

## Base Beca

Ofrecimiento N°: 12662

Curso:

Designing and Planning HSPA and 4G Mobile Broadband Networks

Descripción:

Course Objectives:

General Objective: To introduce basic and specialized aspects of mobile broadband network design techniques and technology planning with an informative approach, so that participants will understand the new parameters defined in each technology.

Specific Objectives:

\*To manage the sizing of the mobile broadband radio access network based on the 3GPP standard releases.

\*To update participants on issues related to technological innovation and to design and planning trends, and their relations to the traffic patterns managed by mobile network operators.

Course Content:

Week 01 - Radio Access Planning

- Principles of Wireless Propagation
- Propagation and spectrum. Frequency bands and spectrum re-farming.
- Radio interface. Layer 1. Design and planning criteria
- Modulating and Coding. Categories, Ue, e-nodeB
- Antenna System: MIMO Gain and Performance Link Budgeting
- Definition, Link Budget Variables
- Defining and Calculating planning margins
- Propagation models. Okumura-Hata, COST 231
- Air interface sizing process
- General parameters, traffic, mobile equipment, radio propagation, capacity, channel

Week 02 - Radio Access Network Designs

- Baseband: LTE vs. WCDMA/HSPA
- HSPA and LTE Option Deployments
- Network design, site, transmitter, adjacencies, carriers, architecture vs. demand/capacity

Week 03 - Capacity Planning

- Calculating Cell Capacity
- Accounting for Overheads
- Determining the Average BH Capacity
- Building Subscriber Profiles

Week 04 - Sizing Definition and Access Methodology

- Input and output parameters
- Traffic Model and Quality of Service (QoS)
- Dimensioning the Traffic and Transport Network: User Plane, Control Plane, Synchronism and OSS

Course Methodology:

The course will be 100% delivered online asynchronously through the INICTEL-UNI virtual training platform. Each student is expected to participate by reading the material, make written contributions to discussions, forums and activities, and the tests to be defined by the professor. These techniques will ensure the necessary time flexibility for the participants to be able to organize themselves in the way that best suits them.

All activities will be evaluated based on a 20-point grade; to pass the course the minimum score is 70%, equivalent to 14 points.

- Participation in forums: 20% of total grade.
- Handing activities/assignments: 50% of total grade.
- Course evaluations: 30% of total course grade

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Disciplinas: CIENCIA. INVESTIGACION. METODOLOGIA.  
POLITICA ECONOMICA Y SOCIAL. PLANIFICACION.

Fuente: O.E.A.

País: Uruguay

Ciudad: A distancia

Duración desde: 03/10/16 Duración hasta: 04/11/16 Fecha límite solicitud: 07/09/16

Idioma: Inglés

Beneficios:

Scholarship Benefits:

The OAS/CITEL and the Instituto Nacional de Investigación y Capacitación de Telecomunicaciones of the Universidad Nacional de Ingeniería (INICTEL-UNI) will cover tuition costs for selected candidates.

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Requisitos:

Eligibility requirements:

- Be a citizen or permanent resident of Uruguay. (Residents must send a copy of their visa.)
- Participant profile: Professionals interested in further specialization and professionals with a knowledge of LTE

\* No health certificate required.

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DOCUMENTACION A PRESENTAR:

A) EN UN ORIGINAL Y UNA COPIA

I) Formulario de Solicitud de beca llenado (es online la inscripción

<http://www.oas.org/es/becas/desprofesional.asp> , Una vez finalizada recibirá un mail de confirmación con un pdf de su formulario que deberá imprimir, firmar y traer)

II) Copia del Diploma del último grado obtenido (licenciatura, master)

III) Curriculum vitae actualizado no documentado (4 páginas máximo)

IV) Una carta de recomendación del actual o del más reciente empleador.

V) Formulario de objetivos de estudio

VI) Fotocopia de certificado de conocimiento de idioma inglés

(Los formularios IV y V se descargan de:

[http://www.oas.org/es/becas/PDSP/Formularios\\_becas\\_PDSP.pdf](http://www.oas.org/es/becas/PDSP/Formularios_becas_PDSP.pdf) )

B) EN UN ORIGINAL

- Carta de aval de la institución patrocinante del becario dirigida a AUCI

- Formulario de becas de AUCI

- Fotocopia de la CI

El formulario de AUCI se solicita a [becas@auci.gub.uy](mailto:becas@auci.gub.uy)

Esta documentación debe presentarla en:

Presidencia de la República - Torre Ejecutiva - Plaza Independencia 710 Piso 7,  
Of. 703 Sección Becas

Observaciones:

Please Note: If you were awarded an OAS Professional Development Scholarship in the past twelve (12) months or if you currently hold an OAS Scholarship for Academic Studies, you are NOT eligible to apply for another Professional Development Scholarship.