



Advisory Study Plan

Summary of the Study Plan:

| Academic Year | The University of Jordan | | JORAMCO | |
|---|---|------------------|---|-------------------|
| | Weekly Schedule | No. of Students* | Weekly Schedule (Practical Courses) | No. of Students** |
| First Semester | Sunday, Tuesday, Thursday | 15-25 | | 15 |
| Second Semester | Sunday, Tuesday, Thursday | 15-25 | | 15 |
| Summer Semester (1st Year) | Sunday, Monday Tuesday, Wednesday (8:30-11:30) | 15-25 | Tuesday, Wednesday (11:30-3:30) Thursday | 15 |
| Summer Semester (2nd – 5th Year) | | | Sunday, Monday, Tuesday, Wednesday, Thursday | 15 |

* Maximum number of students is 25 according to the capacity approved by the Higher Education Accreditation and Quality Assurance Commission, and the requirements of the Jordanian Civil Aviation Authority (exceptional).

** Maximum number of students is 15 according to the requirements of the Jordanian Civil Aviation Authority and the European Aviation Authority for the CARC certificate.



Yellow colored is delivered at JORAMCO premises

First Year

| First Semester (Sun Tus Thu @ UJ) + (Mon Wed @ JORAMCO) | | | | Second Semester (Sun Tus Thu @ UJ) + (Mon Wed @ JORAMCO) | | | |
|---|--|------------------|--------------|--|--|------------------|--------------|
| Course Number | Course Title | Type of Learning | Credit Hours | Course Number | Course Title | Type of Learning | Credit Hours |
| | University Requirement | Blended | 3 | | University Requirement | Blended | 3 |
| 0301101 | Calculus I | Face-to-Face | 3 | 0301102 | Calculus II | Face-to-Face | 3 |
| 0302101 | General Physics I | Face-to-Face | 3 | 0302102 | General Physics II | Face-to-Face | 3 |
| 0303101 | General Chemistry I | Face-to-Face | 3 | 0302111 | General Physics Lab. I | Face-to-Face | 1 |
| 0904131 | Engineering Graphics and Descriptive Geometry | Face-to-Face | 3 | 0303109 | General Chemistry Lab. I | Face-to-Face | 1 |
| 0966111 | Engineering Workshop | Face-to-Face | 1 | 0907101 | Computer Skills for Engineers | Face-to-Face | 3 |
| 0994151 | Licensing Module 3: Electrical Fundamentals | Face-to-Face | 0 | 0904233 | Machine Drawing | Face-to-Face | 1 |
| 0994152 | Licensing Module 4: Electronic Fundamentals | Face-to-Face | 0 | 0994154 | Licensing Module 5: Digital Techniques/ Electronic Instrument Systems (Part 2) | Face-to-Face | 0 |
| 0994153 | Licensing Module 5: Digital Techniques/ Electronic Instrument Systems (Part 1) | Face-to-Face | 0 | 0994155 | Licensing Module 6: Materials and Hardware | Face-to-Face | 0 |
| | | | | 0994156 | Licensing Module 8: Basic Aerodynamics (Part 1) | Face-to-Face | 0 |
| Total | | | 16 | Total | | | 15 |



| Summer Semester (Sun Mon @ UJ) + (Tue Wed "8:30-11:30" @JU) + (Tue Wed "11:30-3:30" +Thu @ JORAMCO) | | | |
|--|--|------------------|--------------|
| Course Number | Course Title | Type of Learning | Credit Hours |
| | University Requirement | Blended | 3 |
| 0302112 | General Physics Lab. II | Face-to-Face | 1 |
| 0301201 | Calculus III | Face-to-Face | 3 |
| 0994157# | Licensing Module 8: Basic Aerodynamics (Part 2) | Face-to-Face | 0 |
| 0994158# | Licensing Module 9: Human Factors | Face-to-Face | 0 |
| 0994159# | Licensing Module 10: Aviation Legislation (Part 1) | Face-to-Face | 0 |
| Total | | | 7 |

