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|-----------------------|--|--------------------|---------------------------|
| <b>Class title</b>    | Computer II<br>(전자계산2)   | <b>Credit</b>      | 2                         |
| <b>Class room</b>     | SCIXXX (과XXX)  | <b>Time</b>        | XXX (XXX)                 |
| <b>Lecturer</b>       | In-Sun Song (송인선)  | <b>Affiliation</b> | Dept. Atmos. Sci. (대기과학과) |
| <b>Office</b>         | Room 548, Science Hall (과548)  | <b>Contact</b>     | 02-2123-XXXX              |
| <b>Email</b>          | songi@yonsei.ac.kr   | <b>Visit hour</b>  | XXX (XXX)                 |
| <b>Level</b>          | Undergraduate students in science or engineering majors  |                    |                           |
| <b>Objectives</b>     | Understanding recent version of Fortran for scientific and engineering computations and handling self-descriptive binary data format   |                    |                           |
| <b>Pre-requisites</b> | Basic-level knowledge of operating system, computing system and hardware can help (e.g., Operating system, stack, heap).   |                    |                           |
| <b>Format</b>         | Mixture of online and offline (Online or offline weeks). Offline lectures will be announced in advance when they are expected to be possible.  |                    |                           |
| <b>Evaluation</b>     | Relative grading (Mid-term: 30%, Final-term: 30%, Assignment: 40%)   |                    |                           |
| <b>References</b>     | R1: Modern Fortran explained: Incorporating Fortran 2018, 5th edition, Oxford University Press, by M. Metchalf, J. Reid, and M. Cohen<br>R2: NetCDF4 Fortran documentation:<br><a href="https://www.unidata.ucar.edu/software/netcdf/docs-fortran">https://www.unidata.ucar.edu/software/netcdf/docs-fortran</a> |                    |                           |
| <b>Lecturer info</b>  | In-Sun Song<br>Visit <a href="https://undividedlife.github.io">https://undividedlife.github.io</a> for details   |                    |                           |
| <b>Tools</b>          | GNU fortran (gfortran), GNU C (gcc), GNU debugger (gdb) on Windows system  |                    |                           |
| <b>Language</b>       | Korean or English  |                    |                           |

| Week | Period                   | Contents  | Materials                         | Others                                  |
|------|--------------------------|---|-----------------------------------|---|
| 1    | 2021-03-02<br>2021-03-07 | Background, comparison with the other compiled and script languages, GNU compilers and debugger, Fortran source form, data type | R1-Ch.1 <sup>a</sup> ,<br>R1-Ch.2 | (3.2.)개강<br>(3.5.–3.9.) 수강신청<br>확인 및 변경 |
| 2    | 2021-03-08<br>2021-03-14 | Floating point arithmetic, exception handling   | R1-Ch.18                          | (3.5.–3.9.) 수강신청<br>확인 및 변경             |
| 3    | 2021-03-15<br>2021-03-21 | Assignments: Scalar, character, array   | R1-Ch.3,<br>R1-Ch.8               |   |
| 4    | 2021-03-22<br>2021-03-28 | Assignments: Derived data type, pointer   | R1-Ch.3,<br>R1-Ch.8               |   |
| 5    | 2021-03-29<br>2021-04-04 | Control constructs: If, case, where, continue, exit   | R1-Ch.4                           |   |
| 6    | 2021-04-05<br>2021-04-11 | Control constructs: Do, while   | R1-Ch.4                           | (4.5.–4.7.) 수강철회                        |
| 7    | 2021-04-12<br>2021-04-18 | File: (Un)formatted, namelist, Fortran binary, system independent binary with meta data   | R1-Ch.10,<br>R2                   |   |
| 8    | 2021-04-19<br>2021-04-25 | Mid-term exam   |                                   | (4.19.–4.23.)<br>중간시험                   |
| 9    | 2021-04-26<br>2021-05-02 | Program units: Main, subroutines, functions   | R1-Ch.5                           |   |
| 10   | 2021-05-03<br>2021-05-09 | Module, module procedure, scoping rules   | R1-Ch.5                           | (5.5.) 어린이날                             |
| 11   | 2021-05-10<br>2021-05-16 | Explicit interface, generic procedure, external libraries   | R1-Ch.5,<br>R2                    |   |
| 12   | 2021-05-17<br>2021-05-23 | Array features, memory management   | R1-Ch.6,<br>R1-Ch.7               | (5.19.) 부처님 오신<br>날                     |
| 13   | 2021-05-24<br>2021-05-30 | Intrinsic procedures  | R1-Ch.9                           |   |
| 14   | 2021-05-31<br>2021-06-06 | C-Interoperability, calling C libraries   | R1-Ch.19                          | (6.6.) 현충일                              |
| 15   | 2021-06-07<br>2021-06-13 | Coarray, parallelism, thread safety   | R1-Ch.17                          | (6.7.–6.11.)<br>자율학습 및<br>보충학습 기간       |
| 16   | 2021-06-14<br>2021-06-20 | Final exam  |                                   | (6.14.–6.18.)<br>기말시험                   |

<sup>a</sup>Chapter 1 in the reference 1 (R1)