## Mandatory Courses and other relevant course at 10+2 Level for Admission into First Year Degree Engineering

**Prepared from Annexure - A1 (As Per the AICTE APH 2022 Appendix 1 – Table -1.3(a) ) and Appendix - 6 of AICTE**

| Major Disciplines | Mandatory courses at 10+2 Level | Other relevant course(s) for this discipline | Corresponding Course(s) | Under Graduate Degree Courses of corresponding major Disciplines |
|---|---|---|---|---|
| Aeronautical Engineering | Physics, Chemistry, Maths | NA | Aeronautical Engineering | Aero Space Engineering |
| | | | | Aeronautical Engineering |
| | | | | Aircraft Maintenance Engineering |
| Agriculture Engineering | Physics, Chemistry OR Agriculture stream | Maths/Biology/ Biotechnology/ Agriculture/ Agriculture stream | Agriculture Engineering | Agricultural Engineering |
| | | | | Agricultural Technology |
| | | | | Agriculture Engineering |
| Architecture and Planning | As per the COA | As per the COA | As per the COA | Architectural Assistantship |
| | | | | Architectural Engineering |
| | | | | Architecture and Interior Decoration |
| | | | | Architecture Assistantship |
| | | | | Architecture |
| | | | | Architecture (Interior Design) |
| | | | | Building Engineering and Construction Management |
| | | | | Interior Design |
| Planning | Maths | For remaining two courses select any courses out of 14# | Planning | Environmental Planning |
| | | | | Infrastructure Planning |
| | | | | Planning |
| | | | | Urban and Regional Planning |
| | | | | Urban Design |
| | | | | Urban Planning |
| | | | | Urban Regeneration |
| | | | | Urban Transport Planning and Management |
| Biotechnology | Physics, Chemistry | Select any one from Bio/Biotechnology/Maths | Biotechnology | Biotechnology |
| | | | | Biotechnology and BioChemical Engineering |
| | | | | Industrial Biotechnology |
| Ceramic Engineering | Physics, Chemistry, Maths | NA | Ceramic Engineering | Cement and Ceramic Technology |
| | | | | Ceramic Engineering and Technology |
| | | | | Ceramic Technology |
| | | | | Ceramics Engineering |

| Mandatory Courses and other relevant course at 10+2 Level for Admission into First Year Degree Engineering | | | | |
|---|---|---|---|---|
| Prepared from Annexure - A1 (As Per the AICTE APH 2022 Appendix 1 – Table -1.3(a) ) and Appendix - 6 of AICTE | | | | |
| **Major Disciplines** | **Mandatory courses at 10+2 Level** | **Other relevant course(s) for this discipline** | **Corresponding Course(s)** | **Under Graduate Degree Courses of corresponding major Disciplines** |
| Civil Engineering | Physics, Chemistry, Maths | NA | Civil Engineering | Building and Construction Technology |
| | | | | Civil and Rural Engineering |
| | | | | Civil Engineering |
| | | | | Civil Engineering and Planning |
| | | | | Civil Engineering (Construction Technology) |
| | | | | Civil and Infrastructure Engineering |
| | | | | Civil Technology |
| | | | | Construction Engineering |
| | | | | Construction Engineering and Management |
| | | | | Construction Technology |
| | | | | Construction Technology and Management |
| | | | | Geo Informatics |
| | | | Environment Engineering | Civil and Environmental Engineering |
| | | | | Civil Engineering (Environmental Engineering) |
| | | | | Civil Engineering Environment and Pollution Control |
| | | | | Environment Engineering |
| | | | | Environmental Engineering |
| | | | | Environmental Science and Engineering |
| | | | | Environmental Science and Technology |
| | | | | Civil Engineering (Environmental Engineering) |
| | | | | Civil Engineering (Public Health Engineering) |
| | | | | Environmental Planning |
| | | | Water Resources | Civil and Water Management Engineering |
| Computer Science and Engineering | Physics, Maths | For remaining single course select any courses out of 14# | Computer Science and Engineering | 3-D Animation and Graphics |
| | | | | Advanced Computer Application |
| | | | | Computer and Communication Engineering |
| | | | | Computer Engineering |
| | | | | Computer Engineering and Application |
| | | | | Computer Networking |
| | | | | Computer Science and Engineering |
| | | | | Computer Science |
| | | | | Computer Science and Technology |
| | | | | Computer Science and Information Technology |
| | | | | Computer Science and Systems Engineering |
| | | | | Computer Technology |
| | | | | Computing in Computing |
| | | | | Computing in Multimedia |
| | | | | Computing in Software |
| | | | | Electrical and Computer Engineering |
| | | | | Electronics and Computer Science |
| | | | | Electronics and Computer Engineering |
| | | | | Mathematics and Computing |
| | | | | Software Engineering |
| | | | Information Technology | Information and Communication Technology |
| | | | | Information Engineering |
| | | | | Information Science and Engineering |
| | | | | Information Science and Technology |
| | | | | Information Technology |
| | | | | Information Technology and Engineering |

| Mandatory Courses and other relevant course at 10+2 Level for Admission into First Year Degree Engineering | | | | |
|---|---|---|---|---|
| Prepared from Annexure - A1 (As Per the AICTE APH 2022 Appendix 1 – Table -1.3(a) ) and Appendix - 6 of AICTE | | | | |
| **Major Disciplines** | **Mandatory courses at 10+2 Level** | **Other relevant course(s) for this discipline** | **Corresponding Course(s)** | **Under Graduate Degree Courses of corresponding major Disciplines** |
| Chemical Engineering | Physics, Chemistry, Maths | NA | Chemical Engineering | Chemical and Electro Chemical Engineering |
| | | | | BioChemical Engineering |
| | | | | Chemical Engineering |
| | | | | Chemical Engineering (Plastic and Polymer) |
| | | | | Chemical Technology |
| | | | | Dye Stuff Technology |
| | | | | Surface Coating Technology |
| | | | Oil and Paint Technology | Oil and Paint Technology |
| | | | | Oil Technology |
| | | | | Oils, Oleo Chemicals and Surfactants Technology |
| | | | | Paint Technology |
| | | | PetroChemical Engineering | PetroChemistry and Petroleum Refinery Engineering |
| | | | | PetroChemical Engineering |
| | | | | PetroChemical Technology |
| | | | | Petroleum Engineering |
| | | | | Petroleum Technology |
| | | | Plastic and Polymer Technology | Plastic and Polymer Engineering |
| | | | | Plastics Engineering |
| | | | | Plastics Technology |
| | | | | Polymer Engineering |
| | | | | Polymer Engineering and Technology |
| | | | | Polymer Science and Chemical Technology |
| | | | | Polymer Science and Technology |
| | | | | Polymer Technology |
| Dairy Engineering | Physics, Chemistry, Maths | NA | Dairy Engineering | Dairy Engineering |
| | | | | Dairy Technology |
| Electrical Engineering | Physics, Maths | For remaining single course select any courses out of 14# | Electrical Engineering | Electrical and Computer Engineering |
| | | | | Electrical and Electronics (Power System) |
| | | | | Electrical and Electronics Engineering |
| | | | | Electrical and Instrumentation Engineering |
| | | | | Electrical and Mechanical Engineering |
| | | | | Electrical and Power Engineering |
| | | | | Electrical Engineering |
| | | | | Electrical Engineering (Electronics and Power) |
| | | | | Electrical Engineering Industrial Control |
| | | | | Electrical Instrumentation and Control Engineering |
| | | | | Electrical, Electronics and Power |
| | | | | Electronics and Computer Science |
| | | | | Electronics and Electrical Engineering |
| | | | | Electronics and Power Engineering |
| Energy Engineering | Physics, Chemistry, Maths | NA | Energy Engineering | Energy and Environmental Management |
| | | | | Energy Engineering |

| | | | | Mandatory Courses and other relevant course at 10+2 Level for Admission into First Year Degree Engineering |
|---|---|---|---|---|
| | | | | Prepared from Annexure - A1 (As Per the AICTE APH 2022 Appendix 1 – Table -1.3(a) ) and Appendix - 6 of AICTE |
| **Major Disciplines** | **Mandatory courses at 10+2 Level** | **Other relevant course(s) for this discipline** | **Corresponding Course(s)** | **Under Graduate Degree Courses of corresponding major Disciplines** |
| Electronics Engineering | Physics, Maths | For remaining one course select any course out of 14# | Electronics Engineering | Biomedical Engineering |
| | | | | Digital Techniques for Design and Planning |
| | | | | Electrical and Electronics Engineering |
| | | | | Electrical, Electronics and Power |
| | | | | Electronic Engineering |
| | | | | Electronic Science and Engineering |
| | | | | Electronics |
| | | | | Electronics and Computer Science |
| | | | | Electronics and Computer Engineering |
| | | | | Electronics and Control Systems |
| | | | | Electronics and Electrical Engineering |
| | | | | Electronics and Power Engineering |
| | | | | Electronics Design Technology |
| | | | | Electronics Engineering |
| | | | | Electronics System Engineering |
| | | | | Electronics Technology |
| | | | | Optics and Optoelectronics |
| | | | | Power Electronics |
| | | | | Power Electronics Engineering |
| | | | | Radio Physics and Electronics |
| | | | Electronics and Communication Engineering | Advanced Communication and Information System |
| | | | | Advanced Electronics and Communication Engineering |
| | | | | Applied Electronics and Communications |
| | | | | Biomedical Engineering |
| | | | | Communication Engineering |
| | | | | Electronics and Communication Engineering |
| | | | | Electronics and Communication Engineering (Industry Integrated) |
| | | | | Electronics and Telecommunication Engineering |
| | | | | Electronics and Telecommunication Engineering |
| | | | | Electronic Radio) |
| | | | | Electronics and Communication Engineering (Microwaves) |
| | | | | Electronics Communication and Instrumentation Engineering |
| | | | | Electronics and Telematics Engineering |
| | | | | Telecommunication Engineering |
| | | | Instrumentation Engineering | Applied Electronics and Instrumentation Engineering |
| | | | | Automation and Robotics |
| | | | | Automation Engineering |
| | | | | Biomedical Instrumentation |
| | | | | Electrical Engineering Industrial Control |
| | | | | Electrical Instrumentation and Control Engineering |
| | | | | Electronic Instrumentation and Control Engineering |
| | | | | Electronics and Instrumentation Engineering |
| | | | | Applied Electronics and Instrumentation Engineering |
| | | | | Electronics and Instrumentation Engineering |
| | | | | Electronics Instrumentation and Control Engineering |
| | | | | Power Electronics and Instrumentation Engineering |
| | | | | Electronics and Control Systems |
| | | | | Electronics Communication and Instrumentation Engineering |
| | | | | Electronics Instrumentation and Control Engineering |
| | | | | Instrument Technology |
| | | | | Instrumentation |
| | | | | Instrumentation and Control Engineering |
| | | | | Instrumentation and Electronics |
| | | | | Instrumentation Engineering |
| | | | | Instrumentation Technology |
| | | | | Power Electronics and Instrumentation Engineering |
| | | | | Robotics and Automation |
| | | | Mechatronics Engineering | Mechatronics |
| | | | | Mechatronics Engineering |
| | | | Medical Electronics | Medical Electronics Engineering |
| | | | | Medical Electronics |
| | | | | Medical Lab Technology |
| | | | | Electronics and Biomedical Engineering |