This course is 12 weeks' course



Second Year

| First Semester (Sun Tus Thu @ UJ) + (Mon Wed @ JORAMCO) | | | | Second Semester (Sun Tus Thu @ UJ) + (Mon Wed @ JORAMCO) | | | |
|---|---|------------------|--------------|--|---|------------------|--------------|
| Course Number | Course Title | Type of Learning | Credit Hours | Course Number | Course Title | Type of Learning | Credit Hours |
| | University Requirement | Blended | 3 | 0994202 | Engineering Math II for Aeronautical Engineering Students | Blended | 3 |
| 0914202 | Computer Programming for Engineers | Blended | 1 | 0904222 | Dynamics | Face-to-Face | 3 |
| 0994201 | Engineering Math I for Aeronautical Engineering Students | Blended | 3 | 0934372 | Strength of Materials | Face-to-Face | 3 |
| 0901241 | Statics | Face-to-Face | 3 | 0904361 | Fluid Mechanics | Face-to-Face | 3 |
| 0903203 | Fundamentals of Electrical Engineering (none EE students) | Face-to-Face | 3 | 0994253 | Licensing Module 7: Maintenance Practice II | Face-to-Face | 3 |
| 0994251 | Licensing Module 10: Aviation Legislation (Part 2) | Face-to-Face | 0 | 0994254 | Licensing Module 15: Gas Turbine Engine (Part 1) | Face-to-Face | 0 |
| 0994252 | Licensing Module 7: Maintenance Practice I | Face-to-Face | 3 | | | | |
| Total | | | 16 | Total | | | 15 |



| Summer Semester (Sun Mon Tue Wed @JORAMCO) Instructor's Transportation Means is Required | | | |
|---|--|-------------------------|---------------------|
| Course Number | Course Title | Type of Learning | Credit Hours |
| Online | University Requirement (online) | Online | 3 |
| 0904302 | Engineering Numerical Methods | Online | 3 |
| 0994255# | Licensing Module 15: Gas Turbine Engine (Part 2) | Face-to-Face | 0 |
| 0994256# | Licensing Module 17: Propeller | Face-to-Face | 0 |
| Total | | | 6 |

This course is 12 weeks' course



Third Year

| First Semester (Sun Tus Thu @ UJ) + (Mon Wed @ JORAMCO) | | | | Second Semester (Sun Tus Thu @ UJ) + (Mon Wed @ JORAMCO) | | | |
|---|--|------------------|--------------|--|--|------------------|--------------|
| Course Number | Course Title | Type of Learning | Credit Hours | Course Number | Course Title | Type of Learning | Credit Hours |
| | University Requirement | Blended | 3 | | University Requirement | Blended | 3 |
| 0904341 | Thermodynamics | Face-to-Face | 3 | 0944331 | Mechanics of Machines | Face-to-Face | 3 |
| 0934345 | Thermodynamics Lab. | Face-to-Face | 1 | 0994311 | Sound and Mechanical Vibrations | Blended | 3 |
| 0994363 | Aerodynamics I | Blended | 3 | 0994331 | Machine Elements Design | Blended | 3 |
| 0904441 | Heat Transfer | Face-to-Face | 3 | 0994364 | Aeronautics Lab. I | Face-to-Face | 1 |
| 0904362 | Fluid Mechanics Lab. | Face-to-Face | 1 | 0954412 | Mechanical Vibrations Lab. | Face-to-Face | 1 |
| 0994352 | Licensing Module 11: Aeroplane Aerodynamic, Structure and Systems (Part 1) | Face-to-Face | 0 | 0994353 | Licensing Module 11: Aeroplane Aerodynamic, Structure and Systems (Part 2) | Face-to-Face | 0 |
| Total | | | 14 | Total | | | 14 |

| Summer Semester (Sun Mon Tue Wed @JORAMCO) Instructor's Transportation Means is Required | | | |
|--|---|------------------|--------------|
| Course Number | Course Title | Type of Learning | Credit Hours |
| 0994443 | Propulsion | Face-to-Face | 3 |
| 0994461 | Gas Dynamics | Face-to-Face | 3 |
| 0994351# | Maintenance Practice III: Aircraft Practical Experience | Face-to-Face | 3 |
| 0994354# | Work Experience 1 | Face-to-Face | 0 |
| Total | | | 9 |

This course is 12 weeks' course



Fourth Year

| First Semester (Sun Tus Thu @ UJ) + (Mon Wed @ JORAMCO) | | | | Second Semester (Sun Tus Thu @ UJ) + (Mon Wed @ JORAMCO) | | | |
|--|--|------------------|--------------|---|--------------------------------|------------------|--------------|
| Course Number | Course Title | Type of Learning | Credit Hours | Course Number | Course Title | Type of Learning | Credit Hours |
| 0994482 | Aircraft Performance | Face-to-Face | 3 | | University Requirement | Online | 3 |
| 0994411 | Automatic Control | Face-to-Face | 3 | | University Requirement | Blended | 3 |
| 0994471 | Materials Science for Aeronautical Engineers | Online | 3 | 0994501 | Instrumentation | Blended | 3 |
| 0994481 | Aircraft Structure I | Blended | 3 | 0934374 | Materials Lab. | Face-to-Face | 1 |
| 0994451 | Maintenance Practice IV: Work Experience | Face-to-Face | 3 | 0994412 | Aircraft Stability and Control | Blended | 3 |
| 0994452 | Work Experience 2 | Face-to-Face | 0 | 0904446 | Heat Transfer Lab. | Face-to-Face | 1 |
| | | | | 0921420 | Engineering Economy | Online | 2 |
| | | | | 0994453 | Work Experience 3 | Face-to-Face | 0 |
| Total | | | 15 | Total | | | 16 |

