M.Sc. Program in Informatics and Telecommunications at UoA-DIT

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Deputy Dept Chair,
Director of Graduate Studies

Overview of Graduate Studies

- Initiated in 1993
  - Modified in 2000 and 2004; due to be largely modified in 2013
- Six Areas of Specialization (AoS) in the M.Sc. Program
  - Theoretical Computer Science
  - Advanced Information Systems
  - Computer System Technology
  - Telecommunication systems and Networks
  - Signal Processing for Telecommunications and Multimedia
  - New Technologies in Informatics and Telecommunications
- Ph.D. Studies (Ph.D.)

M.Sc. Program

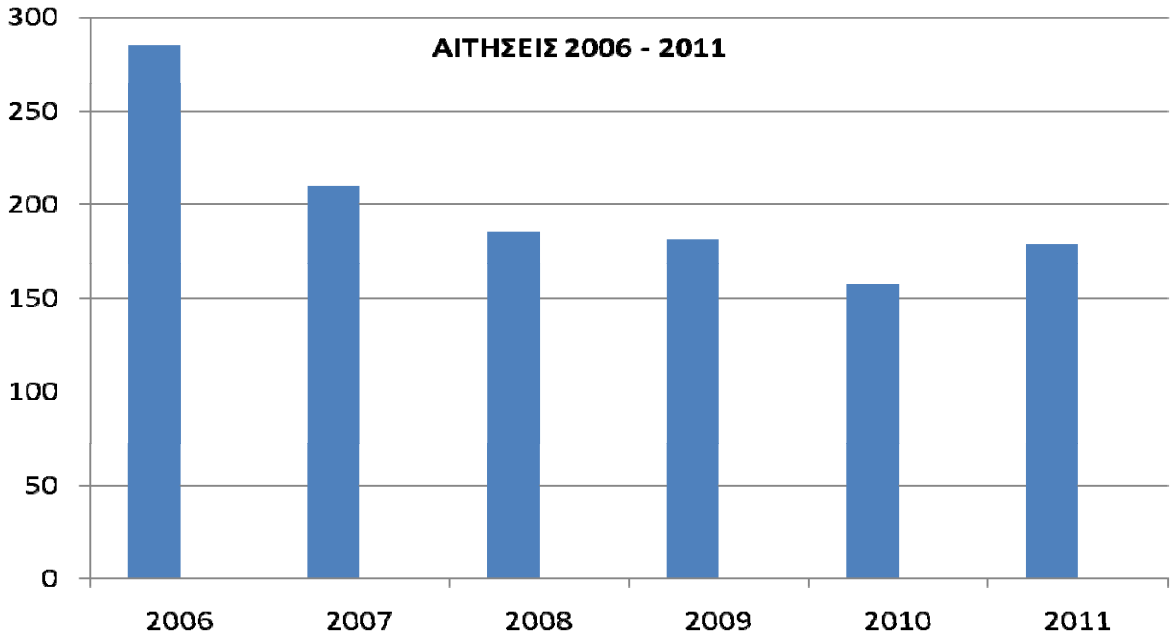
M.Sc. Applicant's profile

- Applicants are admitted in late spring in the specific AoSs
- Applicant's profile:

1. UoA-DIT
2. Other Greek Departments of Informatics, Electrical Engineering and Computer Science/Engineering, Electronics Engineering
3. Math / Physics
4. Other disciplines, including relevant Departments of Higher Technological Institutes

(Applicants in 3 and 4 are required to attend a preparation/convergence program)

