

1. Struktur Kurikulum Intelligent Wireless Communications & Satellite Systems (IWCSS)

Coursework based dengan 4 semester (4 Semesters coursework based) IWCSS

Semester	No	Code	Courses	Credit
I	1	TTI-6A3	Statistical Learning and Optimization	3
	2	TTI-6B3	ICT Business and Management	3
	3	TTI-6C3	Research Methodology	3
	4	TTI-6D3	Internet of Things	3
	5	TEI-6A3	Intelligent Systems	3
Semester I Credits				15
II	1	TTI-6Z2	Project, Seminar and Publications	2
	2	TTI-6E3	Information Theory and Coding	3
	3	TTI-6F3	Advanced Digital Communications	3
	4	TTI-6G3	Advanced Wireless Communications	3
	5		Elective Course 1 (Major)	3
Semester II Credits				14
III	1	TTI-7Y3	Thesis Proposal	3
	2	TTI-7A3	Advanced Digital Signal Processing and Applications	3
	3		Elective Course 2 (Major)	3
Semester III Credits				9
IV	1	TTI-7Z4	Thesis	4
	2		Elective Course 3 (Minor)	3
Semester IV Credits				7
Total Credits				45

Coursework based dengan 3 semester (3 Semesters coursework based) IWCSS

Semester	No	Code	Courses	Credit
I	1	TTI-6A3	Statistical Learning and Optimization	3
	2	TTI-6E3	Information Theory and Coding	3
	3	TTI-6C3	Research Methodology	3
	4	TTI-6F3	Advanced Digital Communications	3
	5	TEI-6A3	Intelligent Systems	3
	6	TTI-6Z2	Project, Seminar and Publications	2
Semester I Credits				17
II	1	TTI-7A3	Advanced Digital Signal Processing and Applications	3
	2	TTI-6B3	ICT Business and Management	3
	3	TTI-6D3	Internet of Things	3
	4	TTI-6G3	Advanced Wireless Communications	3
	5	TTI-7Y3	Thesis Proposal	3
Semester II Credits				15
III	1	TTI-7Z4	Thesis	4
	2		Elective Course 1 (Major)	3
	3		Elective Course 2 (Major)	3
	4		Elective Course 3 (Minor)	3
Semester III Credits				13
Total Credits				45

Mata Kuliah Pilihan IWCSS

Engineering Elective (Major)			
No	Code	Courses	Cr
1	TTI-6Y3	Advanced Satellite Communications	3
2	TTI-6P3	Advanced Multiple Access	3
3	TTI-6Q3	Intelligent Systems for Wireless Communications	3
4	TTI-7O3	Space System Engineering	3
5	TTI-7D3	Radar Signal Processing	3
6	TTI-7E3	Array Signal Processing	3
7	TTI-7F3	5G and Beyond Mobile Communications	3
8	TTI-7G3	Advanced Antenna	3
Engineering Elective (Minor)			
9	TTI-6S3	Advanced Topics in NECS	3
10	TTI-7K3	Telecom Network and Performance	3
11	TTI-6H3	Advanced Cyber Security	3
12	TTI-6K3	Management of Technology and Innovation	3

2. Struktur Kurikulum Network Engineering and Cyber Security (NECS)

Coursework based dengan 4 semester (4 Semesters coursework based) NECS

Semester	No	Code	Courses	Cr
I	1	TTI-6A3	Statistical Learning and Optimization	3
	2	TTI-6B3	ICT Business and Management	3
	3	TTI-6C3	Research Methodology	3
	4	TTI-6D3	Internet of Things	3
	5	TEI-6A3	Intelligent Systems	3
Semester I Credits				15
II	1	TTI-6Z2	Project, Seminar and Publications	2
	2	TTI-6H3	Advanced Cyber Security	3
	3	TTI-6I3	Data Network and Protocol	3
	4	TTI-6J3	Network Mathematics	3
	5		Elective Course 1 (Major)	3
Semester II Credits				14
III	1	TTI-7Y3	Thesis Proposal	3
	2	TTI-7B3	Advanced Model and Network Simulation	3
	3		Elective Course 2 (Major)	3
Semester III Credits				9
IV	1	TTI-7Z4	Thesis	4
	2		Elective Course 3 (Minor)	3
Semester IV Credits				7
Total Credits				45

