

# ITU Spectrum Management Training Program (SMTP)

Concept Presentation

# Addressed problem

- Efficient running of Spectrum Management (SM) requires well educated professionals
- Today there are no formal holistic SM education programs, except some ad hoc commercial or public courses such as ITU BR seminars, USTTI
- Large administrations train SM staff by seconding them to experienced workers, but this offers narrowed vision and no formal quality check
- Many smaller administrations, especially in developing countries, do not have even such option, but must rely solely on ad hoc courses

# The solution

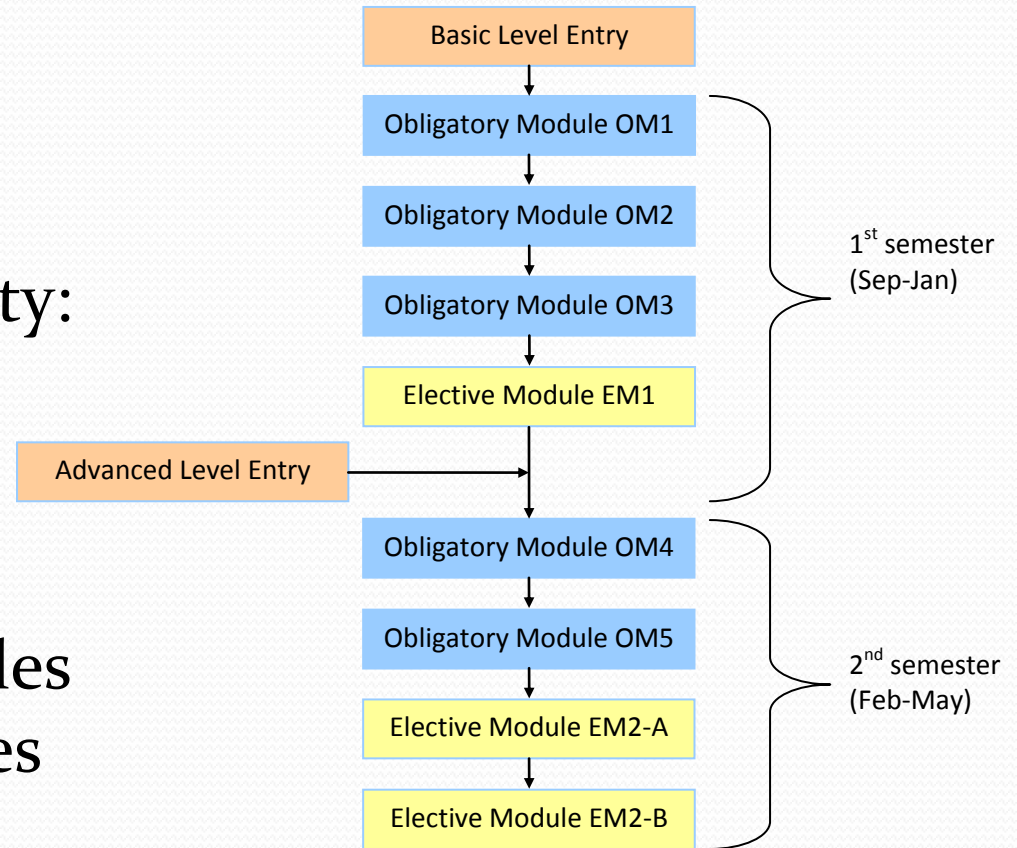
- ITU establishing Spectrum Management Training Program:
  - Unified course, offering students across the globe access to state-of-the-art holistic SM training and forward-looking professional vision
  - Formalised assessment ensuring minimal quality of professional education
  - Certification to give international recognition, with possible option of university credits/diploma

# Benefits for ITU

- Preserving and spreading the wealth of SM knowledge accumulated in ITU (BR/BDT and ITU-R SG: staff's know-how and Reports/Recs)
- Additional facet to ITU's global leadership role as enabler and facilitator of ICT development
- Service to Member Administrations and Sector Members
- Course completion certificate as quality reference for candidates assessment in ITU and administrations' hiring processes

