



Università degli Studi del Sannio

Dipartimento di Ingegneria



uiip.

University - industry
internship training program

University of Sannio
Engineering Department

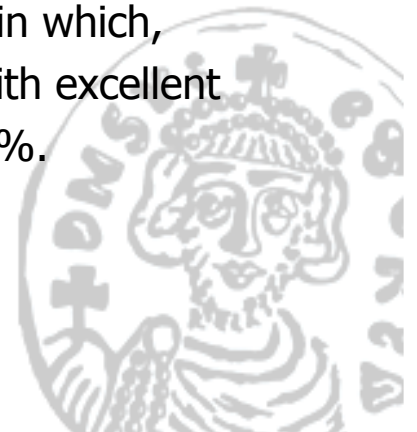
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UIIP UNIVERSITY-INDUSTRY INTERNSHIP TRAINING PROGRAM

- Uiip university-industry internship training program is a professional development program for manager technologists in the ICMT sector (Information, Communication & Media Technology).
- The UIIP program is conducted in partnership by DING (Engineering Department of the University of Sannio) and a pool of major companies in the ICMT sector.
- The Program UIIP represents the evolution of successful experience in the period 2000-2007 of the Faculty of Engineering of the University of Sannio in collaboration with RCOST (Research Centre on software Technology), in the conception, design and management of University Master courses in computer Engineering and Engineering management (MUTS-MUJAZZ-MUTEKS) within which, more than 300 young people were trained with excellent results and with an average placement of 98%.



UNIVERSITY OF SANNIO EXCEPTION IN THE SOUTH FOR THE ATTRACTION OF RESEARCH FUNDS

- The organizational model of the Master has been focused since the first edition on the reduction of public transfers in favor of increasing financing for private companies. This policy has greatly contributed to the brilliant results achieved by the University of Sannio with an excellent third place in the ranking of national universities that have been able to attract more funds for research.

(source: il Sole 24 ore)

Data:
lunedì 04.12.2006

Il Sole **24 ORE**

Atenei, la ricerca fa rotta a Nord

Trento vince per risultati e attrazione dei fondi privati - Sannio eccezione nel Sud

Graduatoria delle università per capacità di attirare fondi privati per la ricerca

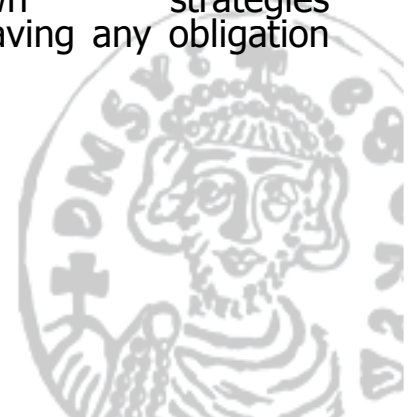
	Ateneo	€ per docente		Ateneo	€ per docente		Ateneo	€ per docente
1	Trento	76.724	20	Torino	23.513	39	Bologna	14.032
2	Siena	42.189	21	Padova	22.294	40	Bari	13.155
3	Sannio	40.709	22	Milano	21.689	41	Insubria	12.739
4	Torino Politecnico	40.621	23	Ferrara	21.578	42	Venezia Iuav	12.551
5	Milano Politecn.	37.095	24	Catania	20.540	43	Messina	10.075
6	Basilicata	36.175	25	L'Aquila	19.338	44	Mediterranea di Reggio Calabria	9.753
7	Politecnica delle Marche	35.536	26	Udine	18.983	45	Roma Tre	9.445
8	Verona	34.771	27	Salerno	18.975	46	Roma La Sapienza	9.272
9	Perugia	33.579	28	Parma	18.768	47	Bergamo	9.261
10	Roma Tor Vergata	31.919	29	Catanzaro	18.500	48	Chieti	7.902
11	Firenze	28.742	30	Pavia	18.388	49	Politecnico Bari	7.547
12	Sassari	27.862	31	Napoli	17.848	50	Lecce	7.479
13	Napoli II Univ.	26.565	32	Milano-Bicocca	16.040	51	Molise	7.394
14	Pisa	25.814	33	Piemonte Orient.	15.870	52	Napoli Parthenope	7.300
15	Camerino	25.736	34	Venezia	15.425	53	Palermo	7.238
16	Tuscia	24.369	35	Foggia	15.173	54	Macerata	5.139
17	Calabria	24.007	36	Cagliari	15.093	55	Cassino	4.487
18	Brescia	23.936	37	Trieste	14.491	56	Teramo	3.391
19	Modena-Reggio E.	23.875	38	Genova	14.219	57	Napoli Orientale	3.274