Coursework based dengan 3 semester (3 Semesters coursework based) NECS

Semester	No	Code	Courses	Credit
I	1	TTI-6A3	Statistical Learning and Optimization	3
	2	TTI-6I3	Data Network and Protocol	3
	3	TTI-6C3	Research Methodology	3
	4	TTI-6J3	Network Mathematics	3
	5	TEI-6A3	Intelligent Systems	3
	6	TTI-6Z2	Project, Seminar and Publications	2
Semester I Credits				17
II	1	TTI-6H3	Advanced Cyber Security	3
	2	TTI-6B3	ICT Business and Management	3
	3	TTI-6D3	Internet of Things	3
	4	TTI-7B3	Advanced Model and Network Simulation	3
	5	TTI-7Y3	Thesis Proposal	3
Semester II Credits				15
III	1	TTI-7Z4	Thesis	4
	2		Elective Course 1 (Major)	3
	3		Elective Course 2 (Major)	3
	4		Elective Course 3 (Minor)	3
Semester III Credits				13
Total Credits				45

Mata Kuliah Pilihan NECS

Engineering Elective (Major)			
No	Code	Courses	Cr
1	TTI-6S3	Advanced Topics in NECS	3
2	TTI-6T3	Information Security	3
3	TTI-6U3	Software Networks	3
4	TTI-6V3	Data Mining	3
5	TTI-7H3	Broadband Communication Networks	3
6	TTI-7I3	Management and Audits for Information Security	3
7	TTI-7J3	IP Networks Interconnection	3
8	TTI-7K3	Telecom Networks and Performances	3
Engineering Elective (Minor)			
9	TTI-6Y3	Advanced Satellite Communications	3
10	TTI-7F3	5G and Beyond Mobile Communications	3
11	TEI-7C3	Advanced Smart Grid	3
12	TTI-6K3	Management of Technology and Innovation	3

3. Struktur Kurikulum Regulation and Management of Telecommunications (RMT)

Coursework based dengan 4 semester (4 Semesters coursework based) RMT

Semester	No	Code	Courses	Cr
I	1	TTI-6A3	Statistical Learning and Optimization	3
	2	TTI-6B3	ICT Business and Management / Telecom and Digital Business Management	3
	3	TTI-6C3	Research Methodology	3
	4	TTI-6D3	Internet of Things	3
	5	TEI-6A3	Intelligent Systems	3
Semester I Credits				15
II	1	TTI-6Z2	Project, Seminar and Publications	2
	2	TTI-6L3	Foundation of Policy and Regulation Development	3
	3	TTI-6K3	Management of Technology and Innovation	3
	4	TTI-6N3	Telecom Digital Policy and Regulations	3
	5		Elective Course 1 (Major)	3
Semester II Credits				14
III	1	TTI-7Y3	Thesis Proposal	3
	2	TTI-7C3	Digital Business Transformation	3
	3		Elective Course 2 (Major)	3
Semester III Credits				9
IV	1	TTI-7Z4	Thesis	4
	2		Elective Course 3 (Minor)	3
Semester IV Credits				7
Total Credits				45

Coursework based dengan 3 semester (3 Semesters coursework based) RMT

Semester	No	Code	Courses	Credit
I	1	TTI-6A3	Statistical Learning and Optimization	3
	2	TTI-6B3	ICT Business and Management	3
	3	TTI-6C3	Research Methodology	3
	4	TTI-6L3	Foundation of Policy and Regulation Development	3
	5	TEI-6A3	Intelligent Systems	3
	6	TTI-6Z2	Project, Seminar and Publications	2
Semester I Credits				17
II	1	TTI-6K3	Management of Technology and Innovation	3
	2	TTI-6N3	Telecom Digital Policy and Regulations	3
	3	TTI-6D3	Internet of Things	3
	4	TTI-7C3	Digital Business Transformation	3
	5	TTI-7Y3	Thesis Proposal	3
Semester II Credits				15
III	1	TTI-7Z4	Thesis	4
	2		Elective Course 1 (Major)	3
	3		Elective Course 2 (Major)	3
	4		Elective Course 3 (Minor)	3
Semester III Credits				13
Total Credits				45