Distribution of number of applicants in recent years

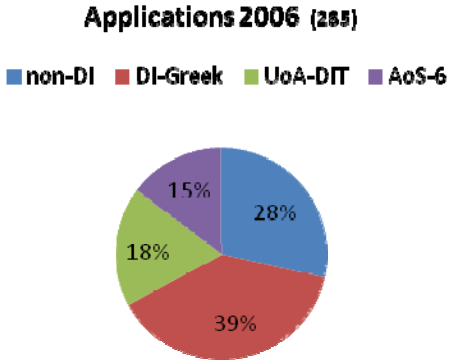


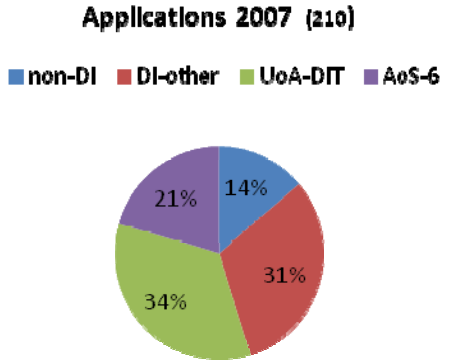
Number of admitted students: 70/80 + 20 (for AoS 6)

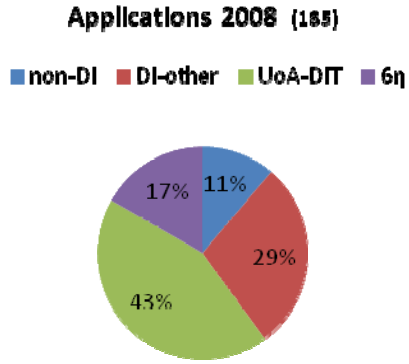
Reduction of applications attributed to:

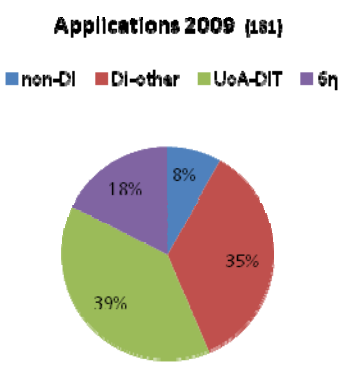
- An explosion of Graduate Programs in Greek Universities after 2005
- The reputation for a demanding M.Sc. Program at UoA-DIT

