	15
	8.3 WNU Summer Institute	O	B	H	45	O	B	H	45
	8.4 Annual INMP Student Conference (research proposal and results)	R	B	I	15	R	B	I	15
	8.5 Master's Level Thesis or Individual Research Project	R	B	H	45	R	B	H	45
	8.6 Work term or internship (e.g. coop study at/with NO)	R	B	H	45	R	B	H	45
	8.7 Team project	R	B	W	30	R	B	W	30
INDICATIVE TOTAL OF HOURS					1755	1755			

Decommissioning and Waste management: Summaries

ASPECT GROUPS for each competency area	Options	Nuclearizing Managers*				Managerizing Engineers*			
		Sum (h)	Total (h)	Options	Total (h)	Sum (h)	Total (h)	Options	Total (h)
E	External environment (International, Institutional, politic, legal)	225	1755			225	1755		
T	Technology related	495	1755			495	1755		
M	Management	480	1755			465	1755		
L	Leadership	180	1755			180	1755		
A	Administrative (decision making)	150	1755			165	1755		
P	Practicum, project, internship	225	1755			225	1755		
Total amount of hours (Control)		1755				1755			

STATUS of competency area	Options	Sum (h)	Total (h)	Options	Sum (h)	Total (h)
O= Optional for the specified programme theme	O	210	1755	O	210	1755
Q= Qualified (assumes most students will have this as pre-requisite training or experience otherwise must make up as it is a requirement)	Q	270	1755	Q	105	1755
R= Required (core) for the specified programme theme	R	1275	1755	R	1440	1755
Total amount of hours (Control)		1755			1755	

TYPE of approach for each competency area (CA)	Options	Sum (h)	Total (h)	Options	Sum (h)	Total (h)
B=Both, combining elements of conceptual and practical levels	B	1080	1755	B	1095	1755
C=Conceptual level, focus on theory, processes, and awareness of methodologies	C	675	1755	C	660	1755
S=Skill-oriented (i.e. hands-on or practical, focus on methodology, techniques, application)	S	0	1755	S	0	1755
Total amount of hours (Control)		1755			1755	

DEPTH of coverage for each Competency area	Options	Sum (h)	Total (h)	Options	Sum (h)	Total (h)
I = Introductory (15h)	I	450	1755	I	465	1755
W= Well Grounded general knowledge (30h)	W	720	1755	W	660	1755
H= Higher level of coverage (45h)	H	585	1755	H	630	1755
Total amount of hours (Control)		1755			1755	

LEGEND
 Numbering : The numbering for each competency areas refer to Appendix B
 Aspect Groups (AG)

PROGRAM THEME N* 4. DECOMMISSIONING,
WASTE MANAGEMENT, ENVIRONMENTAL
REMEDATION

ASPECT GROUPS	<p>Competency Area (CA) <i>Competency areas are both general but nuclear focused AND nuclear specific topic encompassing a set of competency elements Required to be integrated into an International Nuclear Management Programme.</i></p> <p>Notes: Numbering for each Competency areas, corresponds to Appendix B detailed description of INM Requirements</p>	Track A: Nuclearizing Managers*				Track B: Managerizing Engineers*			
		Status	Type	Depth	Hours	Status	Type	Depth	Hours

M: Management | **A:** Administrative | **P:** Practicum | **L:** leadership | **E:** environment | **T:** technology

Weighting Factors

FACTOR **STATUS:**

Options: **R:** Required | or | **O:** optional | or | **Q:** qualified

FACTOR **TYPE:**

Options: **C:** Conceptual | or | **S:** skill-oriented, | or | **B:** Both

FACTOR **DEPTH:**

Options: **I:** Introductory | or | **W:** well grounded | or | **H:** higher depth of coverage (45 h)

