

Aturan Ekuivalensi Peminatan Sustainable Energy Systems

A. ATURAN UMUM PENGAMBILAN MK

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| 1 | Semua <i>mahasiswa baru</i> reguler/blended learning bukan Fast Track dikenai aturan pengambilan MK sesuai dengan Struktur Kurikulum Prodi S2 Teknik Elektro tahun 2024. |
| 2 | Semua mahasiswa baru jalur Fast Track dan <i>mahasiswa lama</i> yang telah mengambil MK S2 Teknik Elektro sebelumnya, aturan pengambilan MK berdasarkan poin B s.d. E. |
| 3 | Beban belajar <i>mahasiswa baru</i> Prodi S2 Teknik Elektro menyesuaikan Kurikulum 2024, yaitu 55 SKS dengan masa tempuh 2 semester untuk Fast Track dan 3-4 semester untuk non Fast Track |
| 4 | Beban belajar 45 SKS (Kurikulum 2020) untuk <i>mahasiswa lama</i> Prodi S2 Teknik Elektro masih dimungkinkan dengan syarat kelulusan paling lambat September 2025. |

B. ATURAN MK WAJIB PRODI BERHUBUNGAN DENGAN PENELITIAN (TESIS)

| 1 | Semua mahasiswa yang berencana akan mengambil MK berikut: TTI7Z4 Tesis (Kurikulum 2020) maka diwajibkan untuk mengambil kuliah: <table border="1"> <tr> <td>ABK7-YAA5</td> <td>Tesis 1: Publikasi</td> </tr> <tr> <td>ABK7-ZAA5</td> <td>Tesis 2</td> </tr> </table> | ABK7-YAA5 | Tesis 1: Publikasi | ABK7-ZAA5 | Tesis 2 | | | | | | | | | | | | |
|----------------------|---|------------------------------|-------------------------------|------------------------------|-------------------------------|---------|-------------------------------|-----------|------------------------|---------|----------------|-----------|----------------|---------|-----------------------|-----------|-------------------------------|
| ABK7-YAA5 | Tesis 1: Publikasi | | | | | | | | | | | | | | | | |
| ABK7-ZAA5 | Tesis 2 | | | | | | | | | | | | | | | | |
| 2 | Mahasiswa yang telah lulus MK berikut: <table border="1"> <tr> <td>TTI-7Y3</td> <td>Proposal Tesis</td> </tr> <tr> <td>TTI-6Z2</td> <td>Proyek, Seminar dan Publikasi</td> </tr> <tr> <td>TTI-6C3</td> <td>Metodologi Penelitian</td> </tr> </table> <p>maka dianggap sudah lulus MK Wajib prodi sebanyak jumlah SKS yang telah lulus dari 3 MK di atas.</p> | TTI-7Y3 | Proposal Tesis | TTI-6Z2 | Proyek, Seminar dan Publikasi | TTI-6C3 | Metodologi Penelitian | | | | | | | | | | |
| TTI-7Y3 | Proposal Tesis | | | | | | | | | | | | | | | | |
| TTI-6Z2 | Proyek, Seminar dan Publikasi | | | | | | | | | | | | | | | | |
| TTI-6C3 | Metodologi Penelitian | | | | | | | | | | | | | | | | |
| 3 | Mahasiswa yang belum mengambil atau belum lulus MK Proposal Tesis, MK Proyek, Seminar dan Publikasi, dan MK Metodologi Penelitian maka diwajibkan untuk mengambil MK padanan berikut di Kurikulum 2024: <table border="1"> <thead> <tr> <th colspan="2">MK di Kurikulum 2020</th> <th colspan="2">MK Padanan di Kurikulum 2024</th> </tr> </thead> <tbody> <tr> <td>TTI-6Z2</td> <td>Proyek, Seminar dan Publikasi</td> <td>ABK6-ZAB3</td> <td>Perancangan Penelitian</td> </tr> <tr> <td>TTI-7Y3</td> <td>Proposal Tesis</td> <td>ABK7-XAA3</td> <td>Proposal Tesis</td> </tr> <tr> <td>TTI-6C3</td> <td>Metodologi Penelitian</td> <td>ABK6-DAB3</td> <td>Filsafat dan Etika Penelitian</td> </tr> </tbody> </table> | MK di Kurikulum 2020 | | MK Padanan di Kurikulum 2024 | | TTI-6Z2 | Proyek, Seminar dan Publikasi | ABK6-ZAB3 | Perancangan Penelitian | TTI-7Y3 | Proposal Tesis | ABK7-XAA3 | Proposal Tesis | TTI-6C3 | Metodologi Penelitian | ABK6-DAB3 | Filsafat dan Etika Penelitian |
| MK di Kurikulum 2020 | | MK Padanan di Kurikulum 2024 | | | | | | | | | | | | | | | |
| TTI-6Z2 | Proyek, Seminar dan Publikasi | ABK6-ZAB3 | Perancangan Penelitian | | | | | | | | | | | | | | |
| TTI-7Y3 | Proposal Tesis | ABK7-XAA3 | Proposal Tesis | | | | | | | | | | | | | | |
| TTI-6C3 | Metodologi Penelitian | ABK6-DAB3 | Filsafat dan Etika Penelitian | | | | | | | | | | | | | | |

