

**DISSEMINATION OF IP KNOWLEDGE  
IN SPANISH UNIVERSITIES**

**A PLAN FOR SPANISH UNIVERSITIES (PSU-IP)**

**Mariano Riccheri  
Programme Manager  
Magister Lvcentinvs, U. Alicante**

## Executive Summary

### **Introduction: General Objectives of the Plan and *Statu-Quo* of IP Teaching in Universities.**

The present document proposes a “Plan for Spanish Universities for the Dissemination of Intellectual Property Knowledge” (PSU-IP), following the “Roving Workshop on Dissemination of IP knowledge in Spanish Universities (Madrid, 5-6 November 2008)” organized by the European Patent Academy and the Spanish Patent and Trademark Office. The paper should serve as a basic document for the Final Road Map for Spain, which will set the measures and actions to be undertaken as a follow-up, as a result of the work of the Spanish Working Group (SWG) attending the Conferences of the Hague (December 2-3, 2008).

The PSU-IP aims at achieving the objective of raising IP awareness within universities. A more concrete purpose of this plan is to create and expand the teaching infrastructure in different scientific fields. As the landscape of IP teaching is quite diverse in Spain a collateral objective of the plan is to initiate a process where IP teaching becomes systematic and capable of reaching all professions.

Overall, the Spanish *statu-quo* in IP teaching could be depicted following a few simple traits:

- A weak presence of Intellectual Property teaching at the graduate level, in particular in non-law faculties.
- A lack of diversity in scientific perspectives and approaches to Intellectual Property.
- A connected lack of professors and lecturers with interdisciplinary approaches.

One problem which has been identified is that there is a fault of incentives to introduce IP in the University *curricula*. Some of the main reasons for this absence is the lack of IP-awareness, as well as practical complications, such as the difficulty of introducing an IP branch into the already very concentrated graduate courses. Other obstacles, such as the lack of preparation of professors to teach IP, appear as well.

In addition, mention of the singular context of reform of higher education, marked by the Bologna Process, must be made: the adaptation of existing University programmes to the harmonized Bologna System appears to exacerbate the problem of curricular “concentration”. In Spain, the process –which is in process of implementation - implies a reallocation of credits, due to a general shortening of the graduate (formerly, *licenciatura*) period of study in the first cycle.

Bologna, however, also represents a set of opportunities which may favour the purpose of the PSU-IP: as government officials and university authorities are gathering to discuss and plan the future of universities on a regular basis, there is a multiplication of *fora* where actions deriving from the plan may be targeted. It is therefore necessary to introduce the debate on IP teaching into the general framework of discussion.

Finally, also in relation to the question of incentives, one must identify and take special account of those groups which already possess some form of motivation in line with the objective of the PSU-IP: the clearest cases are represented by university TTOs, since they are direct and immediate beneficiaries from actions aiming to increase IP-awareness in universities.

## Specific Objectives to be Achieved by the PSU-IP, Targets and Actions

The plan has **five main objectives**:

The first three are substantial:

- To expand and extend basic IP Knowledge across universities.
- To take IP to new areas of knowledge, in particular studies where IP education is less present an increment will be useful for society and likely to have a positive impact in terms of favouring entrepreneurial economic exploitation of RDI (engineering schools, business schools, science faculties).
- To promote interdisciplinary studies and boost interdisciplinary capacities and approaches towards teaching and studying IP.

The last two are related with the sustainability of the plan itself:

- To create continuous support for the plan, in particular by creating an infrastructure through networking (create new professor networks, integrate the objectives of the plan into existing networks –TTOs-) and institutional involvement (in particular the Spanish Patent Office and the Ministry of Education).
- Identifying and exploiting opportunities in the changing environment, in particular by acknowledging the reality imposed by the Bologna process, retrieving and disseminating information related to experiences in education in IP as an Innovation-supportive tool, and by exploring synergetic programmes and resources exiting at the European and National levels.

To achieve these objectives, different **forms of action** -sometimes in combination- are proposed. These include curricular design and course implementation; interdisciplinary training for professors; networking and synergy development; and PR and dissemination actions.

The **targets** of these actions include University Students; Teachers and Researchers; TTO staff and Decision Makers and Stakeholders (POs, Ministry of Education, Rectors, Faculty Deans, Professional Associations and Bars). Although all **university faculties** may be targeted by the plans activities, the priority will be to reach non-law studies, in particular in Engineering, Science and Economics / Business.

### Implementation of Activities

Most of the activities should be implemented within a time framework of 24 months. The more concrete actions set out are:

- The creation of a network/association of professors and researchers in areas related to IP, or where IP may prove useful to promote innovation. The main scope of the association should be to put IP studies at the service of innovation and the generation of economic revenues stemming from research and creative activity. The association would be also be censed to carry forward the PSU-IP, in particular the actions described below.
- The design and implementation of generic IP basic –transversal- courses (applicable to all careers, and of tailored (but still basic) courses, designed to attract and fulfil the needs of different faculties.
- The creation of advanced interdisciplinary courses for professors.
- The creation of information resources which may facilitate interdisciplinary and inter-institutional partnerships.
- The promotion of the objectives, progress of the plan among decision makers and other relevant circles.

- The draft of a Status-Map, analysing with further detail of the situation of IP teaching, allowing design of continuing measures.

# A PLAN FOR SPANISH UNIVERSITIES (PSU-IP)

## Table of Contents

1. Introduction .....	7
1.1. A Working Document.....	7
1.2. General Objectives .....	7
2. The Statu-Quo of IP Teaching and the University Environment.....	8
2.1. Statu-Quo of IP teaching in Spain. ....	8
2.2. <i>The Higher Education Environment: Obstacles, Opportunities and Incentives for Expanding IP Teaching</i> .....	9
3. Specific objectives to be achieved by the PSU-IP.....	11
3.1. Objective 1: Expanding and extending basic IP Knowledge across universities:.....	11
3.2. Objective 2: Taking IP to different areas of knowledge:.....	11
3.3. Objective 3: Promoting interdisciplinary studies and boosting interdisciplinary capacities and approaches:.....	11
3.4. Objective 4: Working on continuous support for the plan:.....	12
3.5. Objective 5: Identifying and exploiting opportunities in the changing environment. ....	12
4. Targets.....	12
5. Proposed Forms of Action.....	12
5.1. Curricular Design.....	13
5.2. IP Course Implementation .....	13
5.3. Interdisciplinary Training for Professors.....	13
5.4. Networking and Synergy Development.....	13
5.5. PR Actions.....	14
6. Implementation of Activities According to the Different Objectives .....	14
6.1. Objectives 1 and 2 ( Expanding and extending basic IP knowledge across universities - Taking IP to different areas of knowledge). ....	15
6.1.1. Curricular Design:.....	15
6.1.2. Networking (dissemination of the IP courses through networks with high reach, among and inside, universities).....	16
6.1.3. Implementation of Courses: .....	17
6.1.4. PR Actions: .....	17
6.1.5. Expected Results: .....	17
6.2. Objective 3: Promoting interdisciplinary studies and boosting interdisciplinary capacities and approaches in IP teaching. ....	18
6.2.1 Curricular Design of Advanced Interdisciplinary Courses:.....	18
6.2.2. Advanced Interdisciplinary Course Implementation:.....	20
6.2.3. Networking/Synergy development measures: .....	20
6.2.4. PR action:.....	20
6.2.5. Expected Results: .....	21
6.3. Objective 4: Working on continuing support for the plan.....	21
6.3.1. Networking: .....	21
6.3.2. Expected Results: .....	22
6.4. Objective 5: Identifying and exploiting opportunities in the changing environment (Informing, reporting and publicizing among authorities and the public) .....	22
6.4.1. PR and Information retrieval and organization actions: .....	22
6.4.2. Expected Results: .....	23
7. Timeframe for the Plan .....	23

8. Financial means and cost estimates .....	23
Annex 1: Time Frame for the SPU-IP .....	25
Annex 2: Examples of tailored courses for Engineers and Scientists. ....	27
<i>Annex 3: Spanish Working Group (Country Representatives)</i> .....	35

## 1. Introduction

### 1.1. A Working Document

This is a working document which contains the elements for a Plan for Spanish Universities for the for the Dissemination of IP Knowledge (PSU-IP). A first draft of this document was presented at “**Roving Workshop on Dissemination of IP knowledge in Spanish Universities (Madrid, 5-6 November 2008)**” organized by the European Patent Academy and the Spanish Patent and Trademark Office. The scope of this document is to facilitate the design of a common road map for disseminating IP in high level education centres, which is to be drawn by leading actors as a result of the aforementioned meeting in Madrid. Discussions and issues presented at the workshop, as well as necessary adjustments to the previous version, have been integrated in the present paper and shall be further discussed by a Spanish Working Group (SWG) in the Hague (See Annex 3), on December 2-3, at the “Follow-up Conference on Roving Workshops”. The paper should serve as a basic document for the Final Road Map for Spain, which will set the measures and actions to be undertaken from there.

### 1.2. General Objectives

The PSU-IP aims at achieving the objective of raising IP awareness within universities. A more concrete purpose of this plan is to create and expand the teaching infrastructure in different scientific fields.

By definition, knowledge on Intellectual Property is indispensable to every form of activity involving and intellectual effort: hence, there is probably a potential gain in the extension of IP education to every academic field. However, special attention should be given to areas of education where IP knowledge is less present and –notwithstanding- more likely to have a positive impact on economic development and innovation capacities if properly boosted. Such areas include, *a priori*, those schools where actors working directly related to innovation processes are usually educated: engineering schools, scientific faculties, as well as schools and faculties where managers and *entrepreneurs* are receive instruction (economy faculties and business schools).

Furthermore, even in fields where IP teaching has traditionally received more attention such as law faculties, there is a great degree of diversity among universities in terms of the development of IP curricula. Here the CPSU should provide means for the introduction of IP in the curricula of all schools across the country.

