



MASTER PROGRAM IN INDUSTRIAL PHARMACY

**D.M.REKKAS
ASSOCIATE PROFESSOR
SCHOOL OF PHARMACY
UNIVERSITY OF ATHENS
HELLAS
rekkas@pharm.uoa.gr**



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- History
- Outline of the program
- Some numbers...
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- **Why to change?**
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HISTORY

- The Faculty of Pharmacy was established in 1843
- 3 Departments (Pharmaceutical Chemistry, Pharmacognosy, Pharmaceutical Technology)
- PhD was the first postgraduate degree
- MSc studies were established much later (1993-1994)
- More than one MSc per Department



PROGRAM OUTLINE

The Dpt of Pharm. Tech. coordinates 2 Msc degrees

- Clinical Pharmacy
- **Industrial Pharmacy (1998)**
which has combined 3 previously separate MSc programs running from 1994
(Pharmaceutical Technology, Cosmetology and Biopharmaceutics)



MSc in INDUSTRIAL PHARMACY

Admission Requirements

- Bachelor in Pharmacy and related Sciences
e.g. Chemistry, Biology, Chemical Engineering
- Evaluation of the CVs
- Interview



MSc in INDUSTRIAL PHARMACY

Curriculum (2 years)

Courses for 2 semesters and research for another 2.

- Physical Pharmacy
 - Quality Control, GMP-GLP
 - Statistics
 - Pharmaceutical Analysis
 - Pharmaceutical Microbiology
 - Advanced Pharmaceutical Technology
 - Advanced Biopharmaceutics-Pharmacokinetics
 - Advanced Cosmetology
 - Research Methodology
- and one of the following :
- *Novel Drug Delivery Systems-Dosage Form Design*
 - *Quality Control and Evaluation of Topical Products*
 - *Clinical Pharmaceutical Analysis*

SOME NUMBERS

Students per academic year

1998-1999	21
1999-2000	23
2000-2001	13
2001-2002	12
2002-2003	11
2003-2004	10
2004-2005	7
2005-2006	10
2006-2007	14
2007-2008	7
2008-2009	9

TOTAL NUMBER OF
STUDENTS 1998-2008 :137

NUMBER OF STUDENTS
EXPECTED TO HAVE
GRADUATED:119

GRADUATED :101



SOME NUMBERS

Types of Bachelors per academic year

During the last 3 academic years:

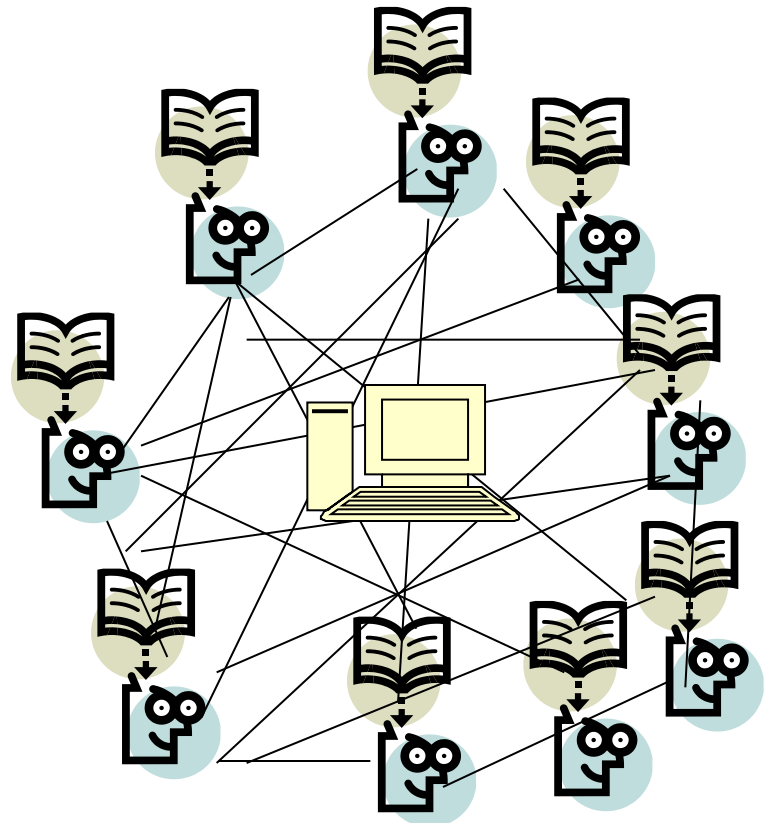
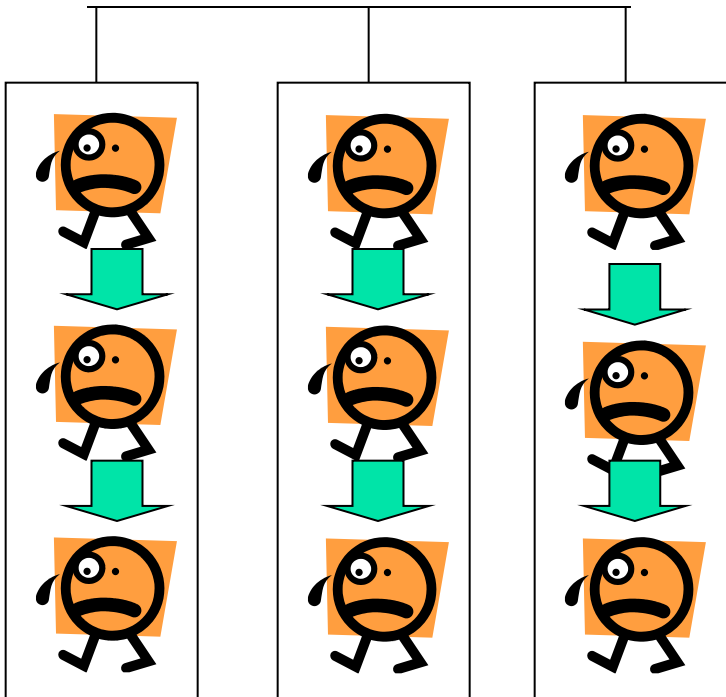
- Pharmacists 50%
- Chemists 18%
- Chemical Engineers 18%
- Biologists 9%
- Materials Science 6%

WHAT IS NEXT ? CHANGE!

FROM THE SILO TOWARDS THE LATTICE MODEL

COMMAND AND CONTROL

CREATION & FLOW OF KNOWLEDGE

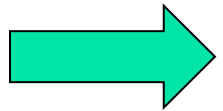


Modified from H. Buckman, Building a knowledge driven organization



WHAT IS NEXT ? EMOTIONAL INTELLIGENCE !