WORKING DRAFT REVISION 15		REQUIREMENTS FOR INTERNATIONAL NUCLEAR MANAGEMENT PROGRAMME									
		INMP									
ASPECT GROUPS		PROGRAM THEME N*5. NON-POWER NUCLEAR APPLICATION									
		Track A: Nuclearizing Managers*				Track B: Managerizing Engineers*					
		Status	Type	Depth	Hours	Status	Type	Depth	Hours		
Competency Area (CA) <i>Competency areas are both general but nuclear focused AND nuclear specific topic encompassing a set of competency elements Required to be integrated into an International Nuclear Management Programme.</i>											
Notes: Numbering for each Competency areas, corresponds to Appendix B detailed description of INM Requirements											
1. EXTERNAL ENVIRONMENT	3.1 Nuclear law	R	C	I	15	R	C	I	15		
	3.2 International nuclear organizations	O	C	I	15	O	C	I	15		
	3.3 International nuclear security and safeguards programmes	R	B	I	15	R	B	I	15		
	3.4 Nuclear licensing, licensing basis, and regulatory processes	R	C	W	30	R	C	W	30		
	3.5 Global nuclear energy sector, energy distribution systems etc.	O	C	I	15	O	C	I	15		
	3.6 National nuclear technology policy and planning	R	C	I	15	R	C	I	15		
	3.7 International regulation of trade or transport of nuclear goods/materials	R	B	H	45	R	B	H	45		
	3.8 International nuclear standards	R	C	I	15	R	C	I	15		
	3.9 Intellectual property (rights and management)	Q	C	I	15	R	C	I	15		
2. TECHNOLOGY	4.1 Nuclear plant systems (technology aspects)	R	B	I	15	R	B	I	15		
	4.2 Nuclear plant design principles (technology aspects)	O	C	I	15	O	C	I	15		
	4.3 Nuclear facility life cycle issues and ageing management	R	B	I	15	R	B	I	15		
	4.4 Nuclear asset management (plant life management)	O	C	I	15	O	C	I	15		
	4.5 Nuclear waste management and disposal	R	C	I	15	R	C	I	15		
	4.6 Nuclear plant decommissioning, environmental remediation	O	C	I	15	O	C	I	15		
	4.7 Nuclear fuel cycle (technology aspects and issues)	O	C	I	15	O	C	I	15		
	4.8 Nuclear reactivity theory, reactivity management	R	C	I	15	Q	C	I	15		
	4.9 Nuclear environmental protection, monitoring and compliance	R	C	I	15	R	C	I	15		
	4.10 Nuclear safety principles and safety analysis	R	B	I	15	Q	B	I	15		
	4.11 Radiation safety and management	R	C	I	15	Q	C	I	15		
	4.12 Nuclear medicine (imaging, pharmacology, etc.)	R	C	I	15	R	C	I	15		
	4.13 Nuclear agriculture applications (e.g. pest control)	R	C	I	15	R	C	I	15		
	4.14 Nuclear food-irradiation	R	C	I	15	R	C	I	15		
3. MANAGEMENT	5.1 Nuclear project management, engineering management	O	C	I	15	O	C	I	15		
	5.2 Management of labour relations in nuclear	Q	B	H	45	R	B	H	45		
	5.3 Nuclear event management, emergency planning and response	R	C	I	15	R	C	I	15		
	5.4 Human resources development and management in nuclear	R	B	W	30	R	B	W	30		
	5.5 Systematic approach to training in nuclear organizations	R	C	W	30	R	C	W	30		
	5.6 Planning and management systems in nuclear organizations	R	C	I	15	R	B	I	15		
	5.7 Project planning and management	R	C	I	15	R	C	I	15		
	5.8 Nuclear safety management, risk-informed decision-making	R	C	I	15	R	C	I	15		
	5.9 Nuclear quality assurance programmes	R	C	I	15	R	C	I	15		
	5.10 Organizational behaviour in nuclear organizations	Q	C	I	15	R	C	I	15		
5.11 Nuclear procurement and supplier management	Q	C	I	15	R	C	I	15			
5.12 Business law and contract management	Q	C	W	30	R	C	W	30			
5.13 Nuclear site security programme management	O	C	I	15	O	C	I	15			
5.14 Cultural awareness, inter-cultural communication	R	C	I	15	R	C	I	15			
5.15 Organizational culture issues in nuclear organizations	Q	C	I	15	R	C	I	15			
5.16 Operating Experience	R	B	H	45	R	B	H	45			