C. ATURAN MK WAJIB PRODI (SELAIN PADA POIN B)

| 1 | Mahasiswa yang telah lulus MK berikut di kurikulum 2020: <table border="1"> <tr> <td>TTI-6A3</td> <td>Pembelajaran Secara Statistik dan Optimisasi (3 SKS)</td> </tr> <tr> <td>TTI-6B3</td> <td>Manajemen dan Bisnis TIK (3 SKS)</td> </tr> <tr> <td>TTI-6D3</td> <td>Internet of Things (3 SKS)</td> </tr> <tr> <td>TEI-6A3</td> <td>Sistem Cerdas (3 SKS)</td> </tr> </table> <p>maka dianggap sudah mengambil MK wajib prodi sebanyak SKS yang telah lulus dari 4 MK di atas.</p> | TTI-6A3 | Pembelajaran Secara Statistik dan Optimisasi (3 SKS) | TTI-6B3 | Manajemen dan Bisnis TIK (3 SKS) | TTI-6D3 | Internet of Things (3 SKS) | TEI-6A3 | Sistem Cerdas (3 SKS) | | | | | | | | |
|----------------------------------|--|----------------------------------|--|------------------------------|----------------------------------|---------|----------------------------|-----------|--------------------------------|---------|---------------|-----------|--------------------------|---------|--|-----------|--|
| TTI-6A3 | Pembelajaran Secara Statistik dan Optimisasi (3 SKS) | | | | | | | | | | | | | | | | |
| TTI-6B3 | Manajemen dan Bisnis TIK (3 SKS) | | | | | | | | | | | | | | | | |
| TTI-6D3 | Internet of Things (3 SKS) | | | | | | | | | | | | | | | | |
| TEI-6A3 | Sistem Cerdas (3 SKS) | | | | | | | | | | | | | | | | |
| 2 | Mahasiswa yang belum lulus MK Manajemen dan Bisnis TIK, MK Pembelajaran Secara Statistik dan Optimisasi, MK Internet of Things, dan/atau MK Sistem Cerdas di Kurikulum 2020 maka diwajibkan untuk mengambil MK padanan berikut di Kurikulum 2024: <table border="1"> <thead> <tr> <th colspan="2">MK belum lulus di Kurikulum 2020</th> <th colspan="2">MK Padanan di Kurikulum 2024</th> </tr> </thead> <tbody> <tr> <td>TTI-6B3</td> <td>Manajemen dan Bisnis TIK</td> <td>ABK6-CAB3</td> <td>Kewirausahaan Untuk Perekayasa</td> </tr> <tr> <td>TEI-6A3</td> <td>Sistem Cerdas</td> <td>ABK6-AAB3</td> <td>Matematika Teknik Lanjut</td> </tr> <tr> <td>TTI-6A3</td> <td>Pembelajaran Secara Statistik dan Optimisasi</td> <td>ABK6-BAB3</td> <td>Pembelajaran Mendalam Untuk Teknik Elektro</td> </tr> </tbody> </table> <p>Catatan: Mahasiswa yang belum lulus MK Internet of Things di Kurikulum 2020 diharuskan mengambil 1 MK pengganti (total 3 sks) sebagai pengganti kuliah Internet of Things</p> | MK belum lulus di Kurikulum 2020 | | MK Padanan di Kurikulum 2024 | | TTI-6B3 | Manajemen dan Bisnis TIK | ABK6-CAB3 | Kewirausahaan Untuk Perekayasa | TEI-6A3 | Sistem Cerdas | ABK6-AAB3 | Matematika Teknik Lanjut | TTI-6A3 | Pembelajaran Secara Statistik dan Optimisasi | ABK6-BAB3 | Pembelajaran Mendalam Untuk Teknik Elektro |
| MK belum lulus di Kurikulum 2020 | | MK Padanan di Kurikulum 2024 | | | | | | | | | | | | | | | |
| TTI-6B3 | Manajemen dan Bisnis TIK | ABK6-CAB3 | Kewirausahaan Untuk Perekayasa | | | | | | | | | | | | | | |
| TEI-6A3 | Sistem Cerdas | ABK6-AAB3 | Matematika Teknik Lanjut | | | | | | | | | | | | | | |
| TTI-6A3 | Pembelajaran Secara Statistik dan Optimisasi | ABK6-BAB3 | Pembelajaran Mendalam Untuk Teknik Elektro | | | | | | | | | | | | | | |