Nota: da questa classifica è stato escluso l'Istituto di Scienze motorie di Roma, che per la sua particolarità presenta dati non confrontabili

Fonte: elaborazioni su dati Miur

DING ACTIVITIES IN THE UIIP PROGRAM

- Selection of resources to be included in the Uiip Program
selection of candidates made by expert evaluators in the technical subjects, object of the study of the Uiip Program, selection on the candidates' disposition (psychological and educational evaluations) and on the motivational component.
- Training resources included in the Uiip Program
classroom training on technology and management issues, delivered by academics, researchers and external experts engaged in projects characterized by a high degree of complexity
- Inclusion of resources in Project Team engaged in research activities of interest to the company
solving real business issues through the development of project work carried out in a team project supported by university tutors and experts in the subjects of the training
- Tutoring of participants in the in-company training in order to:
 - focus the activities on matters considered strategic by the company
 - support the inclusion of resources of current projects
 - support the company in the verification of the compatibility of resources with its own strategies for entering the personal without having any obligation to recruitment



Two curricula Leaving the UIIP Program

- Software designer
- New products and ICMT services designer

Schedule of the program

- total duration of the program: 6 months
- two semi-annual sessions
September-February, March-August
- full immersion training in the laboratory and classroom with the training model *Project work Learning Based*

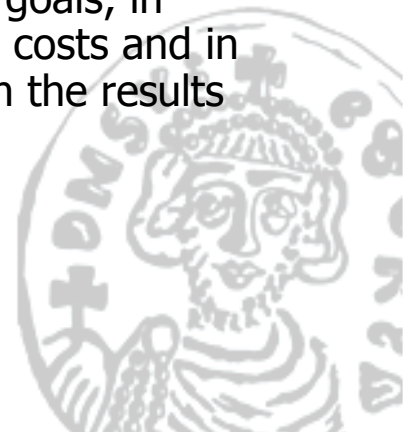


The Educational model

- The educational model used during the training period is a Project Work Learning Based that allows to transfer quickly and effectively information and contents.

The model bases its strength upon option between moments of classroom training and moments of cooperative work done in a community driven and guided by supervisor coming from academic and industrial world.

The model can be beneficial in reducing the time required to achieve the educational goals, in reduction of the educational project costs and in significant improvement of quality in the results achieved.



CURRICULUM

Software Designer

Skills:

- Professional capable of supporting ICMT businesses in the management of activities that require the combination of expertise in designing complex icmt systems and analysis of related business models. The specific skills fall in the area of design, development and management of systems and software services.
- Professionalism in the output are characterized by a high degree of technical knowledge (object-oriented languages, data base designing, software engineering, service-oriented computing, middleware).



Software Designer Course Program

MODULE A-

Depth of expertise (520 hours)

Object oriented languages
Database and web technologies
Software Engineering and business process modeling
Distributed Systems and Middleware
Engineering management

The module will be held primarily at the research laboratories of the Ding of Ariano Irpino (AV).

MODULE B-

Operational experience in supporting staff engaged in industrial research(440 hours)

Design and development of complex software systems (developing a business plan with the tutoring of academic staff and research)

The module will be held at the research laboratories of the Ding and/or at one of the premises of the business partners in the Uiip Program.



CURRICULUM

New Products and ICMT services designer

Skills:

- Professional capable of supporting ICMT businesses in the management of activities that require the combination of skills in understanding-modeling the business case, requirements analysis, identification of appropriate ICMT innovative solutions.
- The specific skills are covered in disciplines related to managing organizational knowledge and design, construction and maintenance of advanced software systems for companies permanently engaged in processes of complex product and service development. Professionalism in the output are characterized by a high degree of integration between economic and managerial knowledge (business organization, process analysis, strategic management, new products development) and technical Knowledge (software Engineering, business modeling, object-oriented languages, service oriented computing, middleware and PLM solutions).



New products and ICMT services designer Course program

MODULE A-

Depth of expertise (540 hours):

Business information systems ERP
Management and organization of the production
Object-Oriented Language
Data base and web technologies
Software engineering and business process modeling
Organization of innovation processes
Strategic management of technological innovation
Management of innovations and projects

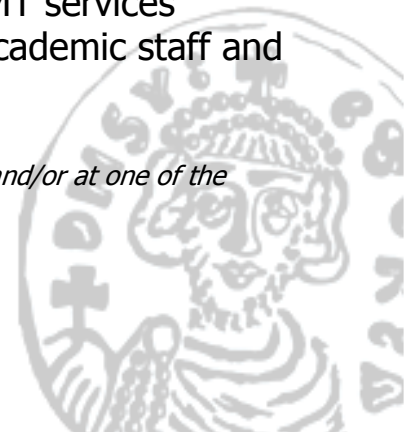
The module will be conducted primarily at the research laboratories of the Ding of Ariano Irpino (AV).