WORKING DRAFT REVISION 15		REQUIREMENTS FOR INTERNATIONAL NUCLEAR MANAGEMENT PROGRAMME							
		INMP							
ASPECT GROUPS		PROGRAM THEME N*5. NON-POWER NUCLEAR APPLICATION							
		Track A: Nuclearizing Managers*				Track B: Managerizing Engineers*			
Competency Area (CA)		Status	Type	Depth	Hours	Status	Type	Depth	Hours
<i>Competency areas are both general but nuclear focused AND nuclear specific topic encompassing a set of competency elements Required to be integrated into an International Nuclear Management Programme.</i> Notes: Numbering for each Competency areas, corresponds to Appendix B detailed description of INM Requirements									
4. LEADERSHIP	6.1 Nuclear ethics and values	R	B	I	15	R	B	I	15
	6.2 Nuclear corporate governance and oversight	R	C	I	15	R	C	I	15
	6.3 Leadership and communication in nuclear	Q	B	W	30	R	B	W	30
	6.4 Stakeholder communication and public relations in nuclear	R	B	I	15	R	B	I	15
	6.5 Change management in nuclear organizations	R	C	I	15	R	C	I	15
	6.6 Knowledge management (i.e. NKM graduate course)	R	B	W	30	R	B	W	30
	6.7 Strategic issues and planning (nuclear case studies)	R	B	W	30	R	B	W	30
5. ADMINISTRATIVE	7.1 Cost accounting and cost control in nuclear organizations	Q	B	I	15	R	B	I	15
	7.2 Financial management and accounting in nuclear organizations	Q	B	W	30	R	B	W	30
	7.3 Nuclear information and records management	R	C	I	15	R	C	I	15
	7.4 Performance monitoring and management in nuclear	R	B	W	30	R	B	W	30
	7.5 Engineering economics, cost estimating	Q	B	I	15	R	B	I	15
	7.6 Analytical decision-making and safety (decision science in nuclear)	Q	B	W	30	R	B	W	30
	Practicum, project, internship								
6. PRACTICUM	8.1 IAEA Nuclear Energy Management School (2-3 weeks)	O	B	W	30	O	B	W	30
	8.2 International nuclear leadership course (i.e., 1-week NKM, WNU or INLEP)	O	B	I	15	O	B	I	15
	8.3 WNU Summer Institute	O	B	H	45	O	B	H	45
	8.4 Annual INMP Student Conference (research proposal and results)	R	B	I	15	R	B	I	15
	8.5 Master's Level Thesis or Individual Research Project	R	B	H	45	R	B	H	45
	8.6 Work term or internship (e.g. coop study at/with NO)	R	B	H	45	R	B	H	45
	8.7 Team project	R	B	W	30	R	B	W	30
INDICATIVE TOTAL OF HOURS					1365				1365
NON POWER NUCLEAR APPLICATIONS: Summaries									
ASPECT GROUPS for each competency area		Nuclearizing Managers*				Managerizing Engineers*			
Options		Sum (h)	Total (h)			Sum (h)	Total (h)		
E	External environment (International, Institutional, politic, legal)	180	1365			180	1365		
T	Technology related	330	1365			330	1365		
M	Management	345	1365			345	1365		
L	Leadership	150	1365			150	1365		
A	Administrative (decision making)	135	1365			135	1365		
P	Practicum, project, internship	225	1365			225	1365		
Total amount of hours (Control)		1365				1365			
STATUS of competency area		Options	Sum (h)	Total (h)	Options	Sum (h)	Total (h)		
O= Optional for the specified programme theme		O	255	1365	O	255	1365		
Q= Qualified (assumes most students will have this as pre-requisite training or experience otherwise must make up as it is a requirement)		Q	255	1365	Q	45	1365		
R= Required (core) for the specified programme theme		R	855	1365	R	1065	1365		
Total amount of hours (Control)			1365			1365			
TYPE of approach for each competency area (CA)		Options	Sum (h)	Total (h)	Options	Sum (h)	Total (h)		
B=Both, combining elements of conceptual and practical levels		B	690	1365	B	705	1365		
C=Conceptual level, focus on theory, processes, and awareness of methodologies		C	675	1365	C	660	1365		
S=Skill-oriented (i.e. hands-on or practical, focus on methodology, techniques,		S	0	1365	S	0	1365		
Total amount of hours (Control)			1365			1365			
DEPTH of coverage for each Competency area		Options	Sum (h)	Total (h)	Options	Sum (h)	Total (h)		
I= introductory (15h)		I	735	1365	I	735	1365		
W= Well Grounded general knowledge (30h)		W	360	1365	W	360	1365		
H= Higher level of coverage (45h)		H	270	1365	H	270	1365		
Total amount of hours (Control)			1365			1365			
LEGEND									
Numbering : The numbering for each competency areas refer to Appendix B									
Aspect Groups (AG)									
M: Management A: Administrative P: Practicum L: leadership E: environment T: technology									
Weighting Factors									
FACTOR STATUS:									
Options: R: Required or O: optional or Q: qualified									
FACTOR TYPE:									
Options: C: Conceptual or S: skill-oriented, or B: Both									
FACTOR DEPTH:									
Options: I: Introductory or W: well grounded or H: higher depth of coverage (45 h)									