# MODULE HANDBOOK DESCRIPTION

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| Module designation | *Digital Signal Processing Laboratory* | |
| Code | *FBC4112* | |
| Semester(s) in which the module is taught | *7/Fourth year* | |
| Person responsible for the module | *Djul Fikry B., ST., MT.* | |
| Language | *Indonesian* | |
| Relation to curriculum | *Elective For Telecommunications* | |
| Teaching methods | *Contextual Instruction (CI)* | |
| Workload (incl. contacthours, self-study hours) | *Contact minutes every week, each week of the 16 weeks/semester :*<br>• *Practice : 1 x 50 minutes*<br>• *Data analysis : 1 x 50 minutes*<br>• *Writing report : 1 x 50 minutes.*<br>*Total study hours = 2 hours 50 minutes/week* | |
| Credit points | *1 (~ 1,6 ECTS)* | |
| Required and recommended prerequisites for joiningthe module | - *Basic Telecommunications (FBS1217)*<br>- *Digital Signal Processing (FBC3207)* | |
| Module objectives/intend edlearning outcomes | 1. *Students are able to analyze Filter respond using Digital Infinite Impulse Response (IIR), Digital Finite Impulse Response (FIR),* | *PLO3* |
| | 2. *Students are able to design Digital Infinite Impulse Response (IIR) and Digital Finite Impulse Response (FIR)* | *PLO4* |
| | 3. *Students are able to compare device using Digital Infinite Impulse Response (IIR) and Digital Finite Impulse Response (FIR)* | *PLO5* |

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| Content | 1. *Introduction To Matlab*<br>2. *Digital Infinite Impulse Response (Iir) Filter*<br>3. *Digital Filters Finite Impulse Response (Fir)*<br>4. *Basic For Digital Signal Processing*<br>5. *Digital Filter Type Iir*<br>6. *Digital Filter Type Fir* |
| Examination forms | 1. *Pre-test*<br>2. *Practice skills*<br>3. *Practice report*<br>4. *Response* |
| Study and examination requirements | *The final grade in the module is composed of:*<br>1. *Pre-test and practice skills = 20%*<br>2. *Practice report and response = 80%*<br>*Students must have a final grade of 65% or higher to pass* |
| Reading list | 1. *Harijono, A. Tjokronegoro. 2001. Pengolahan Sinyal. Bandung : Departemen Teknik Fisika ITB*<br>2. *Lonie, C. Ludeman. 1997. Fundamentals of Digital Signal Processing. Singapore: John Willey and Sons*<br>3. *Lucas Nulle. 2012. Digital Signal Processing Laboratory. Jerman Barat Lucas Nulle*<br>4. *Shanmugam, K.Sam (2013), Digital And Analog Communication System, Wiley.* |