MODULE B-

Operational experience in supporting staff engaged in industrial research (420 hours):

Design and management of new products and ICMT services
(developing a business plan with the tutoring of academic staff and
research)

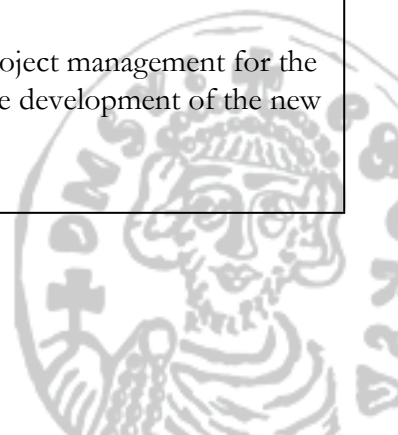
The module will be held at the research laboratories of the ding and/or at one of the premises of the business partners in the Uiiip Program.



Details of the training program for "SOFTWARE DESIGNER"

- Module A -

<p>Title: object oriented language</p> <p>Description: development of complex software systems in object oriented language java</p> <p>Course content: The paradigm of java and implementation of complex applications in the Java language.</p> <p>Training hours:120</p>
<p>Title: data base and web Technologies</p> <p>Description: Designing and development of Data Base</p> <p>Course Content: advanced programming in SQL, designing of Data Base through ER, techniques of normalization</p> <p>Training hours : 80</p>
<p>Title: software engineering and business process modeling</p> <p>Description: method and models for software development</p> <p>Course content: software life cycle, requirements analysis and definition of the specifics, analysis and designing of object-oriented systems, modeling language UML, main models of software architecture</p> <p>Training hours: 120</p>
<p>Title: distributed systems and middleware</p> <p>Description: designing and development of complex distributed application</p> <p>Courses content: object-oriented middleware: java RMI, Asynchronous RM, web services, Soap, Wsdl, Uddi, Bpel4ws, Owl-s, J2EE/EJB, Jms.</p> <p>Training hours: 120</p>
<p>Title: Management Engineering</p> <p>Description: management of innovation and projects</p> <p>Course content: strategic analysis, business organization and project management for the development of complex software application, marketing for the development of the new product, preparation of complete Business Plans</p> <p>Training hours: 80</p>



Details of the training program for "SOFTWARE DESIGNER"

- Module B -

Title: Design and development of complex Software Systems

Description: each participant will be included in a team work composed of more than three people. Each work team will be supported by academic and research staff, all teams will be engaged in work activities involving the design and development of the project work.

Activities content: study of the application domain, Analysis and Specification of requirements, Architectural design, Implementation and Testing

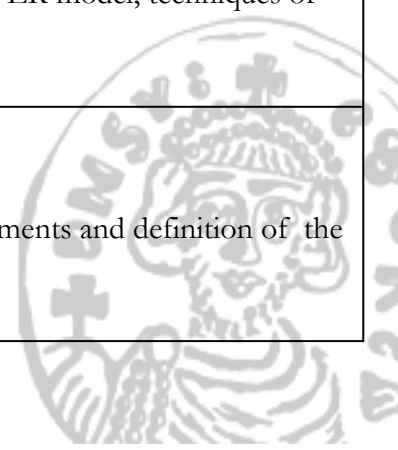
Training hours: 440



Details of the training program for "NEW PRODUCTS AND ICMT SERVICES DESIGNER"

- Module A -

<p>Title: Business Information Systems ERP</p> <p>Description: PLM applications and ERP Systems (PLM, Production Planning, Supply Chain Management, Controlling, Financial).</p> <p>Course content: Introduction to ERP systems, ERP systems in Business, methods for the implementation of ERP, focus ERP applications' areas (management of the production cycle, management of suppliers-supply chain management, financial management and controlling).</p> <p>Training hours: 120</p>
<p>Title: management and organization of the production</p> <p>Description: organization of the production, planning and realization of the products (manufacturing) use of information systems to support the management of productive processes.</p> <p>Course content: organization of the production, Study of the productive processes, engineering of the product, cycles of manufacturing, Supply Chain management, development of business network.</p> <p>Training hours: 120</p>
<p>Title: Object-Oriented Language</p> <p>Description: implementation of complex software systems in JAVA language</p> <p>Course content: The paradigm of object-oriented language and its implementation in Java</p> <p>Training hours: 60</p>
<p>Title: Data base and Web Technologies</p> <p>Description: design and realization of Data Base</p> <p>Course content: SQL language, data Base design through the ER model, techniques of normalization</p> <p>Training hours: 60</p>
<p>Title: Software engineering and business process modeling</p> <p>Description: methods and models for software development</p> <p>Course content: the life cycle of Software, analysis of requirements and definition of the specifics, modeling language UML, hints of software testing</p> <p>Training hours: 60</p>