The landscape of IP teaching is diverse in Spain, as occurs in other countries. For this reason, a collateral objective of the plan is to initiate a process where IP teaching becomes systematic and capable of reaching all professions.

## 2. The Statu-Quo of IP Teaching and the University Environment.

### 2.1. Statu-Quo of IP teaching in Spain.

The situation of IP teaching in Spain may be described according to the following general characteristics:

- A weak presence of Intellectual Property teaching at the graduate level, characterized by:
  - A general lack of IP teaching in schools and faculties where future professionals involved in technological innovation processes receive education (engineering schools, science faculties, etc.).
  - Absence of IP teaching in schools where future managers and entrepreneurs receive education (for instance entrepreneurial-management careers within faculties of economy, business schools offering degrees, etc.)
  - A timid inclusion –limited to a few hours- of IP in core studies, mainly Commercial Law and Civil Law courses, as well a discontinued and non-systematic presence of more developed Intellectual Property courses in law faculties.

In all, IP teaching at the graduate level is often dependant on personal initiatives and interest of University Professors. Mostly, courses are optional for students. Durations, in some of the examples found, may vary between six to sixty hours. Methodologies are also variable: some courses are imparted by a professor with IP knowledge (for example, a chemist with experience working in University TTO), or by professors with the support of institutions such as the patent office.

In addition, one must add that examples of such courses<sup>1</sup> are more often found in Universities where IP related centres or activities have already attained some importance: therefore, these initiatives seem to benefit from pre-existing awareness and the existence of knowledgeable personnel capable of carrying an IP project/course forward.

- A growing offer of postgraduate courses, which is however characterized by a lack of diversity in scientific perspectives and approaches to Intellectual Property. Such courses include Master

---

<sup>1</sup> In studies carried out in law schools, such examples are abundant, since IP –in particular Trademark Law, Unfair Competition Law and Copyright Law- are already part of the curricula. Normally, they are contained in courses on Corporate Law and Commercial Law. Out of the legal area of studies, in Science, Engineering and Economic related studies it is more difficult to identify IP courses. However, some examples which may constitute “best practices” in Spain are the 40 hour “Patent and Technological Information” online course organized by the Universidad Politécnica de Madrid with collaboration of the Spanish Patent and Trademark Office (see report of the Madrid Roving Workshop), the courses for Chemical Engineering candidates (Tele-documentation and Patents, 45 hours) and Chemistry students (Patents and Scientific Documentation, 60 hours) organized by the University of Alicante and the “Roving” Seminar Organized by the Centre de Patents of the University of Barcelona and the Spanish Patent and Trade Mark Office “Everything an Engineer or a Scientist must Know About Patents” (5 hours). All such courses are optional for students to take.



Programmes organized by Universities and the more recent “official” Master Programmes, following the undergoing restructuring of university curricula in line with the Bologna process<sup>2</sup>. In general, the overview of such programmes shows:

- A well-endowed array of programmes focusing on Intellectual Property from the legal perspective, with recent proliferation of Masters and other postgraduate courses. A few programmes focus on a wider study of IP Law, including laws on Patents, Trademarks, Geographical Indications, Designs, and Copyright while others focus on specific aspects of IP law<sup>3</sup>.
- An absence of programmes embracing the study of IP with truly interdisciplinary approaches, i.e., including not only the aspects of legal protection of creativity and innovation, but also considering equally crucial aspects such as, for example, the integration of IP in company innovation management (the integration of IP protection in different phases of product development, the utility of patent information, etc.); the importance of IP as an income generator through transactions (not only through direct sales of protected products, but by means of licensing IP) or as an asset which may be exploited to access financial markets (IP as collateral for bank loans, IP and securitization, IP and venture capitals, etc), as well as the indispensable study of IP valuation; the strategic role of IP in competitive innovation environments, (for example, examining issues such as patent thickets, cross-licensing and patent pools); public policy approaches (which would involve studies approaching IP from political economy, international relations, IP management in public institutions and law etc.

In line with the general situation described, IP professors devoted to research and teaching of IPRs, other than from the legal perspective, appear to be scarce. In Spain there is a tradition of highly qualified academics in the legal field, including professors and lawyers with great dedication to academia. However, the number of professors and researchers with a background in fields such as engineering, science and economics or business management academic is comparatively underdeveloped and (much) less apparent. The result is that there it is difficult to identify who should be teaching IP in non-law faculties, which in itself constitutes a barrier to the introduction of this subject in the non-law curriculum.

## 2.2. The Higher Education Environment: Obstacles, Opportunities and Incentives for Expanding IP Teaching.

An important issue which arises, when examining the origin of the current situation of IP teaching in Spain, is the problem of the lack of incentives for introducing IP-specific courses into the programmes of different faculties. A part of this issue is certainly linked to the central problem already identified by institutions such as the European Patent Academy and the Spanish Patent and Trademark Office namely, the lack of IP-awareness among university professors.

More specifically, there are other existing problems mining the incentive to introduce and intensify IP teaching in University curricula, notably the concentration of curricula in different careers, where “core” subjects hold precedence over non-core subject<sup>4</sup>

---

<sup>2</sup> Joint declaration of the European Ministers of Education. Bologna, 19 June 1999.

<sup>3</sup> Examples of such courses are the Magister Lvcentivns of the University of Alicante, the Post-graduate course organized by IDIUS of University of Santiago de Compostela, or the Master of Intellectual Property of ESADE/Ramón Llull.

<sup>4</sup> This situation is reported by different academics as an existing obstacle in other countries as well as explained by

A connected matter of importance, at the time of the preparation of this plan, is the general framework and context of reform of university programmes as a consequence of the process initiated with the declaration of Bologna for "European Area for a Higher Education" (EAHE). Like all universities across Europe, Spanish centres are currently immersed in a deep process of transforming the structure of their curricula and systems of credits to meet the pledge towards convergence of Bologna. In the particular case of Spain, the process of reform has already started for the postgraduate "Master's" level in 2006, and is currently undergoing at the graduate "Bachelor" level.

Visibly, the reform will expand Universities' autonomy to define their programmes and the name of their degrees. Despite existing nationwide initiatives by faculty deans and university vice rectors to provide guidance, for each career, for the design of curricula, a great deal of discretion is left to each University to define, in each case, which is the plan for each career. Furthermore, universities may apply different models for deciding on important issues –for example, on deciding which are to be the core subjects of each career or by creating a number of "transversal" subjects - showing different degrees of intervention from the university government.

In this context, universities are confronted with practical matters such as that of defining the curricula of first cycle studies (*grado*), the decision of creating new second cycle studies (*master*) and the reallocation of credits and hours of lecture within this new structure. What is relevant and worth examining is that such matters may have an influence on the incentives to include new courses in the curricula, particularly at the graduate level, including -of course- negative incentives, for instance if there are problems to allocate enough credits among pre-existing "core" courses.

The VIII Roving Workshop in Madrid helped to clarify that, despite that both Government and Universities have gained consciousness over the importance of IP education for students across many disciplines, due to the aforementioned constraints –which appear exacerbated in the precise moment where University Departments and Professors are struggling to *squeeze* in the credits to be allocated to different disciplines at a graduate level- an effective PSU must be conceived as a dynamic programme, capable of modulating objectives.

While several professors, under the described situation, are of the view that the scarcity of available study credits will push many IP courses to the second cycle level, it appears to be equally important to expose all students of relevant fields to at least some basic IP knowledge. In this sense, it seems that reserving IP for the Master and Doctoral phase of studies would skip the objective of disseminating useful and necessary knowledge to a wider public.

The existence of the Bologna process makes a top-to-bottom strategy (for instance, centrally deciding the creation of a compulsory IP course) unfeasible at the present moment. Therefore, it is important to develop different strategies which will allow spreading IP teaching experiences, through controlled experiences (pilot projects), which results must be contrasted, reported (publicized!) and used for further action. In realistic terms, at present, moving from null to the introduction of some hours of lecture in the curricula of some relevant Universities should be considered a great success.

---

representatives of foreign institutions from Italy, Denmark and Germany at the VIII EPA – SPTO Roving Seminar of Madrid (see "Disseminating IP Knowledge in Universities in Spain, Report. European Patent Academy and Spanish Patent Office, December 2008). Reports on this situation in the United States and the United Kingdom have been referred to in pre-existing published work as well (see, for example, Hennesey, W.O. "Intellectual Property Program of the Franklin Pierce Law Centre – Past Developments, Current Situation, and Future Tasks, with Particular Emphasis on it's Educational Methodology to Develop Human Resources Meeting Social Needs" ICS Seminar, 2004. or Soetendorp, R. "Intellectual Property Education – In the Law School and Beyond" Centre for Intellectual Property Policy and Management, Bournemouth Law School, Bournemouth University, 2007).

This does not mean, however, that the Bologna process should be taken as a negative factor for the purposes of the PSU-IP. Overall, what remains important is that the changing environment initiated by the Bologna declaration opens the door to opportunities for actions leading to the introduction of more IP in the higher education curricula. It is, after all, a time where the general context is that of redefinition of university programmes, accompanied by the creation of *fora* where a wide discussion on the quality and content of education is taking place. Taking all of this into account, the PSU-IP must incorporate, in the design of its strategy, the identification of groups active on the work of university plans and those with greater incentives towards the expansion of IP and the IP teaching infrastructure.

When speaking of incentives, another important issue to be taken into account is the situation of Technology Transfer Offices in Spain. The position and function of TTOs within Universities should place them as a target already in possession of incentives to facilitate the objective of expanding IP education: first, they are direct beneficiaries of the augmentation of IP education both because they may cover *lacunae* in the capacities of their staffs and because general awareness of researchers will facilitate their role of transferring research results to the entrepreneurial world. In second place, as an already IP-aware group of professionals working within Universities, they constitute an ideal focal point for penetration and dissemination of initiatives taken at higher and wider political levels. In this last sense, they may play a key role in the implementation of measures tending to expand IP awareness.