D. ATURAN MK WAJIB PEMINATAN

| 1 | Mahasiswa yang telah lulus MK berikut di kurikulum 2020: <table border="1"> <tr> <td>TEI-6L3</td> <td>Teknologi Energi Terbarukan dan Berkelanjutan</td> </tr> <tr> <td>TEI-6M3</td> <td>Proses Stokastik Sistem Energi</td> </tr> <tr> <td>TEI-6N3</td> <td>Operasi dan Kendali Sistem Energi</td> </tr> <tr> <td>TEI-7H3</td> <td>Elektronika Daya Lanjut</td> </tr> </table> <p>maka bisa dianggap sudah mengambil MK wajib prodi sebanyak SKS yang telah lulus dari 4 MK di atas. Tetapi, jika ada MK yang belum lulus, maka diwajibkan untuk mengambil MK tersebut dengan padanan sebagai berikut di Kurikulum 2024: <table border="1"> <thead> <tr> <th colspan="2">MK belum lulus di Kurikulum 2020</th> <th colspan="2">MK Padanan di Kurikulum 2024</th> </tr> </thead> <tbody> <tr> <td>TEI-6L3</td> <td>Teknologi Energi Terbarukan dan Berkelanjutan</td> <td>ABK6-IFB3</td> <td>Perencanaan Energi Berkelanjutan</td> </tr> <tr> <td>TEI-6N3</td> <td>Operasi dan Kendali Sistem Energi</td> <td>ABK6-KFB3</td> <td>Operasi dan Kendali Sistem Energi</td> </tr> <tr> <td>TEI-6M3</td> <td>Proses Stokastik Sistem Energi</td> <td>ABK6-AAB3</td> <td>Matematika Teknik Lanjut</td> </tr> <tr> <td>TEI-7H3</td> <td>Elektronika Daya Lanjut</td> <td>ABK6-LFB3</td> <td>Elektronika Daya</td> </tr> </tbody> </table> </p> | TEI-6L3 | Teknologi Energi Terbarukan dan Berkelanjutan | TEI-6M3 | Proses Stokastik Sistem Energi | TEI-6N3 | Operasi dan Kendali Sistem Energi | TEI-7H3 | Elektronika Daya Lanjut | MK belum lulus di Kurikulum 2020 | | MK Padanan di Kurikulum 2024 | | TEI-6L3 | Teknologi Energi Terbarukan dan Berkelanjutan | ABK6-IFB3 | Perencanaan Energi Berkelanjutan | TEI-6N3 | Operasi dan Kendali Sistem Energi | ABK6-KFB3 | Operasi dan Kendali Sistem Energi | TEI-6M3 | Proses Stokastik Sistem Energi | ABK6-AAB3 | Matematika Teknik Lanjut | TEI-7H3 | Elektronika Daya Lanjut | ABK6-LFB3 | Elektronika Daya |
|----------------------------------|---|------------------------------|---|-----------|--------------------------------|---------|-----------------------------------|---------|-------------------------|----------------------------------|--|------------------------------|--|---------|---|-----------|----------------------------------|---------|-----------------------------------|-----------|-----------------------------------|---------|--------------------------------|-----------|--------------------------|---------|-------------------------|-----------|------------------|
| TEI-6L3 | Teknologi Energi Terbarukan dan Berkelanjutan | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEI-6M3 | Proses Stokastik Sistem Energi | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEI-6N3 | Operasi dan Kendali Sistem Energi | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEI-7H3 | Elektronika Daya Lanjut | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MK belum lulus di Kurikulum 2020 | | MK Padanan di Kurikulum 2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEI-6L3 | Teknologi Energi Terbarukan dan Berkelanjutan | ABK6-IFB3 | Perencanaan Energi Berkelanjutan | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEI-6N3 | Operasi dan Kendali Sistem Energi | ABK6-KFB3 | Operasi dan Kendali Sistem Energi | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEI-6M3 | Proses Stokastik Sistem Energi | ABK6-AAB3 | Matematika Teknik Lanjut | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEI-7H3 | Elektronika Daya Lanjut | ABK6-LFB3 | Elektronika Daya | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Jika jumlah SKS keseluruhan yang telah dan akan diambil pada poin D.1 lebih kecil dari 15 SKS, maka untuk menutupi kekurangan SKS untuk mencapai jumlah SKS MK Wajib Peminatan minimal 15 SKS, mahasiswa dapat memilih MK berikut disesuaikan dengan jumlah kekurangan SKS: <table border="1"> <tr> <td></td> <td>Energy Regulation and Economics</td> </tr> <tr> <td>ABK7-BFB3</td> <td>Modernisasi Grid</td> </tr> </table> | | Energy Regulation and Economics | ABK7-BFB3 | Modernisasi Grid | | | | | | | | | | | | | | | | | | | | | | | | |
| | Energy Regulation and Economics | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ABK7-BFB3 | Modernisasi Grid | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

