

DOCTORAL SCHOOL OF INFORMATICS  
COMPLEX EXAM SUBJECT

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**Programming technology (recommended subject)**

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Software developing models: Traditional and agile methods.

Software requirements. Processes of requirements analysis.

Architectural planning. Objekt-oriented modelling. Design patterns and software reusability.

Tools and technics of coding.

Methods and tools of validation and verification.

Maintenance of software. Software evolution.

Project-management, project schedule plan, project estimation techniques.

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**Bibliography:**

-Bertrand Mayer: Object Oriented Software Construction, Prentice Hall PTR, 1997; ISBN-963-545-311-6.

-Ian Sommerville: Software Engineering, (5. Kiadás) Addison-Wesley, 1998, ISBN-0201-42765-6

-Grady Booch, James Rumbaugh: The Unified Modeling Language User Guide, Addison-Wesley Longman, Inc., 1999.

-Connie U. Smith, Lloyd G. Williams: Performance Solutions-A practical Guide to Creating Responsive, Scalable Software, Addison Wesley, Person Education, Inc. 2002, ISBN-0-201-72229-1.

-Erich Gamma et. al.: Design Patters-Element of Reusable Object Oriented Software, Addison Wesley Longman, Inc.1995, ISBN-0-201-63351-2.