

**Western Illinois University
School of Computer Sciences
CS 557 Topics in Networks:
Protocol Supports for the Mobile IP
Spring 2014**

Instructor: Kim, Yeongkwun, Ph.D.

Course Credit: 3

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Lecture Hour: Tue/Thu 12:30 PM – 1:45 PM

Office: Stipes 447 F (298-1351)

Office Hours:

Tue: 11:00 AM – Noon, 2:00 PM ~ 3:00 PM

Wed: 11:00 AM – Noon

Thursday: 11:00 AM – Noon

or Email

Text materials:

- RFC791: IPv4 Protocol Specification
- RFC 2460: IPV6 Protocol Specification
- RFC 5944: IP mobility support for IPv4
- RFC 6275: Mobility support in IPv6
- Mobile Communications (2nd ed.) by Jochen Schiller, Addison Wesley
- Computer Networking: A Top-down approach featuring the Internet by Kurose & Ross, Addison Wesley
- Efficient Reading of Papers in Science and Technology by Michael Hanson & Dylan McNamee

Course Objectives

Provide the student with an overall perspective of Mobile IP by covering the Internet protocol stacks especially, network layer (IP protocol), motivation for mobility, mobility problem in IP networks, mobility solutions, mobile IPv4 and mobile IPv6, and securities issues in mobile IPv4 and mobile IPv6. Provide also applications of mobile IP that students can have right vision for the mobility properties in the Internet. Also improve technical writing and oral discussion skills.

Method of Instruction: Lecture and seminar

Method of Evaluation

Homework Assignments:	30 points
2 Exams	40 points
Research project and presentation:	30 points
1 page proposal	3 points
Presentation & participation	7 points
Final report:	20 points

Letter grade :

- A: ≥ 90
- B: ≥ 80
- C: ≥ 70
- D: ≥ 60
- F: < 60

Note 1: Point ranges for letter grades will be based on a number of factors, including absolute and relative performance. Instructor reserves the right to lower the scale if performance warrants it.

Note 2: Written Homework should be clearly **TYPED** as much as possible.
Otherwise, it will not be accepted!!!

Note 3: All assignments are due at the first 5 minutes of class. Late assignments will be given 30 % penalty **BUT WILL NOT** be accepted after 24 hours of the due.

Note 4: No Make-up Exam will be given without **documented proof** of serious hardship. In case, student must be contact instructor immediately.

Note 5: One or two pop quizzes may be administered during the semester.

Note 6:The topic for the research project is **OPEN** but **SHOULD BE** related to the Mobile IP. The page length of the report should be 10 pages in a single space.

▪ **1 page proposal due: February 20**

This proposal must include an overall **description of your topic**

▪ **10 pages report due: final exam schedule**

This report must include

- 1) an introductory description of your topic,**
- 2) related works**
- 3) your finding if applicable, and**
- 4) concluding remark**

Note 7: Class attendance is **FULLY** student responsibility.

- Active class participation is expected
- You may ask a question(s) at anytime during the class
- You are expected to attend all classes

Major Topics To Be Discussed

- Basics of the Internet protocol stack
- The need for mobile IP
- Mobile IP overview
- Agent advertisement
- Registration
- Tunneling (Reverse tunneling)
- Roaming
- Security issues
- Applications of mobile IP
- IP and mobile IP related RFCs

Plagiarism:

It is assumed that students will learn from each other and in many cases exchange ideas regarding projects, papers and assignments. It is also required that student complete their assignments as an individual effort. Copying retyping or taking other's work and turning it in as your own will result in a zero for the material and may further be dealt with using the University's established plagiarism policy.

Remarks:

- The contents on this syllabus can be changed with advance notification.
- **Student Rights and Responsibilities – Refer to the following WEB site**
<http://www.wiu.edu/provost/student/>