

**NM 412**  
**DIGITAL BROADCASTING**  
**SPRING 2013**

**INSTRUCTOR: Uygur Boynudelik**  
**Department of New Media**  
**Kadir Has University**  
**Thursday 17:00-20:00, D-107**

**Course Description:**

This course aims to introduce the students to the changing concepts of television. The students will have an overall understanding of digital TV technologies, the changing behavior of TV audiences, brand-new services delivered to TV via internet and how the impact of broadband will transform media industry as a whole. The course also supported with the practices from the digital TV industry like case studies and guest speakers.

**Course Objectives:**

The students are expected to: understand and practice basics of digital television platforms, familiarize on new generation TV services, applications & technologies from broadcaster and consumer perspective

**Course Learning Outcomes:**

By the end of this course the students should be able to:

- interpret the basics of available TV platforms and technologies.
- learn about fundamentals of internet TV
- understand the new opportunities created for content providers
- forecast audience and TV interaction methods in the future
- get an insight about how content is distributed securely to other screens within the home

**COURSE MATERIAL:**

- Lundstrom, Lars-Ingemar. *Understanding Digital Television: An Introduction to DVB Systems with Satellite, Cable, Broadband and Terrestrial TV Distribution*.2006
- Lecture notes for each week will be available on Blackboard.

**You are advised to do the readings before the lecture and ask questions to make the session more interactive.**

**GRADING:**

-2 Homeworks	%20
-Final Project	%20
-Midterm exam	%20
-Final	%40

**Lecture Schedule: (Subject to change, -****Week 1:– Course Introduction:**

Course syllabus and ground rules  
Talking about mutual expectations

**Week 2:– The Basics of Digital TV**

History of TV: B & W – Color – Digital – HD – 3D  
Digital TV transmission media: Satellite, Terrestrial, Cable, Internet  
Analog Switch off  
Reading: Lecture notes

**Week 3: TV platforms in Turkey**

Digiturk (Digiturk Plus, Digiturk IQ, Digiturk Play)  
D-Smart  
Tivibu  
Teledünya

**Homework1:** Benchmark of TV platform propositions -available offers-

**Week 4: Internet TV Part 1**

What is difference between WebTV & IPTV?  
How IPTV works?  
How WebTV works?  
Reading: Lundstrom, pages 159-176

**Week 5: Internet TV Part 2**

Use cases  
TV Anytime & Anywhere  
Multi-screen, Mobile TV  
Reading: Lundstrom, pages 159-176

**Week 6: TV over Broadband**

Compare & Contrast Adaptive Bit rate Streaming Techniques  
Http live streaming  
Smooth streaming  
Http Dynamic streaming  
Demo  
Reading: Lundstrom, pages 159-176

**Week 7: New Business Models for Content Providers**

User-generated Content  
Video on Demand (VOD) content  
Over the Top (OTT) TV  
**Homework2:** Compare & Contrast Available VOD services in Turkey

## **Week 8: MIDTERM EXAM**

### **Week 9: Social TV applications**

Changing TV audience behavior  
Second screen / Companion device  
Zeebox  
Tivilog  
TTNET Sosyal Tivi  
Reading: Lecture notes

### **Week 10: Smart TV & Future of TV**

New Smart TV features  
Game changer: Connected TV  
Netflix, Hulu Plus & BBC iplayer  
Google TV  
Reading : Lundstrom, pages 263-282

### **Week 11: Digital Rights Management**

How DRM works?  
Digiturk Lig TV case  
Reading: Lecture notes

### **Week 12: Home media distribution**

DLNA  
Wifi, Homeplug, Intel WiDi  
Tablets and Smartphones: Home Network Secure Content Distribution  
Reading : Lundstrom, pages 159- 168

### **Week 13: Apple TV**

How Apple TV works?  
Features of 3rd generation of Apple TV  
AirPlay

**Term Project Assignment:** Develop a brand new television service with new forms and content and optimize interaction, home distribution and functionality

### **Week 14: TV interaction**

Voice-controlled TV  
Microsoft Kinect  
New generation remote controls  
Apple TV  
Reading: Lecture notes

### **Week 15: TV Rating & Regulation in Turkey**

How do television ratings work?  
AGB Nielsen  
RTÜK  
Meaning of ratings for Advertisers