Mata Kuliah Pilihan RMT

Engineering Elective (Major)			
No	Code	Courses	Cr
1	TTI-6W3	Strategic Management for Telecommunication Industries	3
2	TTI-6X3	Advanced Project Management	3
3	TTI-7L3	Telecommunication Resource Management	3
4	TTI-7J3	Interconnection of IP Networks	3
5	TTI-6U3	Software Networks	3
6	TTI-6H3	Advanced Cyber Security	3
7	TTI-7F3	5G and Beyond Mobile Communications	3
Engineering Elective (Minor)			
8	TEI-7C3	Advanced Smart Grid	3
9	TTI-6Y3	Advanced Satellite Communications	3
10	TTI-6S3	Advanced Topics in NECS	3
11	TEI-6F3	Industrial Automations	3

4. Struktur Kurikulum Control and Intelligent Systems (CIS)

Coursework based dengan 4 semester (4 Semesters coursework based) CIS

Semester	No	Code	Courses	Cr
I	1	TTI-6A3	Statistical Learning and Optimization	3
	2	TTI-6B3	ICT Business and Management	3
	3	TTI-6C3	Research Methodology	3
	4	TTI-6D3	Internet of Things	3
	5	TEI-6A3	Intelligent Systems	3
Semester I Credits				15
II	1	TTI-6Z2	Project, Seminar and Publications	2
	2	TEI-6B3	Linear System and Control	3
	3	TEI-6C3	Embedded Systems	3
	4	TEI-6D3	System Modeling and Identification	3
	5		Elective Course 1 (Major)	3
Semester II Credits				14
III	1	TTI-7Y3	Thesis Proposal	3
	2	TEI-7A3	Advanced Robotics	3
	3		Elective Course 2 (Major)	3
Semester III Credits				9
IV	1	TTI-7Z4	Thesis	4
	2		Elective Course 3 (Minor)	3
Semester IV Credits				7
Total Credits				45

Coursework based dengan 3 semester (3 Semesters coursework based) CIS

Semester	No	Code	Courses	Credit
I	1	TTI-6A3	Statistical Learning and Optimization	3
	2	TEI-6B3	Linear System and Control	3
	3	TTI-6C3	Research Methodology	3
	4	TEI-6D3	System Modeling and Identification	3
	5	TEI-6A3	Intelligent Systems	3
	6	TTI-6Z2	Project, Seminar and Publications	2
Semester I Credits				17
II	1	TEI-6C3	Embedded Systems	3
	2	TTI-6B3	ICT Business and Management	3
	3	TTI-6D3	Internet of Things	3
	4	TEI-7A3	Advanced Robotics	3
	5	TTI-7Y3	Thesis Proposal	3
Semester II Credits				15
III	1	TTI-7Z4	Thesis	4
	2		Elective Course 1 (Major)	3
	3		Elective Course 2 (Major)	3
	4		Elective Course 3 (Minor)	3
Semester III Credits				13
Total Credits				45

Mata Kuliah Pilihan CIS

Engineering Elective (Major)			
No	Code	Courses	Cr
1	TEI-6E3	Advanced Topics in Control	3
2	TEI-6F3	Industrial Automations	3
3	TEI-6G3	Advanced Machine Learning	3
4	TEI-6H3	Advanced Sensor Technology	3
5	TEI-7B3	Advanced Power Control System	3
6	TEI-7C3	Advanced Smart Grid	3
7	TEI-7D3	Advanced Topics in Biomedical Instrumentations and Signal	3
8	TEI-7E3	Sensor-Based Autonomous Navigation Robots	3
Engineering Elective (Minor)			
9	TTI-6H3	Advanced Cyber Security	3
10	TTI-6K3	Management of Technology and Innovations	3