Details of the training program for "New products and ICMT services designer" # 2

- Module A -

Title: Organization of the innovation processes

Description: Design of the organizational structure, analysis of the main indicators of the innovation processes management for the human resources

Course content: Structure of innovation, Choice of the innovation's projects, management of the international processes of innovation, management of team for the innovation

Training hours: 40

Title: Strategic management of the technological innovation

Description: formulation of competitive strategies, preparation of complete business plans, marketing plans for new products.

Course content: strategy and management of competence, strategic marketing, strategies of communication and promotion of new product, business plan: structure and contents

Training hours: 40

Title: Management of innovation and projects

Description: strategies of innovation, development of new products, techniques of project management to support the development of new products, techniques of project management to support the management of public funding for R&D

Course content: techniques for the development of a new product, marketing for the development of a new product, techniques and methods of project management.

Training hours: 40



Details of the training program for “NEW PRODUCTS AND ICMT SERVICES DESIGNER”

- Module B -

Title: Conception management of new products and ICTM services

Description: each participant will be included in a team work composed of more than three people. Each work team will be supported by academic and research staff, all teams will be engaged in work activities involving the design and development of the project work.

Course content: Conception, creation and development of innovations of products and services to support the company in maintaining and achieving the competitive position in ICMT markets.

Training hours: 440



Project Community Learning Work already active

Technological Area

- Techniques and middleware solutions for capturing non-functional properties of distributed systems
- Middleware for the development of pervasive software systems
- Development of framework components for integrated IT solutions
- Methods and tools for the integration of software systems
- The SOA (Service Oriented architecture) paradigm and Service oriented Computing
- Web services technologies
- Business process management technologies and advanced project management
- Approaches model-driven to developing applications in EAI environment(Enterprise application integration)
- Enterprise technologies in java: Java EE
- Methods and technologies for the development of web-based applications

Management Area

- Marketing plan for new product development
- Technical-functional analysis and Customizing of integrated ERP solutions with CRM applications, Supply Chain Management, product life cycle Management
- Design and development of new ICMT services based on mobile services oriented technologies
- Business plan and industrial plans for the creation of new businesses and new business unit
- Management of projects cycle for R&D with public funds(Analysis of requirements requested by notices, development of the innovation project, introduction of the project, project management for the delivery and reporting phases.



Partnership between University and Business

University can mean for the company **a pool of new ideas** to be drawn on to feed the innovation process and to take benefits arising from the **transfer of knowledge and skills** coming from the research and industrial world.

Innovative ideas and development that may arise in the University research laboratories can reach the partner company being transferred by the participants in the Uiip Program through joint projects (Project Work), coordinated and supervised by a business tutors and an academic tutors.

Through the Project Work, **business partners benefit from new ideas** in the form of new technologies to be implemented/acquired, new business models to implement or simply renovated and improved methods for carrying out ordinary activities.

Universities invest in research for new ideas and **new market opportunities**, for the company there is the opportunity to access a data base of information **for high-impact ideas** to create value by stimulating growth.



The headquarters of the courses - The city of Ariano Irpino

The classroom phase of the Program is at Ariano Irpino (AV)

Ariano Irpino is the first Norman county in southern Italy, and it has lived through a time of great splendor, as the main town of a vast territory.

Today it looks like a bustling commercial center in an area with good training facilities and research (secondary schools, Institute of genetic research-Biogem s.c.a.r.l., Research Centre of Seismology of the National Institute of Geophysics and Vulcano, European centre of Norman study).

Ariano houses the bishop's seat, court and the main government offices. You can find here the best hotels, sports facilities catering.



The headquarters of the courses - Palazzo Forte

The historical Palazzo Forte, residence of medieval origin, in the city center of Ariano Irpino, houses the headquarters of the courses of the Uip Program.

The structure has:.

- 2 classrooms
- 1 multimedia classroom
- 2 laboratories
- Space for individual study
- Library
- Area designated for the consumption of meals



Economic Benefits in favor of the students admitted to courses

The town of Ariano Irpino, partner Uiip Program, offers participants coming from other towns, subsidies to cover the cost of staying in the city, for the period of training in research laboratories of the University of Sannio in Ariano Irpino (AV).

In addition to economic benefits to cover costs, there are agreements with shops.

Favorable terms for access to the municipal sports facilities are also provided for all participants (sports hall, gyms, ecc.).