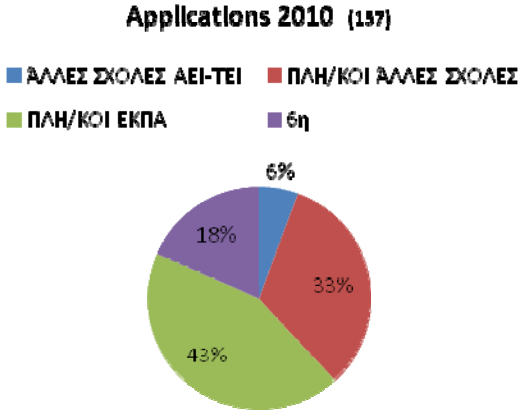
Distribution of Applicants

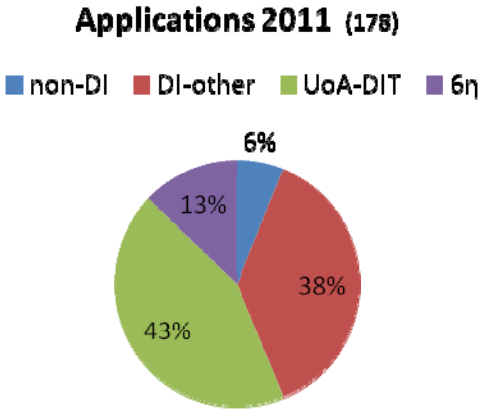








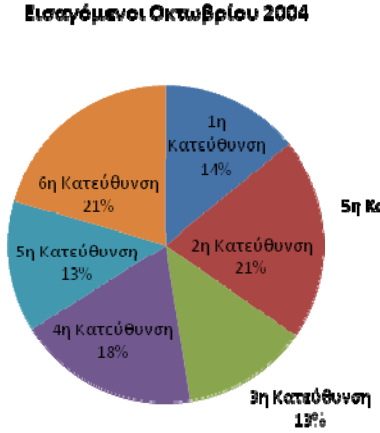




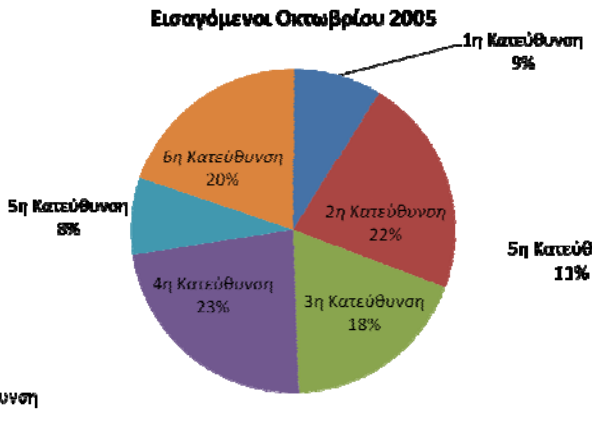
Despite the competition, most applicants come from outside UoA-DIT