### 3. Specific objectives to be achieved by the PSU-IP

#### 3.1. Objective 1: Expanding and extending basic IP Knowledge across universities:

This objective is achieved by introducing and increasing general IP knowledge at the graduate level throughout Spain, across all disciplines (law faculties, engineering and science faculties and business-management and economy schools/faculties).

#### 3.2. Objective 2: Taking IP to different areas of knowledge:

The objective is to introduce new approaches for the study and teaching of IP by tailoring curricula designed to meet the needs and interests of students, faculty professors and labour markets in each area of education. The centre of this objective is facilitate and to implement career-specific IP courses, with priority given to those schools where beneficial direct impacts on technological innovation and economic competitiveness (engineering, business management, economic studies, etc.) are likely to be obtained. In the legal area, an objective could be to further develop legal capacities in processes related to IP ventures, particularly those deriving from technological innovation (possible issues may cover patent law, licensing and IP contracts, introduction to technology transfer agreements etc.).

#### 3.3. Objective 3: Promoting interdisciplinary studies and boosting interdisciplinary capacities and approaches:

The objective is to contribute to the strengthening of interdisciplinary approaches to Intellectual Property. The strategy is to work on the higher end of university education, seeking to give advanced training to teachers and researchers which allows them to increment competence in IP and in the ways it relates to innovation, entrepreneurship and management, as well as promoting – at a specialized level- partnerships between schools offering IP education research and teaching with centres specialized in innovation and management, in order to promote advanced creative and interdisciplinary approaches to IP research and teaching.

Ultimately, the accomplishment of this objective should arrive to all levels of education (graduate and post-graduate).

### 3.4. Objective 4: Working on continuous support for the plan:

The central objective is to develop a network of teachers which will enable quick implementation and sustainability of the plan. In addition, the objective is to identify groups and sub-groups with incentives to support IP dissemination. These may be found inside or outside universities—for instance in representative professional bodies which provide accreditation for graduates. Inside universities, special consideration should be given to the particular position of TTOs, which *a priori* possess strong incentives due to the potential beneficial effects to their core activity.

### 3.5. Objective 5: Identifying and exploiting opportunities in the changing environment.

- The objective consists in identifying and exploiting opportunities in the changing environment, in particular by acknowledging the reality imposed by the Bologna process, retrieving and disseminating information related to experiences in education in IP as an Innovation-supportive tool, and by exploring synergetic programmes and resources which exist at the European and National levels.

## 4. Targets

Targets may be divided following two criteria: a) the nature of their relation to the University and b) the scientific field to which activities aim.

- a) Four university-related target groups are identified, namely:
  - i. University Students;
  - ii.: University Teachers and Researchers (PhD researchers, post-docs and other researchers);
  - iii: TTO staff.
  - iv: Decision Makers and Stakeholders (POs, Ministry of Education, Rectors, Faculty Deans, Professional Associations and Bars)
  
- b) Four groups of disciplines or faculties were identified in this respect, namely:
  - i. Engineering
  - ii. Science
  - iii. Economics / Business;
  - iv Law;

## 5. Proposed Forms of Action

To reach the objectives mentioned in section 3), five forms of action are proposed.

- Curricular design (5.1)
- IP-Course implementation (5.2)
- Training for professors (5.3)
- Networking and synergy development (5.4)
- PR actions to develop IP awareness (5.5) \*\*\*

### 5.1. Curricular Design

The first form of action involves curricular design of IP courses of different levels, from more basic, generic, IP modules to the more specialized interdisciplinary courses. The general idea is that no “one size fits all<sup>5</sup>”. Although, at a basic level, courses may be of similar structure, without differentiation among disciplines, courses will need to be tailored according to more specific needs and interests, as they become more specialized. For example, courses targeting engineers and scientists may dedicate more time to the use of patents as a source of technological information, business managers may dedicate more minutes to licensing or valuation of patents and trademarks. Working groups in science, business, engineering and law should work on the development of specialized curricula, including mixed groups for the development of interdisciplinary courses (training for professors).

### 5.2. IP Course Implementation

IP course implementation may be carried out under various forms. Given the present situation of IP teaching in Spain, where it is sometimes not even taught in many schools, the challenge will frequently consist in succeeding in carrying some hours of lecture to students (as mentioned by one prominent scholar, “moving from zero to one”). In other cases, however, the issue is to develop on existing experiences and knowledge, particularly those that aim at “new” target audiences, multiplying these initiatives and adding value to them.

### 5.3. Interdisciplinary Training for Professors

In order to enhance the interdisciplinary capacities of IP professors and lecturers, it is necessary to provide the necessary understanding and knowledge to professors (even those who have accumulated experience in IP teaching) on the interdisciplinary nature of IP. The organization of interdisciplinary, advanced –and possibly intensive- training for University lecturers and researchers is likely to make a difference in this sense.

### 5.4. Networking and Synergy Development

Networking and synergy development are also crucial to the success of the plan. Networking activities will contribute to all objectives set out (1,2,3 and 5) by spreading action, promoting discussion and obtaining feedback from actors. Network development is also important to help create groups which share common objectives, ensuring endurance and sustainability to the actions carried out. This action should build on pre-existing relevant networks and association experiences (EIPTN teachers network, Red OTRI, professional associations and networks) and develop new connections (for example, an interdisciplinary “Spanish IP Teacher’s Network” SIPTN).

---

<sup>5</sup> Soetendorp, R. 2007

Synergies can be found in such networks, but may also be promoted other ways: for instance, by providing information which allows for different but complementary initiatives to join. An example could be the *elaboration* of a repertoire containing IP courses which are carried out in Spanish, or the creation of a publicly accessible database of IP lecturers and researchers and their lines of research and teaching (which may be restricted to members of the SIPTN, for example, in order to strengthen the incentives of joining the network).

Networking and synergy seeking could take special account of the network of University TTOs (*Red OTR*) and achieve major involvement of Technology Transfer Offices in the process of disseminating IP knowledge in Universities. In addition, it is necessary to explore the potential synergies with European initiatives. For example, we have programmes such as *Erasmus Mundus* (which supports initiatives to create international postgraduate courses, with participation from several institutions) or the measures attaining higher education of the European Institute of Innovation and Technology<sup>6</sup>, as well as national initiatives (for example, the University 2015 Strategy launched by the Spanish Ministry of Education and Sciences -*Estrategia Universidad 2015*- in particular in what relates to the Plan for Knowledge Transfer (*Plan Director de Transferencia del Conocimiento*<sup>7</sup>), where a priority is set to bring expertise to the process of identifying valuable knowledge in Universities, together with according proficiency in IP, in order to maximise IP portfolios of Universities.

### 5.5. PR Actions

PR actions must aim at promoting the message on the importance of Intellectual Property Learning among decision makers and public opinion. Actions may include a few presentations of the Plan in conferences and meetings, particularly in those involving authorities from the Ministry of Education and Sciences and/or Universities. It may be recommendable, from a strategic point of view, to align PR actions with meetings related with the process of creation of the EAHE, for instance in the occasion of the revision of the implementation of the first Bologna related measures. Also, PR measures may be inserted in the calendar of the "University 2015 Strategy".

As a necessary complement to PR actions, a website –preferably hosted by the Spanish Patent and Trade Mark Office- should be set-up, in order to inform stakeholders on the nature of the plan and its activities and to amplify the impact of PR actions.

## 6. Implementation of Activities According to the Different Objectives

---

<sup>6</sup> Article 3 of Regulation (EC) No 294/2008 of the European Parliament and of the Council of 11 March 2008 establishing the European Institute of Innovation and Technology (The EIT) sets out that the main objective of the Institute is "...to contribute to sustainable European economic growth and competitiveness by reinforcing the innovation capacity of the Member States and the Community. It shall do this by promoting and integrating higher education, research and innovation of the highest standards". The EIT will promote autonomous partnership of higher education institutions, research organisations, companies and other stakeholders in the innovation process in the form of a strategic network. Regarding higher education, it will be supported as an integral component of a comprehensive innovation strategy, by integrating it in innovation partnerships. Among other supporting actions, EIT will encourage new programmes new education programmes integrating entrepreneurship, innovation and risk management as core modules.

<sup>7</sup> MDCEI, *Estrategia Universidad 2015, "Plan Director para la Valorización y la Transferencia de Conocimiento y Tecnología"*. Available in <http://universidades2015.fecyt.es/documentos/Plan%20Director.pdf>

## 6.1.Objectives 1 and 2 ( Expanding and extending basic IP knowledge across universities - Taking IP to different areas of knowledge).

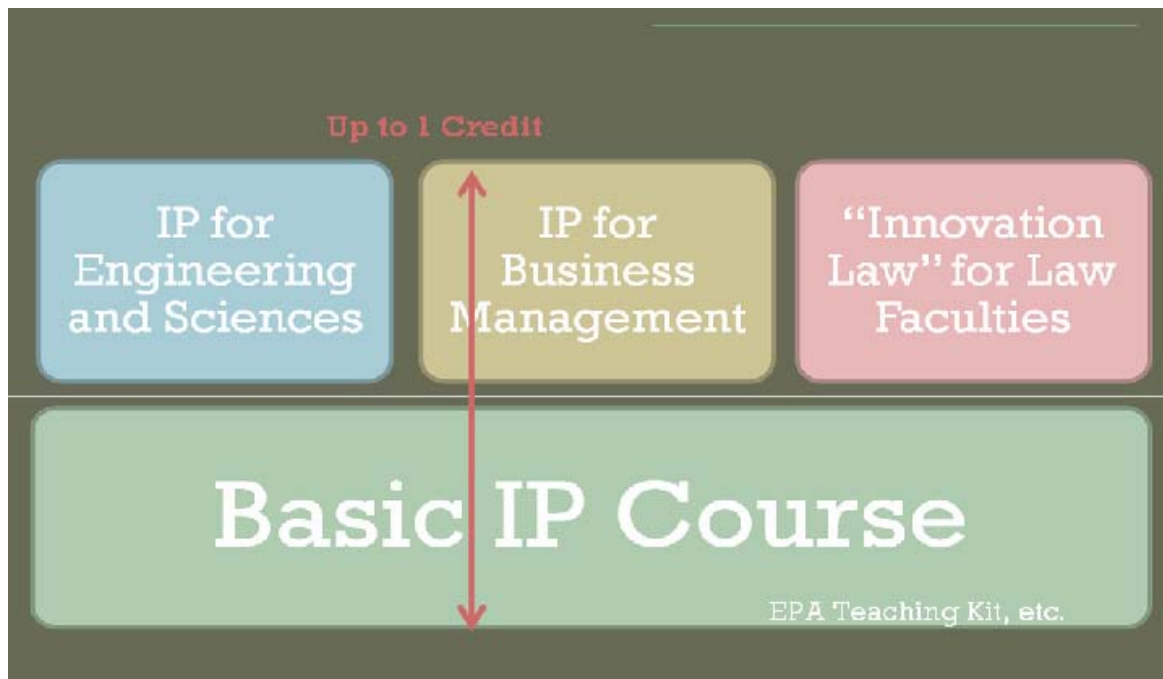
The objectives should be accomplished after executing the following activities:

### 6.1.1. Curricular Design:

A first step in achieving objectives 1 and 2 consists in designing appropriate courses. A first course, which would include IP knowledge at its most basic level, would be a basic/general programme, applicable in most faculties and schools. To achieve the second objective, continuation of the basic course must be designed, with "tailor made" approaches for the different faculties. The specific "cut" for these courses would depend on the specific interests of students following different studies, and should take particular care of the terminology used, as well as to the choice of appealing subjects, based on the utility for students future careers.

- **Description of the activity:**
- **BASIC IP COURSE:** Design of basic curricula (or identification of existing curricula which may apply to Spain: the EPO Patent Teaching Kit, the WIPO Academy's DL-001 course in Spanish or the SPTO-CEDDET Patent and Trademark courses for Latin-America are references which may constitute a starting point in terms of the type of curriculum and materials needed). Suggested extension would be 6/10 working hours (6 corresponding to lectures).
- **CUSTOMIZED/TAILORED COURSES:** Design of three career-specific IP course syllabuses is suggested.
  - o The Engineering and Sciences IP course.
  - o The Business and Management IP course
  - o The Innovation Law IP course

Each course should be designed to meet the needs and interests of graduate students, professors and researchers in different fields. (An example of an existing course sponsored by the Centre de Patents of the University of Barcelona and the Spanish Patent Office is annexed). The course syllabus must highlight practical aspects, putting an accent on the utility of IP for future professions. The suggested work-load for students could be of a maximum of 20 hours (around 10 corresponding to lectures). In it's most developed form, each module, together with the general IP-Basic Course, could earn one ECTS credit to the student.



- **Executing agents:** The design of the courses could be carried out by any person with expertise in the elaboration of academic IP courses. Supervision of the curricula may be carried out by a “Working Group on IP Teaching Standards”, created as a part of this plan. The use of existing tools is recommended: the SPTO will undertake adaptations of existing tools –such as the Patent teaching Kit- .
- **Deadline:** January/February 2009
- **Result/Deliverable:** a) Basic IP Curricula for Spanish Universities. b) The curricula of three Engineering and Sciences IP course, a Business and Management IP course, an Innovation Law IP course.

#### 6.1.2. Networking (dissemination of the IP courses through networks with high reach, among and inside, universities).

- The courses will be disseminated mainly through a newly created teachers/stakeholders network or association (see 6.3. “Supporting Activities”) and by the SPTO. Some members of the network/association could be lecturers of the courses (6.1.3.) with collaborative support of some of the staff of the Patent office. A minimum number of lecturers should be able to commit to undertake some responsibilities in this sense as soon as possible, preferably during the first quarter of 2009.

To contribute to its launch, the basic IP course may also be presented to existing networks which could also contribute to its implementation in an effective manner. As an example, a full presentation of the course to the University TTO network (redOTRI) is suggested, considering the convergent interests of TTOs with the purpose of the plan towards IP dissemination in Spanish Universities. .

- **Targets:** University IP Professors, Professor Networks and Associations , TTO networks.
- **Executing agent:** a representative of the SIPTN, eventually with support of the SPTO and the EPA.
- **Deadline:** Creation of Teachers Network/Association: preparatory works: January 2009.



Launch: February 2009 (see 6.3). Presentations by June/July 2009 (*note: this is before the insertion into 2009/2010 programmes and to allow for the presentation of the courses to networks, and to publicize the activity*).

#### 6.1.3. Implementation of Courses:

- IP Basic and "tailored", career-specific courses should be implemented in as many Universities as possible during the next academic year (2009-2010), aiming at a minimum starting objective to be increased at a continuing stage.
- Basic IP Courses: An initial objective would be to implement the basic course, under a pilot-project phase, in at least eight major universities. Preferably, this would take place during the winter semester, so as to introduce students to the more advanced (tailored) courses, which could be carried out during the summer semester.
- Each Career-Specific IP Course should be implemented in at least one University during the next academic year (2009-2010), in a pilot-project phase. Preferably, the courses will be carried out during the spring/summer semester. Completion of the IP-basic course, or of other relevant, existing, IP courses, should be required to follow the tailored courses.
- **Targets**: University students and the academic community in general (Professors/Researchers, TTO staff). Engineering, Science faculties, Business Schools are privileged targets
- **Executing agents**: members of the IP teaching network or association, with collaboration of TTOs and SPTO.
- **Deadline for implementation**: courses should take place during the spring/summer semester, not later than June 2010.

#### 6.1.4. PR Actions:

- Launch of the IP programmes should be accompanied by appropriate press releases. Presentations to Rectors and Deans -during national conferences- should be made. These occasions should serve to introduce and discuss the need of introducing a transversal/compulsory IP-Basic subjects in graduate curricula.

A report on the results of action 6.1.3. should be distributed to representatives of the Ministry of Education, Autonomous Communities, Rectors and Deans, after execution has been completed.

- **Target**: Decision makers (national, autonomous communities, universities, faculties).

#### 6.1.5. Expected Results:

Short/term results: multiplying IP presence in the offer of courses of all universities. Medium term results: introducing transversal, compulsory basic-IP courses.

Introducing IP to students in engineering, sciences, and business schools by offering approaches which generate interest and prove to be useful to their careers. In law schools, the result will be to introduce specific knowledge to graduates on patents, trade secrets, technology transfer agreements and technology licensing arrangements.

6.2. Objective 3: Promoting interdisciplinary studies and boosting interdisciplinary capacities and approaches in IP teaching.

The objective is to contribute to the strengthening of interdisciplinary approaches to Intellectual Property as well as contributing to augment professionalism, efficiency and reliability in the management of intellectual property in universities, following some of the designated forms of action. During the first year the plan includes the organization of one such course, targeted at the university community, preferably teaching staff and IP managers, under the spirit of “training for trainers” courses.

The objective should be accomplished after executing the following activities:

6.2.1 Curricular Design of Advanced Interdisciplinary Courses:

- Design of advanced interdisciplinary “model” training course, with an initial pilot project on “Intellectual Property and Innovation Management” following these suggested lines:
  - o Format and duration: Intensive training to be carried out in a maximum of 20 to 40 hours (at least half of the hours in the classroom + study/case solving, etc.).
  - o Methodologies: Proactive participation should be required; case method and problem solving should be enhanced.
  - o Content: the content will be defined by the Working Group on Teaching Standards. However, some suggested topics are included in box 1.

Other interdisciplinary courses may be modelled, as well.

- **Executing agents:** The Working Group on IP Teaching Standard. Support from the EPA and the SPTO appears crucial.
- **Results/Deliverables:** The curricula of one “Intellectual Property and Innovation Management” course (A). The curricula of an additional interdisciplinary course (B) –optional-.
- **Deadlines:** (A) March 2009, (B) November 2009 (*to allow implementation of the first course in July 2009 or in a period of recession of classes*).

## Box N° 1: Example: Some Suggested Topics and Activities for an Interdisciplinary “Intellectual Property and Innovation Management” Model Course

### **Introduction to the Fundamentals of IP Law**

- Categories: Patents, Trademarks, Designs and Copyright
- Obtaining exclusivity on creativity and innovation and defending ones assets (IP prosecution, IP enforcement, defending IP rights globally).

### **Intellectual Property and Global Business Opportunities**

- National, Regional and International Filing Systems
- Assessing a foreign filing strategy
- Enforcing IP rights in other countries
- **Practicum**

### **Integrated IP Management**

- Principles behind the business use of IP
- Metrics to evaluate intellectual property management processes
- Creating value from IP
- IP and the selection of technology portfolios
- Strategic project management: using patents, trade secrets, trademarks, copyrights, and know-how, against key competitors
- **Practicum: Business development scenarios illustrating an integrated IP approach**

### **Building and Defending High-Value Intellectual Property Portfolios**

- Criteria of a high value portfolio
- Segmenting a portfolio to show how investments have benefited the company
- Methods for selecting patents, trademarks, designs etc. and the best development options
- IP valuation models
- Identifying opportunities to leverage.
- **Practicum: Case Studies**

### **Using IP to generate revenues**

- Traditional and modern approaches towards the exploitation of IP: moving towards the maximisation of IP portfolios.
- IP Transactions: Licensing and Contracts:
  - IP Licensing as a value generator: Examples from real life
  - Legal Aspects in Licensing, Development Agreements, Technology Transfer Agreements
- IP and Financial Opportunities
  - IP as a collateral for Bank Loans
  - IP backed securitization
  - Venture-Capital Financing

### **IP in Strategic Technology Investment Decisions**

- 1) Using IP to support open innovation
- 2) Using IP elements when externally sourcing technology
- 3) The IP portfolio; trading off revenue opportunities and cost avoidance

### **Learning to use Technological (Patent) Information to distinguish opportunities for innovation.**

- 4) Anticipating technical shifts
- 5) Identifying potential sources of new or complementary technology
- 6) Assessing competitors’ capabilities and intentions
- 7) Strategic aspects in mergers and acquisitions
- 8) **Practicum: Using TI databases. Performing patent searches.**

### **Strategic uses of licensing:**

- Gaining access to complementary technologies (cross licensing, patent pools).
- Gaining access to complementary assets (access to distribution channels, consumer markets)  
Examples: TBlade (patent licensing to access distribution channels) Intel Inside-( gaining to access consumer markets through trademark licensing).