# The vision

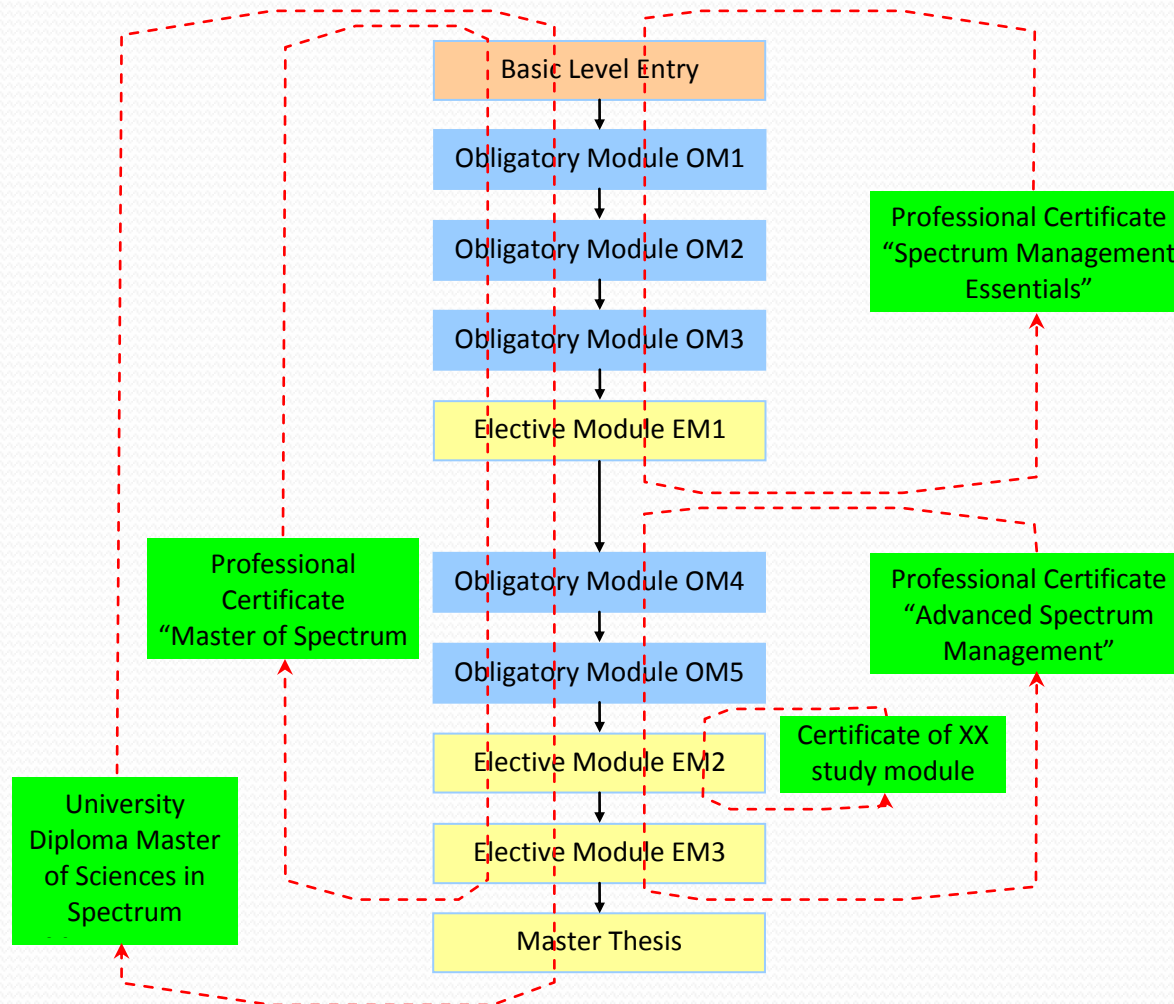
- Two entry levels
- Specialisation possibility:
  - Technical
  - Legal/economic
- Accordingly structured set of obligatory modules and specialised electives