Preference AoS of admitted applicants

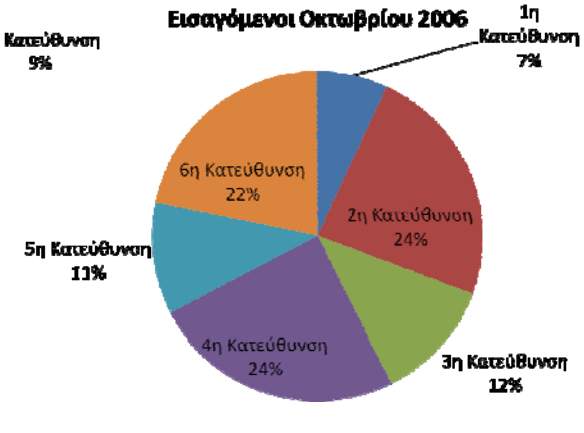
Admitted:126



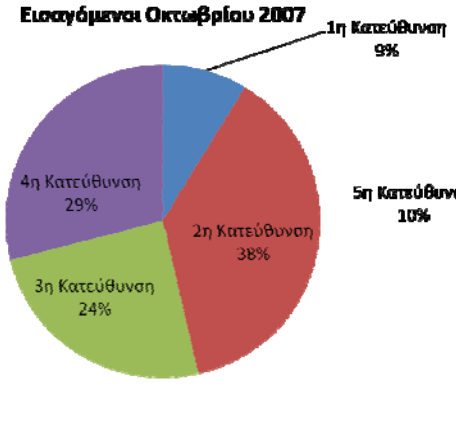
Admitted:141



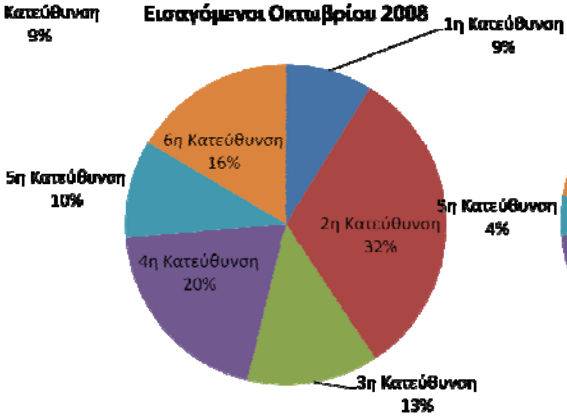
Admitted:91



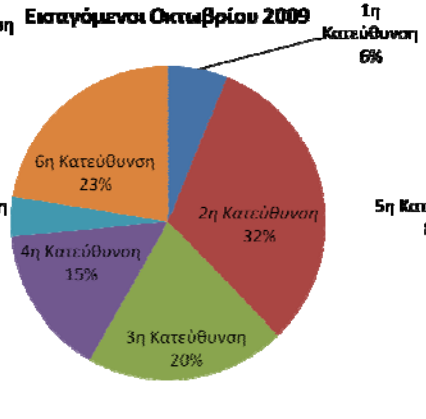
Admitted:101



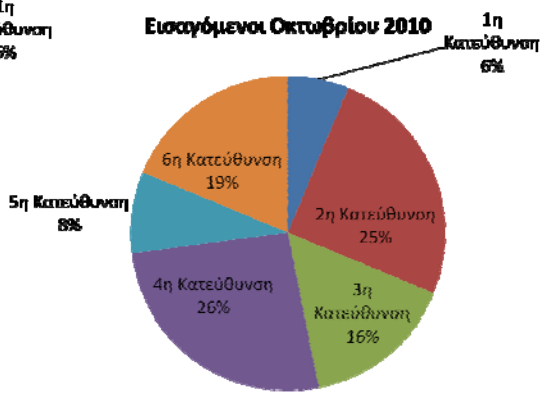
Admitted:100



Admitted:91



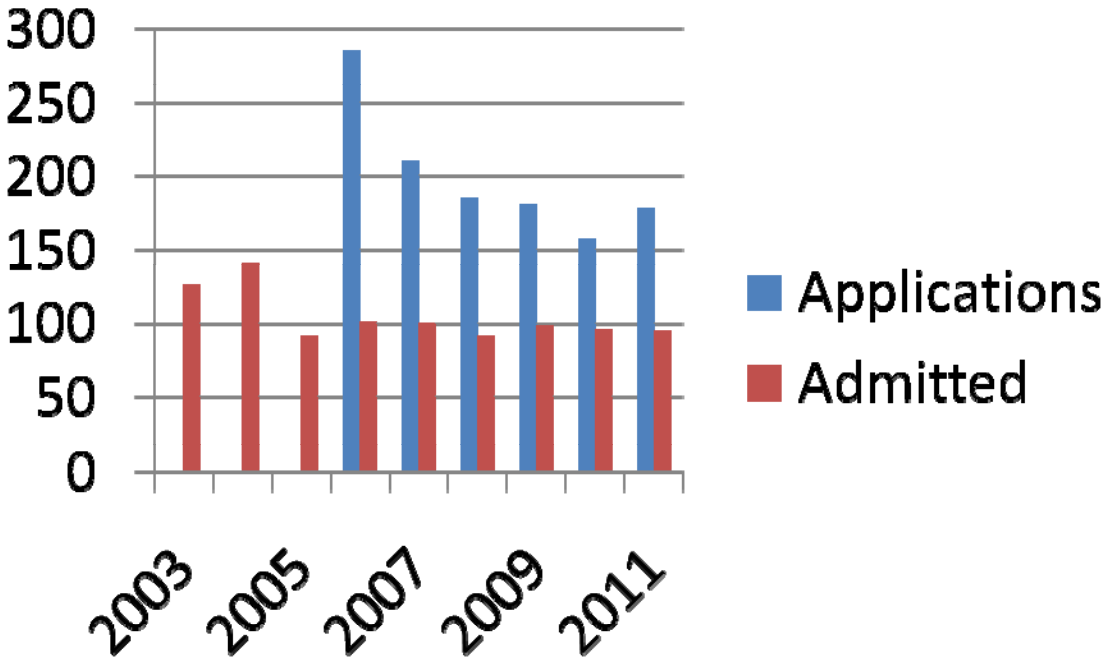
Admitted:98



Admitted:95

AoS-2 and AoS-4 are the most popular and populated

Percentage of admitted applicants



- Admission rate for AoS-6 is over 70% (older/working students)

Admission Criteria

- Undergraduate Degree, GPA
- Background in applied AoS
- Recommendation letters
- Interview for most applicants
- Consideration of special achievements (publications, awards, etc)
- 7-member Graduate Studies Committee process applications and recommends to the Graduate Studies General Assembly for final approval
- Special consideration / attention to:
  - Candidates from other disciplines
  - Candidates from under-represented Departments

M.Sc. Degree Requirements

- Successful completion of 7-8 graduate courses (about 70 ECTS) in AoS
- Successful completion of 10-12 graduate courses (about 90 ECTS) from a menu of about 50 courses)
- A thesis
  - Thesis with open defense (graded)
  - Thesis without defense (Pass / Fail)