**Final Practicum:** Creating an action plan on learned subjects

#### 6.2.2. Advanced Interdisciplinary Course Implementation:

- One national, one week, interdisciplinary seminar to be held in Madrid (A), in the SPTO. The seminar could be made to coincide with an annual SIPTN meeting (to be defined).
- **Targets:** Professors/Researchers, TTO staff. Members of the IP teaching network or association + redOTRI.
- **Executing agents:** Implementation should be in the hands of the Spanish Patent and Trademark Office and the EPA Academy. Eventually, organization of the course could be outsourced to one or several Spanish universities.
- **Deadline for implementation:** Course (A), July 2009. Course (B), a possible second edition of course (A): April/July 2010.

#### 6.2.3. Networking/Synergy development measures:

- The interdisciplinary courses are aimed at educating stakeholders in IP teaching and are particularly conceived to provide interdisciplinary knowledge, particularly in areas related to IP-management in technological innovation and business development cycles. Privileged targets are teachers and trainers which will help implement the plan, in particular members of the teaching standards committee, In this sense, they reinforce self image of the networks activities and contribute as an incentive towards membership. Aside from this it is recommended that other measures aiming at promoting interdisciplinary studies be taken. The following are just a few examples:
  - o Establishing a Database of existing IP courses and lecturers (on a voluntary basis). The data included should be classified according to the scientific approach (economy, law, science, biotechnology) and should facilitate course organizers and coordinators to enable interdisciplinary courses. Means for monitoring quality of the courses listed should be enabled as well.
  - o Providing full information and publicity to synergetic measures which tend to facilitate partnerships which respond to the general objectives of the plan (for instance, EC programmes and institutions such as the *Erasmus Mundus* Programmes and the ETI, which may facilitate or promote educational joint-ventures of a high standard and of interdisciplinary and/or pan-European, nature.
- **Target:** University Professors/Researchers – postgraduate course organizers: teachers in charge of carrying through the “plan” (privileged). All disciplines.

#### 6.2.4. PR action:

Launch of the programmes should be accompanied by press releases. Furthermore, a report on the evaluation of the results of the activities carried out in this framework should be distributed to representatives of the Ministry of Education, Rectors and Deans, after execution has been completed. All activities related to promotion of promotion of interdisciplinary IP will be placed on a website hosted by the SPTO.

### 6.2.5. Expected Results:

Enhanced interdisciplinary knowledge of IP professors to provide for qualified teachers to impart courses in all faculties and schools with approaches which satisfy interests and needs of different groups of students.

### 6.3.Objective 4: Working on continuing support for the plan.

#### 6.3.1. Networking:

Obtaining enduring support for the plan is envisaged by the development of networks, as well as by carrying the objectives of the plan to existing networks with convergent interests. This will help to ensure sustainability through the creation of a community of lecturers, researchers and TTO staff committed to the purpose of the IP-CPSU. Furthermore, network participants will be, at the same time, privileged receptors of certain plan activities and main executers of the many actions aimed at universities.

Three actions are suggested:

- **Immediate action, creation of an IP Teachers Network or Association:** The most important action is immediate creation of a Spanish Intellectual Property Teachers Network (SIPTN). The main objectives of the network will be to help introduce systematic IP courses and to disseminate interdisciplinary IP teaching in Spanish Universities. In a more concrete manner, the SIPTN will:
  - Constitute an organized channel for Spanish teachers to receive interdisciplinary advanced training (6.2.).
  - Provide the main channel for delivering basic and tailored IP courses.
  - Serve as a forum of discussion on IP teaching.
  - Provide connections with other networks: EIPTN, at the European Level or red OTRI at a national level.
- **Target:** University professors/researchers and other university stakeholders in IP teaching, from all disciplines.
- **Deadline:** Launch and creation of the network should take place before the end of February 2009
- **Executing Agent:** The “steering committee” of the Plan and the SPTO. One Spanish University (Hosting a Secretariat of the SIPTN)
  
- **Involvement of redOTRI:** In many parts of this document, it has already been suggested that the national network of Spanish TTOs should by all means be an integral part of the plan. TTO staffs are IP aware and have normally received some previous IP training. Furthermore, their job is to identify, select and transfer valuable knowledge from the university to society, thus with positive experience in putting IP at the service of processes of economic value generation in universities. Therefore, they have full understanding of the general scope of the plan. Finally, TTOs already participate and collaborate with convergent initiatives organized by the SPTO and the Patent Centre of the University of Barcelona (A roving seminar: “Patents: Everything and Engineer or Scientist should Know” see *programme in Spanish, annexed*).
- **Target:** University TTOs
- **Deadline:** Involvement of as many TTOs as possible should be obtained before the next Annual Meeting (June 2008).
- **Executing Agent:** SPTO

- **Involvement of Professional Bodies, Bars, Associations:** The plan must be presented to relevant professional bodies, through their national councils, to enhance support and arise awareness in professional organizations regarding the importance of IP knowledge for professional development.

#### 6.3.2. Expected Results:

To create an appropriate infrastructure to facilitate execution of activities, allowing to obtain wide (reaching all universities) and deep (reaching relevant stakeholders within universities) impact.

#### 6.4. Objective 5: Identifying and exploiting opportunities in the changing environment (Informing, reporting and publicizing among authorities and the public).

##### 6.4.1. PR actions:

Most of the action taken to achieve this objective will aim at rising awareness of social actors and decision makers, with particular focus on key players intervening in the reform of University programmes as an issue of the Bologna process.

The activities should include:

- Setting up a website, hosted by the SPTO, containing all elements and news on the plan, as well as other contents. It is suggested that the site have mirror web-pages in university websites, as well as in the EPA. (January 2009).
- Presentation of the plan in national conferences of rectors and/or deans, including authorities of the Ministry of Education (February 2009).
- Publication of two articles of opinion in the press to by prominent academics (March/April 2009).
- Reporting on the evolution and results of the plan to Ministry of Education Authorities, Rectors and Deans.

##### 6.4.2. Supportive Studies and Publications :

Complementary activities under this section aim at obtaining accurate information on the situation of IP teaching in Spain, both in IP-specific careers, as in courses on innovation and business management, where certain elements of IP are taught. Such information will result in information contained in working documents and –at least- one publication, to be used for the purposes of the plan.

The activities should include:

- Preparation of a report on the need to include IP education as a transversal course for all faculties (the SIPTN or Association Secretariat + steering committee). By November 2009.
- Status map on IP teaching in Spain, to be carried out by the steering committee by June

2009.

- Publication of best practices/successful cases in IP teaching, to be carried out by the steering committee members by September 2009.

#### 6.4.3. Expected Results:

To insert the plan in the general dynamic of reform taking place in Spanish universities. To obtain a precise knowledge on the situation, strengths and -in particular- the needs of Universities in terms of IP teaching. To develop awareness among decision makers on the importance of IP to all careers and to introduce a discussion on the need to create compulsory IP modules.

### 7. Timeframe for the Plan

18 to 24 Months, starting from November 2008 (see the programmed deadlines in the previous chapter and the annexed table).

### 8. Financial means and cost estimates

The successful execution of this plan –as of any project, for that matter- depends in great measure on the resources available to carry it forward. In the case of the PSU-IP, public support -in particular from the EPO and the SPTO- has been crucial to launch the initiative: the organization of two “Roving Workshops” (Madrid, in November 2008, and in the Hague, in December, 2008) have been at the origin of the elaboration of this plan and have constituted a considerable initial contribution, both from financial and organizational points of view. .

From this point onwards, institutional support -from the cited patent offices, for example- may appear under the form of lending expertise of its staff members, making available teaching tools –such as the “EPA teaching kit-”, or providing platforms facilitating the dissemination of IP-knowledge –for example, through actions such as hosting meetings, enabling a website containing relevant information, etc. Such support appears to us as crucial, since the task related to the plan may not be carried out without the involvement of public institutions.

However, no financial resources –under the form of pre-established money “lump sums”, or other- have been allocated by any of such public institutions in advance, to carry forward the activities of the plan. Its execution, therefore, is conditioned in many ways, the first of which being that fund-raising mechanisms must be created in order to provide means for the different programmed activities to be carried out.

The main problem related fund-raising for a project such as the one aiming at the dissemination of IP knowledge in the universities of a large country such as Spain is that: 1) programmed activities will tend to be dispersed over time and over a geographical space, and are likely to involve several, different, actors and 2), initially, there will be no formal, single, entity entitled and entirely responsible for carrying the objectives of the plan forward (this is the case for the PSU-IP).

Therefore, some measures are recommended collaterally, with the objective of facilitating fund procurement:

- a) As the plan is a collaborative project, open to all universities, and that its principal beneficiaries are high level education centres and society as whole, it is assumed that some resources for the PSU-IP –under a collaborative form- should come from universities themselves.

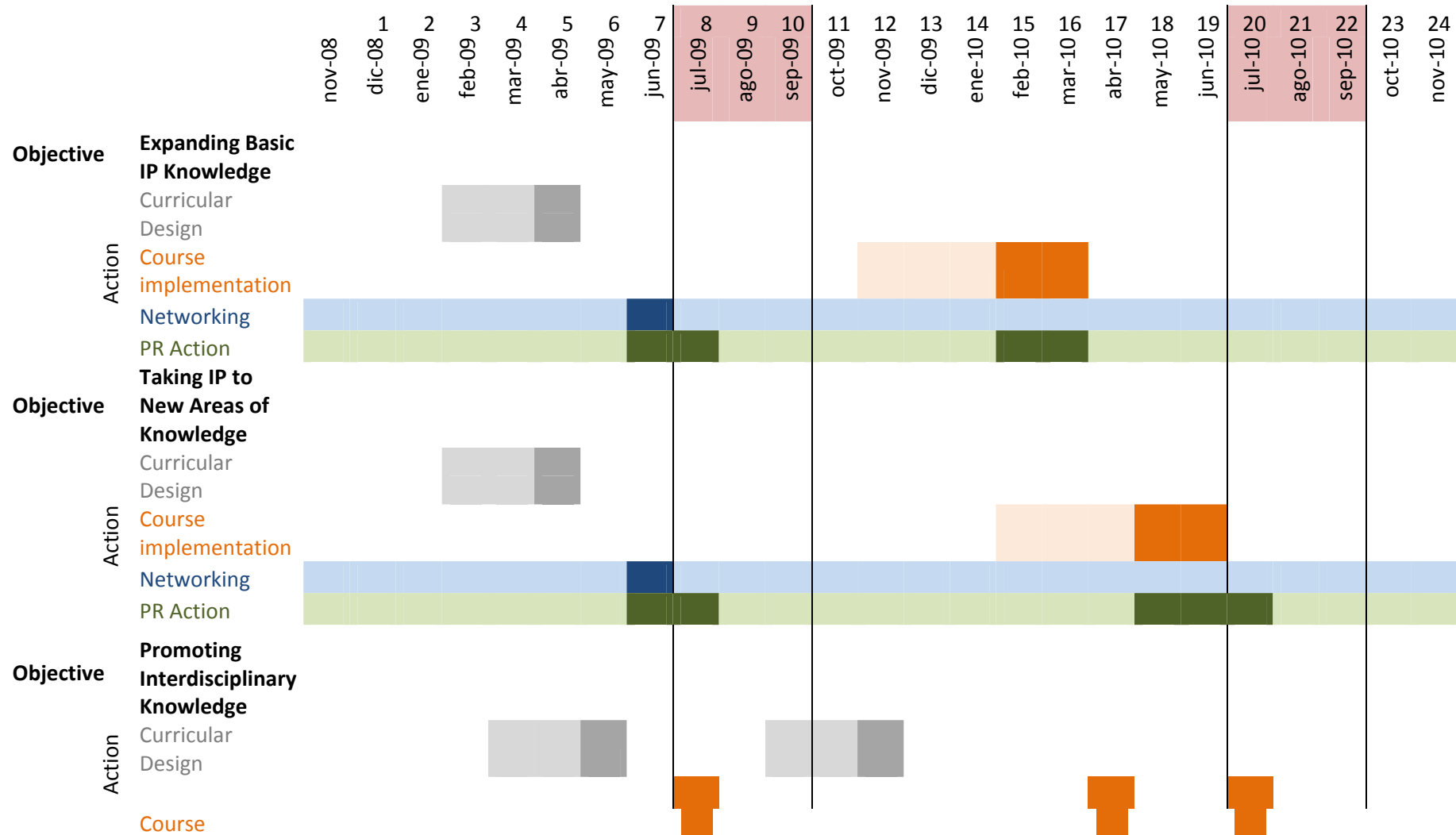
This may prove efficient if Universities are called to do what they do best: providing educational resources. In this sector, Universities are resourceful and have much endowment -related to the execution of the plan- such as the necessary infrastructure for carrying out courses or professorial staffs which represent the main human resource available to perform several of the deeds to be conducted. Upon the existence of the necessary willingness, collaboration from universities may not prove to be costly to them in many terrains which are central to the plan – such as the insertion of basic-IP courses, for example.

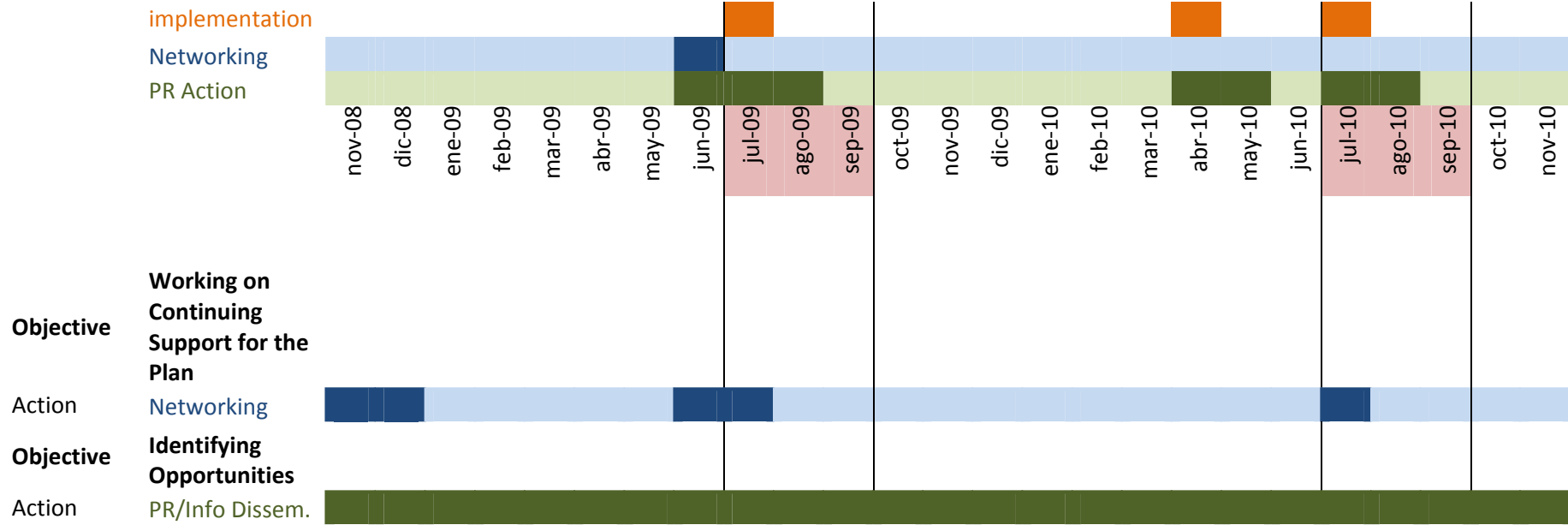
- b) Collaborations, on an individual level, should be sought for, as well. In particular, voluntary collaborations have been put forward from the members of the working group present at the Madrid and the Hague workshops, in particular for activities related to the report on the statu-quo of IP teaching in Spain, the drafting of opinion, press-targeted, articles, and the study of best practices.
- c) Most activities are implying costs which remain –for the moment- at a low level. Activities which may require the most expenses and resources are those related to the interdisciplinary training of professors. While facilities related to the organization of the course may be found in some institution (Universities, SPTO, etc.), financial resources –in particular for professor travelling, and stay-related expenses, must be obtained from public or private entities.
- d) It seems convenient to establish at least some form of administrative unit, however minimal it be, in charge of seeking resources to carry forward the plan. This may include obtaining direct contributions, helping to find institutions which are willing to collaborate and to help organize the distribution of collaborative “efforts”. At least one institution (Universidad Alcalá de Henares) has shown interest in hosting a secretariat and lending form of support in terms of staff (a part time *stagier*). To maximise efficiencies, this unit could be the secretariat of an eventual IP Teaching Association or Network.
- e) Public Institutions: Specific aid from the SPTO could come from providing communication platforms (website hosting, providing centralized facilities for meetings (of the IP Teaching Association), dissemination of the activities carried forward, translation to Spanish, of the plan and existing teaching kits which are provided in English. From the EPA, the supply of a Teaching Kit, and eventual ad-hoc training may be attainable.

Specific collaboration from other institutions (Education Ministry, Regional Administrations) must be explored. Conveniently, collaborating universities could contribute to this search.



# Annex 1: Time Frame for the SPU-IP





Annex 2: Examples of tailored courses for Engineers and Scientists.

(LOGO DE LA UNIVERSIDAD)

# La Universidad de X

en colaboración con la Oficina Española de Patentes y Marcas y el Centre de Patents de la UB,  
ofrece la  
sesión formativa para profesores, investigadores y estudiantes

## PATENTES: Lo que todo científico o ingeniero debe saber

El xxx de xxxx de 2008, de 10-14 h, en ????

**Prof. Pascual Segura**, doctor en química por la UB; agente de la propiedad industrial y director del Centre de Patents de la UB; consejero de la Academia Europea de Patentes (Oficina Europea de Patentes); representante de Chemical Abstracts Service y STN Internacional en España.

**Dra. Carmen Toledo**, Jefe del Área de Documentación y Búsquedas, del Departamento de Patentes e Información Tecnológica, de la Oficina Española de Patentes y Marcas (OEPM).

**YYY**, responsable de patentes de la OTRI de la Universidad de X.

Todo estudiante universitario de ciencias o ingeniería debe conocer algo sobre el sistema de patentes antes de acabar sus estudios, como formación básica que le será muy útil en cualquier tipo de trabajo. Para todos, las patentes son útiles como fuentes de información; para muchos, pueden representar un estímulo al ingenio y una posible fuentes de beneficios, y, para algunos, pueden ser una buena salida profesional. El objetivo de esta sesión formativa, de 4 h de duración, es proporcionar esa deseable formación básica en patentes, materia que no suele tratarse en ninguna asignatura debido a su carácter multidisciplinar (mezcla de ciencia-técnica, derecho, documentación, economía y cuestiones prácticas).

Evidentemente el tema también interesa mucho a los profesores, investigadores y estudiantes de doctorado, para tener claros los conceptos básicos sobre patentes antes de dirigirse a las

oficinas de transferencia de tecnología de sus universidades.

### PROGRAMA

1. Qué papel juega la propiedad intelectual-industrial, y particularmente las patentes, en el mundo actual
2. Cómo un descubrimiento se transforma en una invención patentable
3. Qué es lo primero que hay que hacer cuando se cree tener una invención patentable
4. Qué se puede patentar
5. Qué condiciones ha de cumplir la invención para que la patente sea válida y eficaz para impedir la imitación
6. Cómo facilitar al experto la redacción de la solicitud prioritaria
7. Cómo rentabilizar las invenciones realizadas por inventores particulares y por investigadores de organismos públicos de investigación
8. Cómo obtener y hacer valer los derechos de patente
9. Cómo utilizar las patentes como fuente de información tecnológica
10. Cómo localizar información sobre patentes
11. A quién dirigirse en la Universidad de Córdoba para temas de patentes
12. Coloquio

### PROGRAMA DETALLADO

1. **Qué papel juega la propiedad intelectual-industrial, y particularmente las patentes, en el mundo actual.** Algunos ejemplos sobre protección de derechos de autor, marcas, diseños, competencia desleal y *know-how* (secretos industriales). Lo que las patentes significan para los científicos o ingenieros: fuente de información, estímulo para la innovación, fuente de beneficios... y posible salida profesional.
2. **Cómo un descubrimiento se transforma en una invención patentable.** La aplicabilidad industrial y la ventaja competitiva proveniente del derecho de exclusiva. La aplicación industrial de un descubrimiento difícilmente llegará al mercado si no se presenta una solicitud prioritaria de patente. El objetivo de una patente es su explotación industrial/comercial, y no el contribuir a un malentendido currículum.
3. **Qué es lo primero que hay que hacer cuando se cree tener una invención patentable.** Evitar la auto-divulgación prematura (antes de la solicitud prioritaria de patente) que anule la novedad: conferencias, congresos, tesis, trabajos fin de carrera, artículos, etc. Asesorarse con un experto en patentes. Buscar el estado de la técnica anterior, en todo tipo de fuentes de información, pero especialmente en las que cubren patentes (ver apartado 10).
4. **Qué se puede patentar.** Productos/entidades (químicos, farmacéuticos, biológicos, electromecánicos, informáticos...) y procedimientos/métodos (de obtención, de utilización, etc). Ejemplos.
5. **Qué condiciones ha de cumplir la invención para que la patente sea válida y eficaz para impedir la imitación.** Que en el estado de la técnica no se haya descrito nada idéntico; que no resulte obvia para un experto; que tenga indicios de aplicabilidad o utilidad industrial, y que se redacte bien la solicitud de patente, incluyendo una descripción suficiente y unas reivindicaciones claras y lo más amplias posible. Ejemplos de reivindicaciones y derechos concedidos en algunos casos reales.
6. **Cómo facilitar al experto la redacción de la solicitud prioritaria.** Usar textos (preferiblemente en inglés) de informes, manuscritos... aún no publicados. Ayudar al experto en la generalización del alcance de la protección y la redacción de las reivindicaciones, considerando que el nivel de descripción que es suficiente para patentar suele ser menor que el necesario para publicar o comercializar.
7. **Cómo rentabilizar las invenciones realizadas por inventores particulares y por investigadores de organismos públicos de investigación.** Invenciones libres; invenciones laborales y por contrato; invenciones universitarias y asimiladas. Diferencias entre coinventores y coautores de publicaciones científicas. La propiedad

industrial en los contratos de investigación y de transferencia de materiales. La cesión o licencia de derechos de patente. La participación de los inventores en los beneficios.

**8. Cómo obtener y hacer valer los derechos de patente.** Presentar una solicitud prioritaria para gozar de protección prácticamente en todo el mundo durante un año. Alargar año y medio la posibilidad de solicitar patentes en el extranjero mediante la presentación de una solicitud internacional (PCT). Ayudas públicas y el trato especial de la OEPM a las universidades públicas españolas. Patentar en el extranjero (procedimientos nacionales, procedimiento europeo) y realizar acciones judiciales como inversiones empresariales.

**9. Cómo utilizar las patentes como fuente de información tecnológica.** Ventajas de las patentes: tamaño, exclusividad y rapidez en la publicación. La información de la primera página. Las partes de la descripción. Familias de patentes: documentos equivalentes en varios países.

**10. Cómo localizar información sobre patentes.** Búsquedas en bases de datos gratuitas: Esp@cenet, USPTO, bases de datos y servicios de información tecnológica de la OEPM. Información obtenible en, o a través de, la página web de la OEPM. Búsquedas en bases de datos profesionales: SciFinder (Chemical Abstracts Service) y Web of Knowledge (Thomson). Servicios privados.

**11. A quién dirigirse en la Universidad de Jaén para temas de patentes.** Servicios de patentes ofrecidos por la OTRI.

## 12. Coloquio

**Material complementario:** "El secreto está en la marca", "Lo atractivo está en la forma", "Una introducción a las patentes en Europa" y "Guía de valoración y licencia de patentes, FBG-UB". Las diapositivas y el material complementario se podrá descargar de la página web.

## LICENCIATURA DE QUIMICAS

Asignatura optativa: **PATENTES Y DOCUMENTACIÓN CIENTÍFICA**

6 Créditos (teoría: 4.5 créditos, prácticas 1.5 créditos)

Profesor: Dr. Alfonso Cueto Rejón

Dpto: Química Analítica, Nutrición y Bromatología

---

**Temario:**

### 1. Protección de la innovación.

Su importancia. Formas de protección: Dibujo y Modelo industrial, Patente y modelo de utilidad.

### 2. Otras formas de protección de la innovación.

Protección de la propiedad intelectual: los programas de ordenador. Protección de las variedades vegetales. Protección de la topografía de semiconductores. El secreto industrial.

### 3. La protección de los signos distintivos

La marca. Forma de protección. Importancia. Características. Ejemplos. Extensión de la protección. La Marca Internacional. La Marca Comunitaria.

### 4.- Patentabilidad de las invenciones.

Las invenciones. Invenciones patentables. La patente. Historia de las patentes. Sus características. Territorialidad. Temporalidad. Excepciones a la patentabilidad. La falta de aplicación industrial.

### 5.- Requisitos de patentabilidad.

La novedad. La actividad inventiva. La aplicación industrial. Su evaluación. Ejemplos.

### 6.- Las características de las patentes en otros países.

Las patentes en Estados Unidos. La patente en Japón. Modelo europeo. Las patentes Iberoamericanas. Patentes en Rusia.

### 7.- Extensión internacional de las patentes.

Su significado e importancia. El Convenio de la Unión de París. La Patente europea. El sistema PCT. El sistema EURO-PCT. La patente Comunitaria

### 8.- La patente como documento jurídico.

Protección que otorga la patente. Excepciones. El derecho positivo y negativo de la patente. El titular el inventor y sus relaciones. La cotitularidad. Nulidad y caducidad. Su significado y efectos. Agotamiento del derecho. Patentes de cobertura. Patentes de introducción.

### 9.- La patente como documento tecnológico.

Su importancia como fuente de información tecnológica. Documentación y documentación sobre patentes y bases de datos de patentes. El informe sobre el estado de la Técnica. Su importancia e interpretación. Las patentes secretas.

### 10.- Redacción de patentes

Forma y contenido de una patente. Redacción de la Memoria. La suficiencia de descripción y la unidad de invención. Las reivindicaciones. Su importancia. Sus clases. Ejemplos.

### 11.- La solicitud de patente.

La Oficina Española de Patentes y Marcas. Representantes. El Agente de la Propiedad Industrial. La solicitud de las patentes. Formas de presentación. Su modificación. Sus efectos. Partes de la solicitud. Fecha de prioridad. Reivindicación de prioridad. Retirada y publicación de la solicitud. Sus efectos. Solicitudes divisionarias. Cambios de modalidad.

### 12.- Concesión de la patente.

El proceso de concesión. Clases y procedimiento. Sus efectos. Garantías del Estado. Las tasas: su implicación e importancia. Adiciones de patentes. Examen de forma y fondo. El Informe sobre el Estado de la Técnica. Su solicitud y realización. Criterios. El experto en la Técnica. Interpretación del IET

### 13.- Las Invencciones universitarias.

Su importancia. Características. Titularidad de las invenciones universitarias. Regulación de patentes en la Universidad. El caso de la Universidad de Alicante.

### 14. Los derechos de Propiedad Industrial Intelectual en los Organismos Públicos de Investigación.

Evolución del modelo español. El modelo europeo y el modelo en EE.UU.

## PRACTICAS

Consulta de bases de datos de patentes. Realización de un trabajo individual.

---

## INGENIERÍA QUÍMICA

### TELEDOCUMENTACIÓN Y PATENTES

4.5 Créditos (teoría: 3 créditos, prácticas 1.5 créditos)

Profesor: Alfonso Cueto Rejón

4.5 créditos: 3.0 teóricos + 1.5 prácticos

#### Temario

##### 1. Documentación científica.

Documentación. Teledocumentación. Soportes de la información. Acceso telemático a la información. Herramientas telemáticas de acceso a la información.

##### 2.- La Investigación y el Desarrollo Tecnológico (IDT).

Papel estratégico de la IDT en la empresa. Gestión de la Innovación Tecnológica. Gestión estratégica de la tecnología. Gestión de una cartera de Proyectos de IDT empresarial. Financiación de la IDT. Gestión industrial de la empresa

##### 3. Patentabilidad de las invenciones.

Las invenciones. Invenciones patentables. La patente. Historia de las patentes. Sus características. Territorialidad. Temporalidad. Excepciones a la patentabilidad. La falta de aplicación industrial.

##### 4. Requisitos de patentabilidad.

La novedad. La actividad inventiva. La aplicación industrial. Su evaluación. Ejemplos.

##### 5. La patente como documento tecnológico.

Su importancia como fuente de información tecnológica. Documentación y documentación sobre patentes y bases de datos de patentes. El informe sobre el estado de la Técnica. Su importancia e interpretación. Las patentes secretas.

##### 6. Explotación de la patente.

Obligación de explotación. Formas de explotación de las patentes. La cesión. Las licencias: de pleno derecho, obligatorias y contractuales. Ejemplos.