5. Struktur Kurikulum Sustainable Energy Systems (SES)

Coursework based dengan 4 semester (4 Semesters coursework based) SES

Semester	No	Code	Courses	Cr
I	1	TTI-6A3	Statistical Learning and Optimization	3
	2	TTI-6B3	ICT Business and Management	3
	3	TTI-6C3	Research Methodology	3
	4	TTI-6D3	Internet of Things	3
	5	TEI-6A3	Intelligent Systems	3
Semester I Credits				15
II	1	TTI-6Z2	Project, Seminar and Publications	2
	2	TEI-6L3	Renewable and Sustainable Energy Technologies	3
	3	TEI-6M3	Stochastic Process for Energy Systems	3
	4	TEI-6N3	Operation and Control for Energy Systems	3
	5		Elective Course 1 (Major)	3
Semester II Credits				14
III	1	TTI-7Y3	Thesis Proposal	3
	2	TEI-7H3	Advanced Power Electronics	3
	3		Elective Course 2 (Major)	3
Semester III Credits				9
IV	1	TTI-7Z4	Thesis	4
	2		Elective Course 3 (Minor)	3
Semester IV Credits				7
Total Credits				45

Coursework based dengan 3 semester (3 Semesters coursework based) SES

Semester	No	Code	Courses	Credit
I	1	TTI-6A3	Statistical Learning and Optimization	3
	2	TEI-6L3	Renewable and Sustainable Energy Technologies	3
	3	TTI-6C3	Research Methodology	3
	4	TEI-6M3	Stochastic Process for Energy Systems	3
	5	TEI-6A3	Intelligent Systems	3
	6	TTI-6Z2	Project, Seminar and Publications	2
Semester I Credits				17
II	1	TEI-6N3	Operation and Control for Energy Systems	3
	2	TTI-6B3	ICT Business and Management	3
	3	TTI-6D3	Internet of Things	3
	4	TEI-7H3	Advanced Power Electronics	3
	5	TTI-7Y3	Thesis Proposal	3
Semester II Credits				15
III	1	TTI-7Z4	Thesis	4
	2		Elective Course 1 (Major)	3
	3		Elective Course 2 (Major)	3
	4		Elective Course 3 (Minor)	3
Semester III Credits				13
Total Credits				45

Mata Kuliah Pilihan SES

Engineering Elective (Major)			
No	Code	Courses	Cr
1	TEI-6O3	Energy Regulation and Economy	3
2	TEI-6P3	Energy Business Planning	3
3	TEI-6Q3	Electromagnetic Compatibility and Power Quality	3
4	TEI-6R3	Energy System Protection and Component Reliability	3
5	TEI-7I3	Energy System Automation and Digitalization	3
6	TEI-7J3	Social and Environmental Aspects of Sustainable Energy	3
7	TEI-7K3	Energy Storage Techniques	3
8	TEI-7C3	Advanced Smart Grid	3
Engineering Elective (Minor)			
9	TEI-7B3	Advanced Power Control System	3
10	TTI-6X3	Advanced Project Management	3

6. Struktur Kurikulum Telecommunication, Control and Electronic Research (TCER)

TELECOMMUNICATIONS, CONTROL AND ELECTRONICS RESEARCH				
Semeste	No	Mata Kuliah	SK S	Engineering Elective (Major)
I	1	Research Methodology	3	Diambil dari mata kuliah peminatan IWC/NECS/RMT/CIS sesuai topik penelitian dan tesis
	2	ICT Business and Management	3	
	3	Project, Seminar & Publication	2	
	4	Internet of Things	3	
	5	Research Topics 1	4	
SKS Semester I			15	Catatan:
II	1	Statistical Learning & Optimization	3	Warna merah adalah kuliah common di semua peminatan
	2	Intelligent Systems	3	Warna biru adalah mata kuliah penelitian dan tesis (mandiri atau dengan dosen pembimbing)
	3	Thesis Proposal	3	
	4	Research Topics 2	4	Warna hitam adalah mata kuliah pilihan terkait penelitian dan tesis (kelas)
SKS Semester II			13	
III	1	MK Pilihan 1 (Major)	3	
	2	MK Pilihan 2 (Major)	3	
	3	Research Topics 3	4	
SKS Semester III			10	
IV	1	Thesis	4	
	2	Research Topics 4	4	
SKS Semester IV			8	
Total SK S			46	