AoS-1 Theoretical Computer Science – Core courses

- ΠΜΣ 503: Scientific Computations
- ΠΜΣ 505: Graphics
- ΠΜΣ 506: Combinatorial Optimization
- ΠΜΣ 557 Algorithms
- ΠΜΣ 558 Computational Complexity
- ΠΜΣ 559 Programming Language Semantics
- ΠΜΣ 560 Computational Geometry
- ΠΜΣ 561 Parallel Algorithms
- ΠΜΣ 562 Approximation Algorithms
- ΠΜΣ 563 Algorithmic Game Theory
- ΠΜΣ 564 Cryptography
- ΠΜΣ 565 Probabilistic Algorithms
- ΠΜΣ566 Algorithms in Structural Bioinformatics
- ΠΜΣ 567 Immediate Algorithms
- ΠΜΣ 568 Algorithmic Graph Theory
- ΠΜΣ 569 Linear and non-linear Programming

AoS-2 Advanced Information Systems – Core courses

- ΠΜΣ 505: Graphics
- ΠΜΣ 508: Advanced Artificial Intelligence
- ΠΜΣ 509: Knowledge Technology
- ΠΜΣ 510: Topics in Applications for Data Bases
- ΠΜΣ 511: Internet Applications
- ΠΜΣ 512: Multimedia and Hypermedia Systems
- ΠΜΣ 513: e-Commerce Technologies
- ΠΜΣ 514: Simulation
- ΠΜΣ 515: Topics in Data Base Systems

AoS-3 Computer Systems Technologies – Core courses

- ΠΜΣ 504: Parallel Computing System Technology
- ΠΜΣ 515: Topics in Data Base Systems
- ΠΜΣ 516: Advanced Digital System Design
- ΠΜΣ 517: Advanced Computer Architecture
- ΠΜΣ 518: Advance Operating Systems
- ΠΜΣ 519: Distributed Systems
- ΠΜΣ 520: Information System Security
- ΠΜΣ 521: Modern Programming Tools
- ΠΜΣ 522: Computer Communication Networks

AoS-4 Telecommunication Systems and Networks – Core courses

- ΠΜΣ 522: Computer Communication Networks
- ΠΜΣ 523: Advanced Networking Technologies
- ΠΜΣ 524: Network Modeling and Performance Evaluation
- ΠΜΣ 525: Protocol Specification and Design
- ΠΜΣ 526: Mobile Communications
- ΠΜΣ 527: Optical Communication Networks
- ΠΜΣ 528: Information and Coding Theory
- ΠΜΣ 529: VLSI Design for Telecommunication Systems
- ΠΜΣ 536: Data Compression