## Mandatory Courses and other relevant course at 10+2 Level for Admission into First Year Degree Engineering

### Prepared from Annexure - A1 (As Per the AICTE APH 2022 Appendix 1 – Table -1.3(a) ) and Appendix - 6 of AICTE

| Major Disciplines | Mandatory courses at 10+2 Level | Other relevant course(s) for this discipline | Corresponding Course(s) | Under Graduate Degree Courses of corresponding major Disciplines |
|---|---|---|---|---|
| Mechanical Engineering | Physics, Chemistry, Maths | NA | Mechanical Engineering | Electrical and Mechanical Engineering |
| | | | | Mechanical Engineering (Industry Integrated) |
| | | | | Mechanical Engineering |
| | | | | Mechanical Engineering (Repair and Maintenance) |
| | | | | Power Engineering |
| | | | Production Engineering | Industrial and Production Engineering |
| | | | | Machine Engineering |
| | | | | Manufacturing Engineering |
| | | | | Manufacturing Engineering and Automation |
| | | | | Manufacturing Engineering and Technology |
| | | | | Manufacturing Process and Automation Engineering |
| | | | | Manufacturing Science and Engineering |
| | | | | Manufacturing Technology |
| | | | | Mechanical Engineering (Production) |
| | | | | Precision Manufacturing |
| | | | | Production and Industrial Engineering |
| | | | | Production Engineering |
| | | | | Tool Engineering |
| | | | Automobile Engineering | Automobile Engineering |
| | | | | Automobile Maintenance Engineering |
| | | | | Automotive Technology |
| | | | | Mechanical Engineering (Automobile) |
| | | | | Mechanical Engineering Automobile |
| | | | Industrial Engineering | Industrial and Production Engineering |
| | | | | Industrial Engineering |
| | | | | Industrial Engineering and Management |
| | | | Mechatronics Engineering | Mechanical and Automation Engineering |
| | | | | Mechatronics |
| | | | | Mechatronics Engineering |
| Fire and Safety Engineering | Physics, Chemistry, Maths | NA | Fire and Safety Engineering | Fire Technology and Safety |
| | | | | Safety and Fire Engineering |
| Food Engineering | Chemistry | For remaining two courses select any courses out of 14# | Food Engineering | Food Engineering and Technology |
| | | | | Food Processing and Preservation |
| | | | | Food Processing Technology |
| | | | | Food Technology |
| | | | | Food Technology and Management |
| Leather Technology | Chemistry | For remaining two courses select any courses out of 14# | Leather Technology | Foot Wear Technology |
| | | | | Leather Technology |
| Marine Engineering | Physics, Chemistry, Maths | NA | Marine Engineering | Naval Architecture and Ship Building Engineering |
| | | | | Shipbuilding Engineering |
| | | | | Marine Engineering |
| | | | | Marine Technology |
| Metallurgy Engineering | Physics, Chemistry, Maths | NA | Metallurgy Engineering | Material Science and Technology |
| | | | | Metallurgical and Materials Engineering |
| | | | | Metallurgical Engineering |
| | | | | Metallurgy |
| | | | | Metallurgy and Material Technology |
| Military Engineering | Physics, Chemistry, Maths | NA | Military Engineering | Military Engineering |
| Mining Engineering | Physics, Chemistry, Maths | NA | Mining Engineering | Mine Engineering |
| | | | | Mining Engineering |
| Nano Technology | Physics, Chemistry, Maths | NA | Nano Technology | Nano Science and Technology |
| | | | | Nano Technology |
| | | | | Nano Technology and Robotics |
| Nuclear Science And Technology | Physics, Chemistry, Maths | NA | Nuclear Science And Technology | Nuclear Science and Technology |
| Packaging Technology | NA | Select any courses out of 14# | Packaging Technology | Packaging Technology |
| | | | | Printing and Packing Technology |
| Pharmaceutical Engineering | Physics, Chemistry | Select any one from Bio/Biotechnology/Maths | Pharmaceutical Engineering | Pharmaceuticals and Fine Chemical Technology |
| | | | | Pharmaceutical Chemical and Technology |

Note :

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|---|---|
| 1 | ** First one or two Semesters may be so designed that students with Biology/Biotechnology background have adequate courses on Maths and Vice Versa and then the class is at level studying field for the rest of the semesters. |
| 2 | # Physics/ Mathematics / Chemistry/ Computer Science/Electronics/Information Technology/ Biology/ Informatics Practices/ Biotechnology/ Technical Vocational subject/ Agriculture/ Engineering Graphics/ Business Studies/Entrepreneurship |
| 3 | Refer ANNEXURE-6 of APH 2022 - Major Disciplines, their corresponding Courses and Relevant/ Appropriate Branch of Under Graduate Degree in Engineering and Technology |