Logical / Mathematical IQ



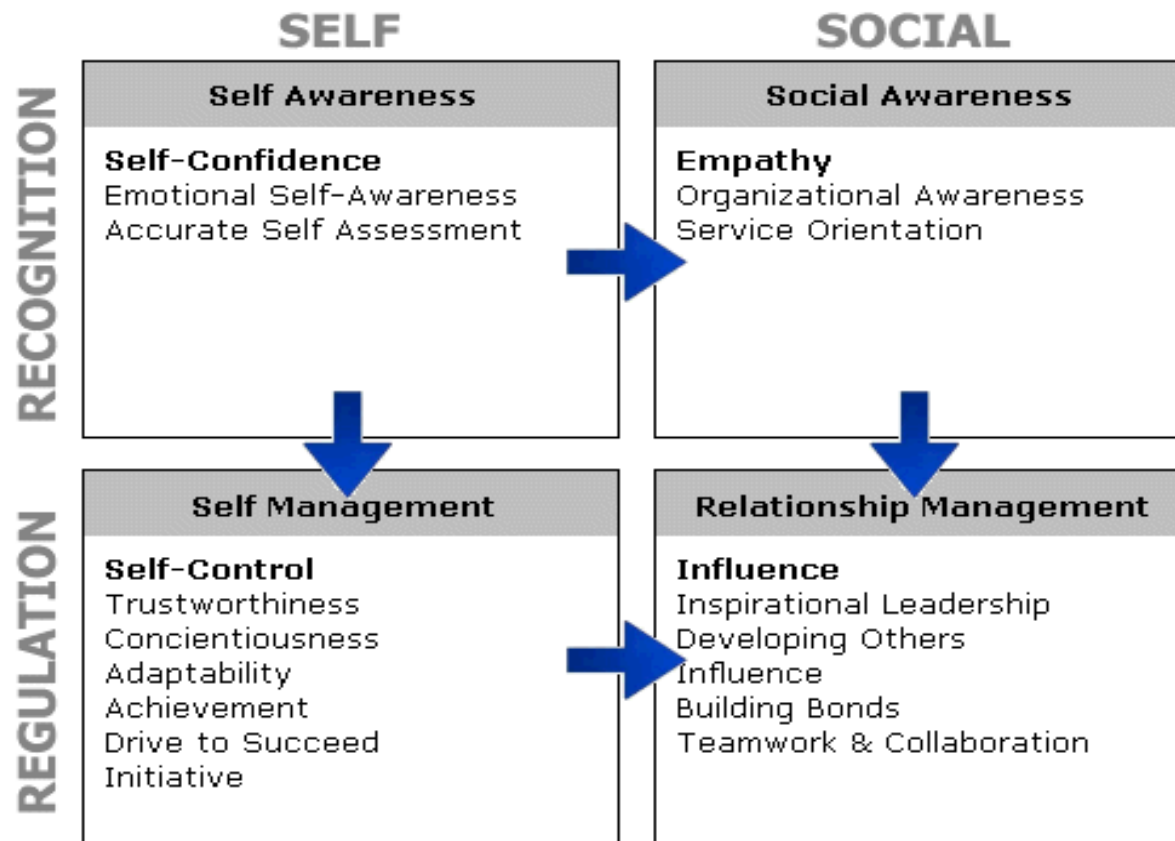
Emotional Intelligence EI

- ❖ Linguistic - Use of language
- ❖ Spatial - Other way to view things
- ❖ Musical
- ❖ Kinesthetic - Movement
- ❖ Interpersonal - Relationships
- ❖ Intrapersonal - Know yourself

. *Prof. H. Gardner from T. Peters "The Circle of Innovation"*

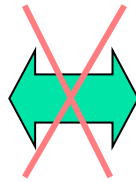


WHAT IS NEXT ? EMOTIONAL INTELLIGENCE !

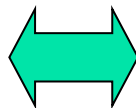


WHY TO CHANGE ?

- ❖ **FROM SILO COMPLEX ORGANIZATIONS** which easily captured market shares in a non competitive environment.



- ❖ **TOWARDS LEAN, KNOWLEDGE, SYSTEM FOCUSED ORGANIZATIONS** which are based on value added processes to deliver results to their customers.





STRENGTHEN THE EI

- ❖ Hire for **attitude**, train for skill

(P. Carobonera "The fast Company")

- ❖ Hire for **intelligence** (all kinds), train for skill

(Prof. H. Gardner from T. Peters "The Circle of Innovation")

- ❖ Hire for **attitude**, train for whatever

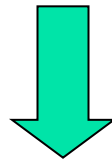
(T. Peters "The Circle of Innovation")



CONCLUSIONS ...MIND THE SHIFT!

- FROM THE ENGINE ("HARDWARE")

PRODUCT DRIVEN ORGANISATIONS
MANUFACTURING EMPLOYEE



- TO THE HUMAN CAPITAL ("BRAINS")

KNOWLEDGE DRIVEN ORGANISATIONS
KNOWLEDGE EMPLOYEE



THANK YOU !

ΕΘΝΙΚΟ ΚΑΙ ΚΑΠΟΔΙΣΤΡΙΑΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ

ΤΜΗΜΑ ΦΑΡΜΑΚΕΥΤΙΚΗΣ