# Initial composition of the course

- Obligatory modules:
  - “Legal Basis and Regulatory Framework of Spectrum Management”
  - “Spectrum Engineering Fundamentals”
  - “Wireless Telecommunications Technologies”
  - “Economic and Market Tools of Spectrum Management”
  - “Strategic Planning and Policies for Wireless Innovation”
- Electives:
  - “Spectrum Monitoring”
  - “Enforcement and Type Approval of Equipment”
  - “SM for Satellite Systems”
  - “SM for HF Systems, Science, Maritime and Amateur Services”
  - “SM for Aeronautical and Radio Determination Services and Military Systems”
  - “Computer-aided Spectrum Management”
  - “Advanced Spectrum Authorization Regimes”
  - “Socio-Economic Impact of Spectrum Regulation; Competition and Consumer Protection”
  - “Terrestrial TV Broadcasting Planning and Digital Transition”
  - “Opportunistic Spectrum Access and Cognitive Radio”

# Flexible certification routes



# First phase of implementation

- Identifying high level experts within the global SM community and tasking them with preparing detailed course content
- Setting up Quality assurance mechanism to check delivered course content, through a combination of two-tier reviews by BR/BDT/Study Groups' experts as well as peer review within the high level expert group
- Clarifying the possibility and scope of partnership with universities and other institutions/companies

# Vision for the team of experts

Subject areas	Number of experts
Spectrum Regulation and Planning	3
Spectrum Engineering and Technical Innovation	2-3
Economic, legal and market aspects of SM	2
Wireless Technologies, Policies for Wireless Innovation	1-2
Spectrum Monitoring and Enforcement	1-2
Team total:	10

# Way ahead

- Clarifying provisions for certification of the course
- Setting up Quality assurance mechanism for course delivery phase with feedback from Study Groups, Administrations as employers, as well as from ultimate students
- Performing ITU financial/staffing impact assessment

# Quality assurance mechanism

- **Consultative and editorial procedure to ensure**
  - **technical** quality of the content is of the highest standard
  - the **language and terminology** used in the training materials conforms to the rules, policies, procedures and instruments of the ITU
- **Bodies to establish for the quality assurance process**
  - Peer Review Committee
  - Editorial Committee
- **Peer Review Committee**
  - review the work of the experts to ensure that the technical aspects of the training material are up to standard
  - be composed of the relevant BDT staff and Councillors of the BR study groups (for the modules falling under their respective groups)
  - Councillors to consult their SG members for comments and inputs into the relevant module/s
  - all comments, reviews and suggestions back to the experts for incorporation into the respective training modules
  - expected turnaround time of about two weeks
- **Editorial Committee**
  - give the ITU stamp of approval to the modules developed by the experts and reviewed by the Peer Review Committee
  - validate the language and terminologies used to ensure that they are consistent with ITU languages
  - not expected to look at the technical content of the syllabus, as the Peer Review committee is deemed competent enough to do so
  - possible composition
    - the BDT Focal Point on Spectrum Management
    - the respective Study Group Councillors in BR
    - 1 or 2 persons appointed by BR
    - representative from the Human Capacity Building division
    - chaired by a senior person from the BR (tbd)

# Ultimate implementation options

1. International university Masters course:
  - Courses organized via collaboration of University/ies and ITU as well as ITU-R sector members
  - Diploma conferred by partner University/ies
2. International professional SM certificate:
  - Developed content becomes a guide for self-studies, supported by practical experience in administrations
  - ITU Academy administers the remote testing to established standard and issues ITU certificate to those who successfully passed the exams
3. Some combination of the above

# Conclusions

- The real weak point identified in supplying ITU Member Administrations with SM-educated personnel, which is unlikely to be resolved on national level, except in some very big countries
- ITU is at unique position to bridge this gap and further cement its position of global centre of SM innovation and know-how
- For more information see
  - <http://academy.itu.int/index.php/news/item/1077-smcp>