'EXTATIC' – Extreme-ultraviolet & X-ray Technology And Training for Interdisciplinary Cooperation

John T Costello

School of Physics/NCPST & Faculty of Science and Heath, DCU

http://www.extatic.eu

EMJD Objective:

"to foster cooperation between higher education institutions and academic staff in Europe and Third Countries with a view to creating poles of excellence and providing highly trained human resources"
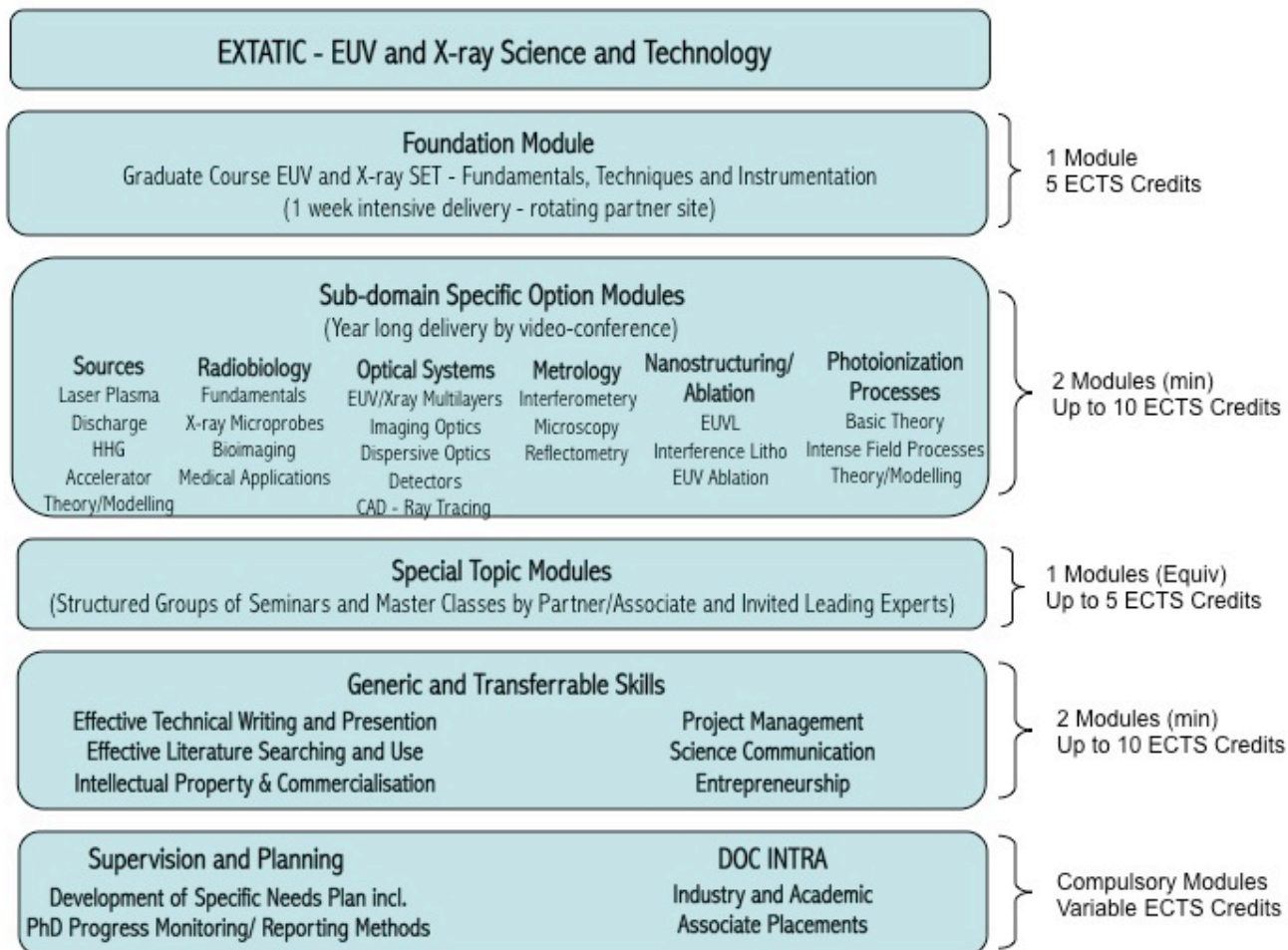
Academic Partners include:

- Dublin City University (Coordinator)
- University College Dublin
- Kings College London
- The University of Southampton
- Czech Technical University-Prague
- The University of Padua
- The Military University of Warsaw
- RWTH-Aachen University

Current associated academic partners include:

- Colorado State University (USA)
- Purdue University (USA)
- Tongji University (China)

Current associated industry/ private laboratory partners include:

- Silson (UK)
- Prevac (Poland)
- XENOCS (France)
- EPPRA (France)
- Rigaku Innovative Tech. (Prague)
- Bruker (Germany)
- Fraunhofer-ILT (Germany)
- XFEL Gmbh (Germany)

EXTATIC - EUV and X-ray Science and Technology

Foundation Module
Graduate Course EUV and X-ray SET - Fundamentals, Techniques and Instrumentation
(1 week intensive delivery - rotating partner site)

1 Module
5 ECTS Credits

Sub-domain Specific Option Modules
(Year long delivery by video-conference)

Sources	Radiobiology	Optical Systems	Metrology	Nanostructuring/ Ablation	Photoionization Processes
Laser Plasma	Fundamentals	EUV/Xray Multilayers	Interferometry	EUVL	Basic Theory
Discharge	X-ray Microprobes	Imaging Optics	Microscopy	Interference Litho	Intense Field Processes
HHG	Bioimaging	Dispersive Optics	Reflectometry	EUV Ablation	Theory/Modelling
Accelerator	Medical Applications	Detectors			
Theory/Modelling		CAD - Ray Tracing			

2 Modules (min)
Up to 10 ECTS Credits

Special Topic Modules
(Structured Groups of Seminars and Master Classes by Partner/Associate and Invited Leading Experts)

1 Modules (Equiv)
Up to 5 ECTS Credits

Generic and Transferrable Skills

Effective Technical Writing and Presention
Effective Literature Searching and Use
Intellectual Property & Commercialisation

Project Management
Science Communication
Entrepreneurship

2 Modules (min)
Up to 10 ECTS Credits

Supervision and Planning
Development of Specific Needs Plan incl.
PhD Progress Monitoring/ Reporting Methods

DOC INTRA
Industry and Academic
Associate Placements

Compulsory Modules
Variable ECTS Credits

**+ PhD Thesis
+ Participatory Elements
=
*EXTATIC Doctoral Programme***

1. What were the main steps taken in putting the proposal together initially ?

2. What challenges did you encounter ?

3. How did you ensure that the award criteria were properly addressed ?

4. How much time did you need ?

5. What is your "top tip" for submitting a successful application ?

1. Make sure you know what you are getting into !!

2. Look at the existing EMJDs and make sure that what you propose is unique/compelling, etc. USPs

3. Go to the part of the website containing the presentations from the EM Information Day. Download and read them in detail - http://eacea.ec.europa.eu/erasmus_mundus/events/infoday_2011_en.php

4. Then read the guide !

5. Assemble strong partners with whom you clearly have common course and ideally 'some **EU** previous' – in our case we had EU COST Action MP0601 – Short Wavelength Laboratory Sources

6. Let your graduate studies office/ Dean of Graduate Studies know early on what you plan – they may have a successful proposal to show you

1. Trying to understand what an EMJD actually is !

2. Trying to explain to all of the partners what an EMJD is and why it might be worth the effort !

3. Convincing all of them that we had a shot at the title – EU proposal fatigue…..!

4. Generating available bandwidth to work on developing a strongly argued proposal !

1. Read the AWCRIT (Award Criteria Questionnaire – main proposal template) over and over again (before you even open the main application form…….)

2. Make sure that you have at least one other partner that you can trust and write with (Michette-KCL & O'Sullivan-UCD)

3. Divide out sections between yourself and your trusted partners to have a first cut at populating them

4. Stay in phone contact debating each sub-point for each subsection – be forensic – do a gap analysis on each section

5. Organise conference calls with ALL partners where you need them to provide inputs……

The first time out: Approximately 3 weeks for preparations for the preparatory phase and 2 weeks to do the writing/honing of the AWCRIT and populate the 2010 front end application form (*while doing normal teaching/ research /admin tasks*).

The second time out: A good deal less. Approximately 1 week to hone the AWCRIT and populate the 2011 front end application form (*while doing normal teaching/ research /admin tasks*).

Objective: Get to the table to be seriously considered…..

- Try to get sight of a successful proposal

- Use lots of figures and tables to indicate the outstaning track record of your consortium in PhD training/supervision (PhD students graduated, current PhD students per member, etc.)

- Ditto on research capacity (facilities, funding, current group sizes, etc.)

- If your consortium is large the management structure and capacity needs to be very robust

- If you can – draft a consortium agreement beforehand

- Ask Eileen…….(eileen.oconnell@hea.ie)

1. Ca. 30 EMJDs to date

2. Typically 10 – 12 successful bids from ca. 140 applications per call

3. Be prepared to go back into battle with an improved proposal for each call

4. Use the EACEA-EM website to browse successful EMJD sites (not ours !) to pick up tips for your own proposal

5. Be prepared for quite a significant administrative load if you are successful