AoS Signal Processing for Telecommunications and Multimedia – Core courses

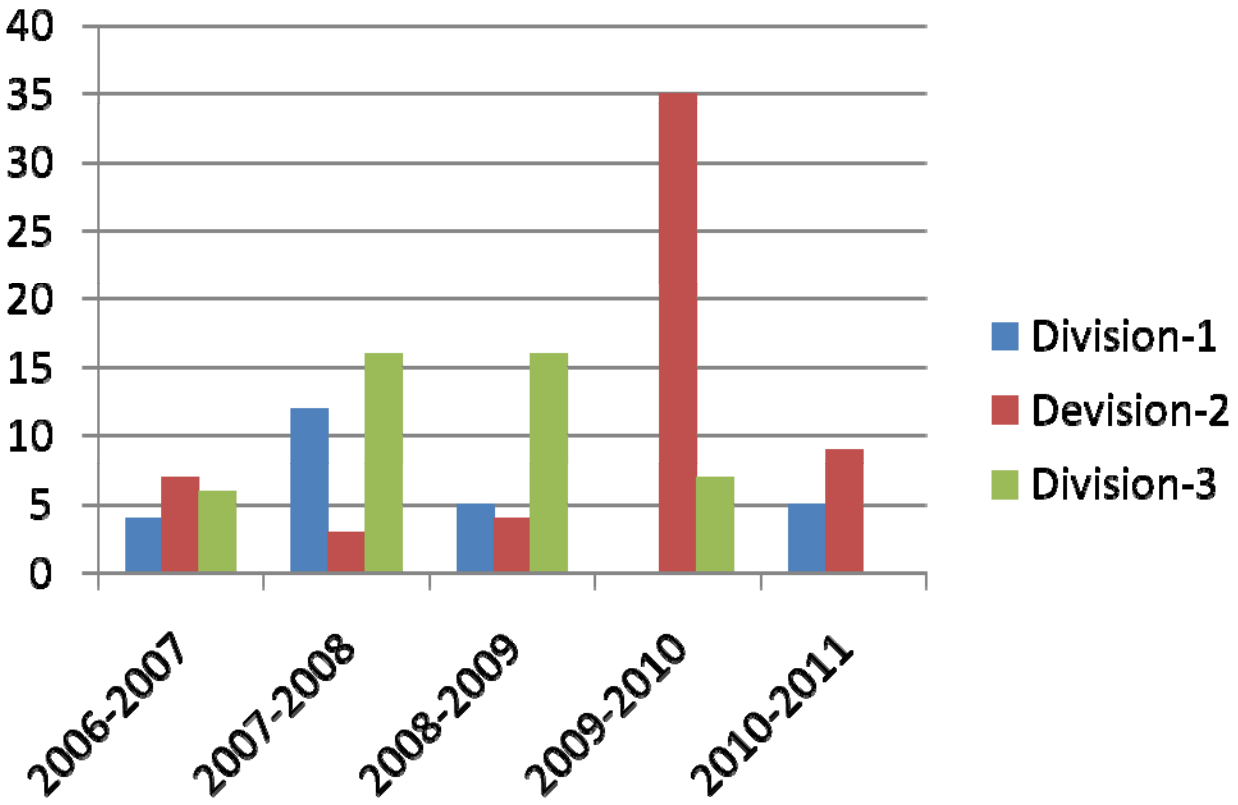
- ΠΜΣ 512: Multimedia and Hypermedia Systems
- ΠΜΣ 530: Advanced Topics in Signal Processing
- ΠΜΣ 531: Digital Communications for Broadband Networks
- ΠΜΣ 532: Pattern Recognition
- ΠΜΣ 533: Picture Analysis and Artificial Vision
- ΠΜΣ 534: Voice Technologies
- ΠΜΣ 535: Adaptive Systems for Telecommunication Networks
- ΠΜΣ 536: Data Compression
- ΠΜΣ 537: Digital Signal Processing

AoS New Technologies in Informatics and Telecommunications – Core courses

(for working people returning to college, evening classes, higher tuition)

- ΠΜΣ 510: Topics in Applications for Data Bases
- ΠΜΣ 511: Internet Applications
- ΠΜΣ 512: Multimedia and Hypermedia Systems
- ΠΜΣ 513: e-Commerce Technologies
- ΠΜΣ 514: Simulation
- ΠΜΣ 520: Information System Security
- ΠΜΣ 522: Computer Communication Networks
- ΠΜΣ 526: Mobile Communications
- ΠΜΣ 527: Optical Communication Networks
- ΠΜΣ 534: Voice Technologies
- ΠΜΣ 536: Data Compression
- ΠΜΣ 538: Business Management
- ΠΜΣ 539: Management Information Systems
- ΠΜΣ 540: Educational Software Design
- ΠΜΣ 541: Business Management Processing Technology
- ΠΜΣ 542: Distance Learning

Graduate Seminars



1- TCS (Theoretical Computer Science)
2- CSA (Computer Systems & Applications)
3- CSP (Communications & Signal Processing)

Student Performance Awards and Support

- First year performance award per AoS
  Criteria: GPA ≥ 8,5 / ECTS ≥ 55
  Award is accompanied by tuition waver for Y-2

- M.Sc. Graduation Award per AoS
  Criteria: GPA ≥ 8,5

- M.Sc. Students **funded by research projects** :
  2008-09: 224 PM → 18 M.Sc. students
  2009-10: 307 PM → 25 M.Sc. students

- Teaching assistantships 2 M.Sc or Ph.D. students

- Student advisors per AoS

- Secretarial Support (with web-based application support)

Currently about 310 students are in the program …. awaiting for THE moment