E. ATURAN MK PILIHAN PEMINATAN

| 1 | Mahasiswa yang telah mengambil dan lulus MK Pilihan mayor dari peminatan SES dan MK minor dari peminatan lain dari Kurikulum 2020 di Prodi S2 TE, maka dapat diakui di kurikulum 2024 <p>Catatan: Syarat pengambilan MK Pilihan Peminatan Mayor sebanyak 2 MK (6 SKS) dan Mayor/Minor 2 MK (6 SKS), sehingga total SKS MK Pilihan Peminatan adalah 12 SKS</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|--|-----------|--|-----------|---|-----------|--|-----------|---------------------------|-----------|--------------------------------|-----------|---------------------------------|-----------|---|-----------|------------------------------------|-----------|--------------------------|-----------|---|----------------------------------|--|---|--|---------|--------------------------|-----------|--------------------------|---------|---|-----------|---|---------|--|-----------|--|---------|---|-----------|---|---------|--|-----------|--|---------|---------------------------|-----------|---------------------------|
| 2 | Mahasiswa dapat mengambil MK Pilihan Mayor berikut di Kurikulum 2024: <table border="1"> <tr> <td>ABK6-SZB3</td> <td>Electromagnetic Compatibility and Power Quality</td> </tr> <tr> <td>ABK6-TZB3</td> <td>Energy System Reliability and Protection</td> </tr> <tr> <td>ABK6-UZB3</td> <td>Energy System Automation and Digitalization</td> </tr> <tr> <td>ABK7-HZB3</td> <td>Social and Environmental Aspects of Sustainable Energy</td> </tr> <tr> <td>ABK7-IZB3</td> <td>Energy Storage Techniques</td> </tr> <tr> <td>ABK6-AZB3</td> <td>Energy Modeling and Simulation</td> </tr> <tr> <td>ABK6-BZB3</td> <td>Electric Transportation Systems</td> </tr> <tr> <td>ABK6-CZB3</td> <td>Direct Current Power Transmission Systems</td> </tr> <tr> <td>ABK7-JZB3</td> <td>Advanced Energy Conversion Systems</td> </tr> <tr> <td>ABK7-JZB3</td> <td>Energy Business Planning</td> </tr> <tr> <td>ABK7-AZB3</td> <td>Electrical Energy Material Technologies</td> </tr> </table> <p>Tetapi, mahasiswa yang telah lulus MK pilihan di kurikulum 2020 tidak diperbolehkan mengambil MK pilihan yang mempunyai padanan di kurikulum 2024 sesuai tabel ekuivalensi berikut: <table border="1"> <thead> <tr> <th colspan="2">MK telah lulus di Kurikulum 2020</th> <th colspan="2">MK peminatan yang tidak boleh diambil di Kurikulum 2024</th> </tr> </thead> <tbody> <tr> <td>TEI-6P3</td> <td>Energy Business Planning</td> <td>ABK7-JZB3</td> <td>Energy Business Planning</td> </tr> <tr> <td>TEI-6Q3</td> <td>Electromagnetic Compatibility and Power Quality</td> <td>ABK6-SZB3</td> <td>Electromagnetic Compatibility and Power Quality</td> </tr> <tr> <td>TEI-6R3</td> <td>Energy System Protection and Component Reliability</td> <td>ABK6-TZB3</td> <td>Energy System Reliability and Protection</td> </tr> <tr> <td>TEI-7I3</td> <td>Energy System Automation and Digitalization</td> <td>ABK6-UZB3</td> <td>Energy System Automation and Digitalization</td> </tr> <tr> <td>TEI-7J3</td> <td>Social and Environmental Aspects of Sustainable Energy</td> <td>ABK7-HZB3</td> <td>Social and Environmental Aspects of Sustainable Energy</td> </tr> <tr> <td>TEI-7K3</td> <td>Energy Storage Techniques</td> <td>ABK7-IZB3</td> <td>Energy Storage Techniques</td> </tr> </tbody> </table> </p> | ABK6-SZB3 | Electromagnetic Compatibility and Power Quality | ABK6-TZB3 | Energy System Reliability and Protection | ABK6-UZB3 | Energy System Automation and Digitalization | ABK7-HZB3 | Social and Environmental Aspects of Sustainable Energy | ABK7-IZB3 | Energy Storage Techniques | ABK6-AZB3 | Energy Modeling and Simulation | ABK6-BZB3 | Electric Transportation Systems | ABK6-CZB3 | Direct Current Power Transmission Systems | ABK7-JZB3 | Advanced Energy Conversion Systems | ABK7-JZB3 | Energy Business Planning | ABK7-AZB3 | Electrical Energy Material Technologies | MK telah lulus di Kurikulum 2020 | | MK peminatan yang tidak boleh diambil di Kurikulum 2024 | | TEI-6P3 | Energy Business Planning | ABK7-JZB3 | Energy Business Planning | TEI-6Q3 | Electromagnetic Compatibility and Power Quality | ABK6-SZB3 | Electromagnetic Compatibility and Power Quality | TEI-6R3 | Energy System Protection and Component Reliability | ABK6-TZB3 | Energy System Reliability and Protection | TEI-7I3 | Energy System Automation and Digitalization | ABK6-UZB3 | Energy System Automation and Digitalization | TEI-7J3 | Social and Environmental Aspects of Sustainable Energy | ABK7-HZB3 | Social and Environmental Aspects of Sustainable Energy | TEI-7K3 | Energy Storage Techniques | ABK7-IZB3 | Energy Storage Techniques |
| ABK6-SZB3 | Electromagnetic Compatibility and Power Quality | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ABK6-TZB3 | Energy System Reliability and Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ABK6-UZB3 | Energy System Automation and Digitalization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ABK7-HZB3 | Social and Environmental Aspects of Sustainable Energy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ABK7-IZB3 | Energy Storage Techniques | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ABK6-AZB3 | Energy Modeling and Simulation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ABK6-BZB3 | Electric Transportation Systems | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ABK6-CZB3 | Direct Current Power Transmission Systems | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ABK7-JZB3 | Advanced Energy Conversion Systems | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ABK7-JZB3 | Energy Business Planning | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ABK7-AZB3 | Electrical Energy Material Technologies | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MK telah lulus di Kurikulum 2020 | | MK peminatan yang tidak boleh diambil di Kurikulum 2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEI-6P3 | Energy Business Planning | ABK7-JZB3 | Energy Business Planning | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEI-6Q3 | Electromagnetic Compatibility and Power Quality | ABK6-SZB3 | Electromagnetic Compatibility and Power Quality | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEI-6R3 | Energy System Protection and Component Reliability | ABK6-TZB3 | Energy System Reliability and Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEI-7I3 | Energy System Automation and Digitalization | ABK6-UZB3 | Energy System Automation and Digitalization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEI-7J3 | Social and Environmental Aspects of Sustainable Energy | ABK7-HZB3 | Social and Environmental Aspects of Sustainable Energy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEI-7K3 | Energy Storage Techniques | ABK7-IZB3 | Energy Storage Techniques | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |