

## Hanyang International Summer School

| Faculty<br>Information | Name   |  | Youngjoon Won   |  |  |  |
|------------------------|--|--|---|--|--|--|
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|                        | Home University  |  | Hanyang University  |  |  |  |
|                        | Department   |  | Dept. of Information Systems  |  |  |  |
|                        | Homepage   |  | https://young.hanyang.ac.kr   |  |  |  |
| Course<br>Information  | Class No.  |  | ТВА   | Course Code  | ENE4019  | Credits <sup>3</sup>                                 |
|                        | Course Name  |  | Introduction to Computer Networks   |  |  |  |
|                        | Lecture Schedule   |  | Tue-Fri / 9:00 AM - 12:00 PM  |  |  |  |
|                        | Course Description   |  | This course introduces the fundamentals of network (Internet) architectures and methods. Our emphasis is placed on how the Internet works in general.   |  |  |  |
|                        | Course Objective   |  | Introducing the fundamentals of network (Internet) architectures and<br>methods:<br>- fundamental concepts of networking and how they apply to the Internet<br>- hands on experience with networking protocols and analysis techniques<br>- how the Internet or DC are connected in general<br>- up-to-date research issues (e.g., Data Center, Internet measurement) |  |  |  |
|                        | Prerequisite   |  | None  |  |  |  |
|                        | Materials/Textbooks  |  | Course materials will be given in class   |  |  |  |
|                        | Materials/T  | extbooks   | Course materi   | als will be given i  | n class  |  |
|                        | Materials/T<br>Attend                                      |  | Course materi<br>10 %   | als will be given i<br>Qu  |  | %  |
|                        |  | ance   |   |  | iz   | %<br>20 %  |
|                        | Attend   | ance<br>ment   | 10 %  | Qu   | iz<br>n Exam   |  |
| Evaluation             | Attend<br>Assign   | ance<br>ment<br>ation  | 10 %<br>20 %  | Qu<br>Mid-terr   | iiz<br>n Exam<br>Exam  | 20 %   |
| Evaluation             | Attend<br>Assign<br>Present                                | ance<br>ment<br>ation  | 10 %<br>20 %<br>%   | Qu<br>Mid-terr<br>Final  | iz n Exam Exam pation  | 20 %<br>40 %   |
| Evaluation             | Attend<br>Assign<br>Present                                | ance<br>ment<br>ation<br>Project                                     | 10 %<br>20 %<br>%   | Qu<br>Mid-terr<br>Final I<br>Partici   | iiz<br>n Exam<br>Exam<br>pation  | 20 %<br>40 %<br>10 %                                 |
| Evaluation             | Attend<br>Assign<br>Present<br>Group P                     | ance<br>ment<br>ation<br>Project                                     | 10 %<br>20 %<br>%   | Qu<br>Mid-terr<br>Final I<br>Particij<br>Evaluation Item   | iiz<br>n Exam<br>Exam<br>pation  | 20 %<br>40 %<br>10 %<br>Ratio                        |
| Evaluation             | Attend<br>Assign<br>Present<br>Group P                     | ance<br>ment<br>ation<br>Project                                     | 10 %<br>20 %<br>%<br>Midterm (Take<br>Final Exam  | Qu<br>Mid-terr<br>Final I<br>Particij<br>Evaluation Item   | iiz<br>m Exam<br>Exam<br>pation<br>nt)   | 20 %<br>40 %<br>10 %<br>Ratio<br>20 %                |
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| Daily                  | Attend<br>Assign<br>Present<br>Group P<br>Etc              | ance<br>ment<br>ation<br>Project<br><br>Day 1<br>Day 2               | 10 %<br>20 %<br>%<br>Midterm (Take<br>Final Exam<br>Introduction to<br>Introduction to<br>Application lag   | Qu<br>Mid-terr<br>Final I<br>Particij<br>Evaluation Item<br>Home Assignme<br>networks: protocc<br>networks: ISPs, Ir<br>/er: Principles (RT                  | nt Exam  | 20 %<br>40 %<br>10 %<br><b>Ratio</b><br>20 %<br>40 % |
|                        | Attend<br>Assign<br>Present<br>Group P<br>Etc<br>Week<br>1 | ance<br>ment<br>ation<br>Project<br>Day 1<br>Day 2<br>Day 3          | 10 %<br>20 %<br>%<br>Midterm (Take<br>Final Exam<br>Introduction to<br>Introduction to<br>Application lag   | Qu<br>Mid-terr<br>Final I<br>Particij<br>Evaluation Item<br>Home Assignme<br>networks: protocc<br>networks: ISPs, Ir<br>/er: Principles (RT                  | niz m Exam Exam pation nt) nt) nt, layering nternet architecture T, Delay, Bandwidth), HTT er popular protocols                    | 20 %<br>40 %<br>10 %<br><b>Ratio</b><br>20 %<br>40 % |
| Daily                  | Attend<br>Assign<br>Present<br>Group P<br>Etc              | ance<br>ment<br>ration<br>roject<br>Day 1<br>Day 2<br>Day 3<br>Day 4 | 10 %<br>20 %<br>%<br>%<br>Midterm (Take<br>Final Exam<br>Introduction to<br>Introduction to<br>Application lay<br>Transport laye<br>Transport laye  | Qu<br>Mid-terr<br>Final I<br>Particip<br>Evaluation Item<br>Home Assignme<br>Home Assignme<br>networks: ISPs, Ir<br>yer: Principles (RT<br>yer: DNS, and oth | iiz m Exam Exam pation nt) nt) nt, layering nternet architecture T, Delay, Bandwidth), HTT er popular protocols P ransfer design I | 20 %<br>40 %<br>10 %<br><b>Ratio</b><br>20 %<br>40 % |



|  |   | Day 4 | Congestion control mechanism              |
|--|---|-------|---|
|  | Day 1         Networking layer: Internet Protocol I           Week         Day 2         Networking layer: Internet Protocol II |       | Networking layer: Internet Protocol I     |
|  |   |       | Networking layer: Internet Protocol II    |
|  | 3   | Day 3 | Internet routing algorithms               |
|  |   | Day 4 | Research topics overview (paper review)   |
|  |   | Day 1 | Data Link layer: Multiple access protocol |
|  | Week  | Day 2 | Data Link layer: Ethernet                 |
|  | 4   | Day 3 | Final Exam                                |
|  |   | Day 4 | Graduation (NO class)                     |