##### 7. El contrato de Licencia.

Tipos de licencia contractual. Cláusulas en un contrato de licencia. Síndrome NIH. Ejemplos.

##### 8. La regalía en un contrato de licencia.

Su cálculo. Factores de que depende. Ejemplos

##### 9. Defensa de la patente.

Ejercicio de la defensa: titular y licenciataria. Infracción de la patente. Avisos previos. Diligencias de comprobación de hechos. Inversión de la carga de la prueba en la infracción de patentes. Medidas cautelares. Indemnizaciones. Los peritos.

##### 10. Las patentes en la industria químico-farmacéutica.

Disposiciones transitorias en la Ley Española de Patentes. Características. Tipos de patentes químicas: producto, proceso y uso. Los productos naturales. Su patentabilidad. Ejemplos. Las reivindicaciones en las patentes químicas:

Fórmulas de "Markush". "Product by process". Producto limitado por su propósito. La patente de selección. La sinergia en las composiciones. Metabolitos y precursores. Primera indicación y siguientes. Caducidad de las patentes

farmacéuticas.

### **11. Las invenciones biotecnológicas.**

Características. Tipos de patentes biotecnológicas. Patentabilidad de microorganismos. Productos microbiológicos. Su patentabilidad. Ejemplos. Reivindicaciones en las patentes biotecnológicas. La suficiencia de descripción en las patentes biotecnológicas. Autoridades internacionales de depósito.

#### **PRACTICAS**

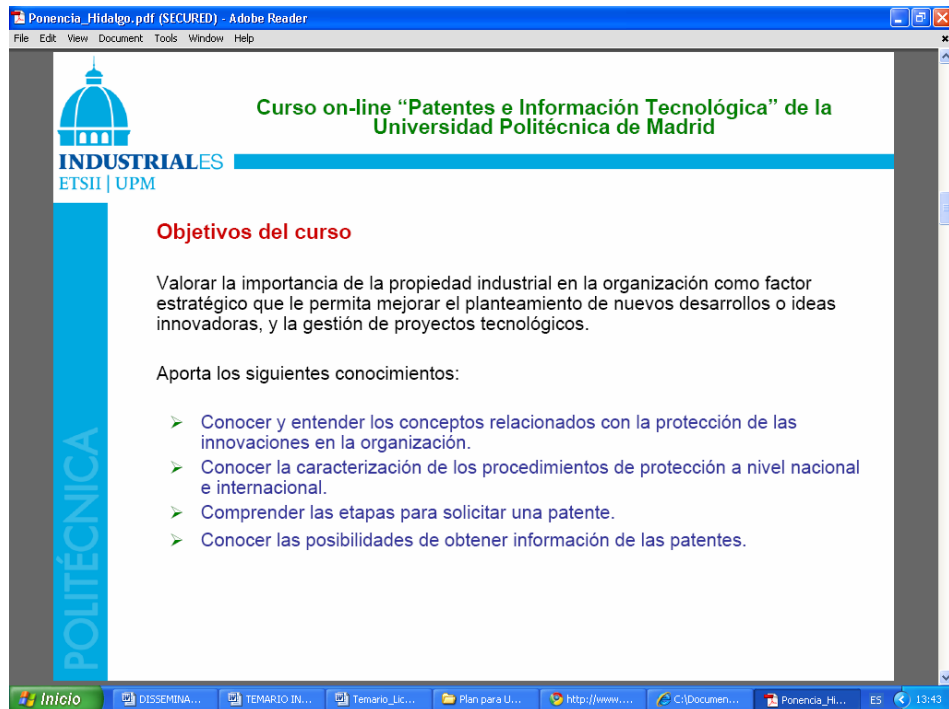
- Uso de bases de datos de patentes en Internet
- Trabajo documental

#### **EVALUACION DE LA ASIGNATURA**

- Examen final
- Entrega del trabajo documental




## Curso Online de Patentes e Información Tecnológica. UPM



Ponencia\_Hidalgo.pdf (SECURED) - Adobe Reader

File Edit View Document Tools Window Help

  
**INDUSTRIALES**  
ETSII | UPM

**Curso on-line "Patentes e Información Tecnológica" de la Universidad Politécnica de Madrid**

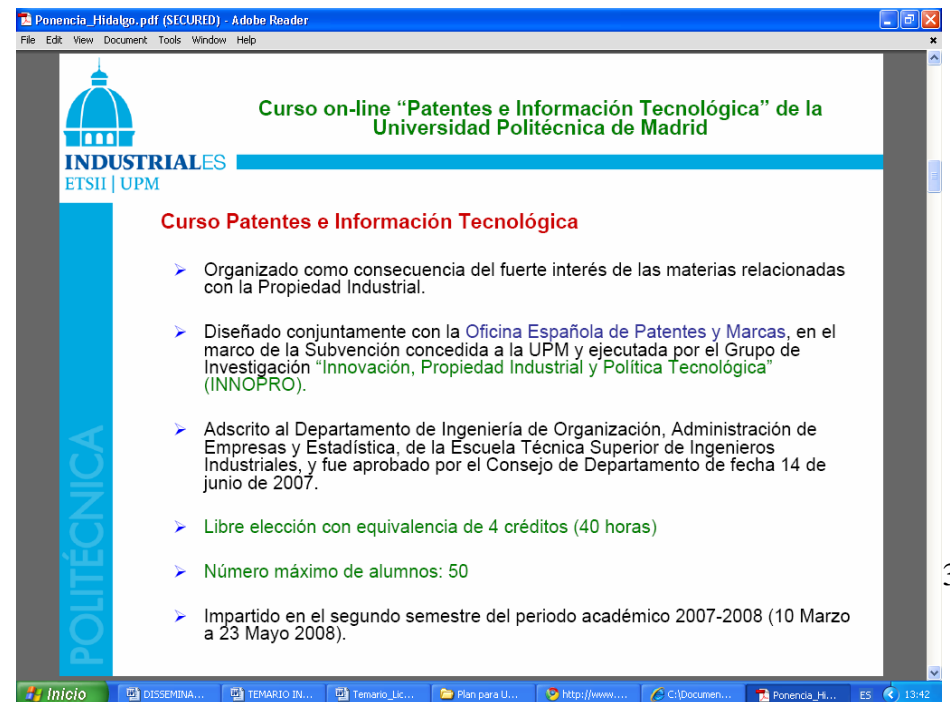
**Objetivos del curso**

Valorar la importancia de la propiedad industrial en la organización como factor estratégico que le permita mejorar el planteamiento de nuevos desarrollos o ideas innovadoras, y la gestión de proyectos tecnológicos.

Aporta los siguientes conocimientos:


- Conocer y entender los conceptos relacionados con la protección de las innovaciones en la organización.
- Conocer la caracterización de los procedimientos de protección a nivel nacional e internacional.
- Comprender las etapas para solicitar una patente.
- Conocer las posibilidades de obtener información de las patentes.

Windows taskbar: Inicio, DISSEMINA..., TEMARIO IN..., Temario\_Lic..., Plan para U..., http://www..., C:\Documen..., Ponencia\_Hi..., ES 13:43



Ponencia\_Hidalgo.pdf (SECURED) - Adobe Reader

File Edit View Document Tools Window Help

  
**INDUSTRIALES**  
ETSII | UPM

**Curso on-line "Patentes e Información Tecnológica" de la Universidad Politécnica de Madrid**

**Curso Patentes e Información Tecnológica**

- Organizado como consecuencia del fuerte interés de las materias relacionadas con la Propiedad Industrial.
- Diseñado conjuntamente con la Oficina Española de Patentes y Marcas, en el marco de la Subvención concedida a la UPM y ejecutada por el Grupo de Investigación "Innovación, Propiedad Industrial y Política Tecnológica" (INNOPRO).
- Adscrito al Departamento de Ingeniería de Organización, Administración de Empresas y Estadística, de la Escuela Técnica Superior de Ingenieros Industriales, y fue aprobado por el Consejo de Departamento de fecha 14 de junio de 2007.
- Libre elección con equivalencia de 4 créditos (40 horas)
- Número máximo de alumnos: 50
- Impartido en el segundo semestre del periodo académico 2007-2008 (10 Marzo a 23 Mayo 2008).

Windows taskbar: Inicio, DISSEMINA..., TEMARIO IN..., Temario\_Lic..., Plan para U..., http://www..., C:\Documen..., Ponencia\_Hi..., ES 13:42

Ponencia\_Hidalgo.pdf (SECURED) - Adobe Reader

File Edit View Document Tools Window Help



**INDUSTRIALES**  
ETSII | UPM

## Curso on-line “Patentes e Información Tecnológica” de la Universidad Politécnica de Madrid

### Programa del curso

El programa del curso consta de ocho temas :

- Conceptos básicos sobre Propiedad Industrial
- Protección nacional (patentes, modelos de utilidad y diseños industriales)
- Protección internacional (solicitudes PCT y europeas)
- Requisitos de patentabilidad: novedad y actividad inventiva
- Invenciones en biotecnología y patentabilidad del software
- Información tecnológica: documentos de patentes y bases de datos
- Patentes y transferencia de tecnología
- La patente como indicador de innovación tecnológica

POLITÉCNICA

Inicio DISSEMINA... TEMARIO IN... Temario\_Lic... Plan para U... http://www.... C:\Documen... Ponencia\_Hi... E5 13:46

*Annex 3: Spanish Working Group (Country Representatives)*

Cartagena Abella	Pedro	OEPM
Hernandez Alfaro	Mati	Universidad Alcala Henares
Hidalgo	Antonio	ETS Ingenieros Industriales. U Politécnica Madrid
Lastiri	Monica	Universidad Carlos III Madrid
Moreu	Pedro	Escuela Superior de Ingenieros. Universidad Sevilla
Penas	Gerardo	OEPM
Santiago	Amalia	Escuela Universitaria Politécnica. Universidad Sevilla
Segarra	Marival	Universidad PolitécnicaValencia

Road Map Expert: Mariano Riccheri, Universidad de Alicante