| Summer Semester (Sun Mon Tue Wed @JORAMCO) Instructor's Transportation Means is Required | | | |
|--|------------------------------|------------------|--------------|
| Course Number | Course Title | Type of Learning | Credit Hours |
| 0994365 | Field Aeronautics Lab. II | Face-to-Face | 1 |
| 0994581 | Aircraft Maintenance Systems | Face-to-Face | 3 |
| 0994531 | Aircraft Design | Face-to-Face | 3 |
| 0994454# | Work Experience 4 | Face-to-Face | 0 |
| Total | | | 7 |

This course is 12 weeks' course



Fifth Year

| First Semester (Sun Tus Thu @ UJ) + (Mon Wed @ JORAMCO) | | | | Second Semester (Sun Tus Thu @ UJ) + (Mon Wed @ JORAMCO) | | | |
|--|---|------------------|--------------|---|--|------------------|--------------|
| Course Number | Course Title | Type of Learning | Credit Hours | Course Number | Course Title | Type of Learning | Credit Hours |
| 0994591 | Project I for Aeronautical Engineers | Face-to-Face | 1 | | Project II for Aeronautical Engineers | Face-to-Face | 2 |
| 09945## | Technical Elective ^{\$} | Online | 3 | 09945## | Technical Elective ^{\$} | Blended | 3 |
| 0994593* | Employability Readiness and Field Training (Aeronautical Engineering) | Face-to-Face | 5 | 09945## | Technical Elective ^{\$} | Blended | 3 |
| 0994551 | Maintenance Practice V: Work Experience | Face-to-Face | 3 | 0994571 | Composite Materials | Blended | 3 |
| 0994552 | Maintenance Practice VI: Work Experience | Face-to-Face | 3 | 0994502 | Instrumentation and Dynamic Systems Lab. | Face-to-Face | 1 |
| 0994553 | Work Experience 5 | Face-to-Face | 0 | 0994554 | Work Experience 6 | Face-to-Face | 0 |
| Total | | | 15 | Total | | | 12 |

| Summer Semester (Sun Mon Tue Wed @ JORAMCO) Instructor's Transportation Means is Required | | | |
|---|-------------------|------------------|--------------|
| Course Number | Course Title | Type of Learning | Credit Hours |
| 0994555# | Work Experience 7 | Face-to-Face | 0 |
| Total | | | 0 |

\$ Offered according to JORAMCO Approval

*** Students can enroll in other courses with this course.**

This course is 12 weeks' course



Course Description of Licensing Modules of B1.1

| | | |
|----------------|--|-------------------------|
| 0994151 | Licensing Module 3: Electrical Fundamentals | (0 Credit Hours) |
|----------------|--|-------------------------|

Prerequisite: None

Electron theory
 Static electricity and conduction
 Electrical terminology
 Generation of electricity
 DC sources of electricity
 DC circuits
 Resistance/ resistor power
 Capacitance/ capacitor magnetism
 Inductance/ inductor
 DC motor/ generator theory
 AC theory
 Resistive (R), Capacitive (C) and Inductive (L) circuits transformers filters
 AC generators
 AC motors

| | | |
|----------------|--|-------------------------|
| 0994152 | Licensing Module 4: Electronic Fundamentals | (0 Credit Hours) |
|----------------|--|-------------------------|

Prerequisite: None

Semiconductors
 Printed circuit boards
 Servomechanisms

| | | |
|----------------|--|-------------------------|
| 0994153 | Licensing Module 5: Digital Techniques Electronic Instrument Systems (Part 1) | (0 Credit Hours) |
|----------------|--|-------------------------|

Prerequisite: None

Electronic instrument systems
 Numbering systems
 Data conversion
 Data buses
 Logic circuits
 Basic computer structure



0994154 Licensing Module 5: Digital Techniques Electronic Instrument Systems (Part 2)

(0 Credit Hours)

Prerequisite: 0994153

Fiber optics
Electronic displays
Electrostatic sensitive devices
Software management control
Electromagnetic environment
Typical electronic/ digital aircraft systems

0994158# Licensing Module 9: Human Factors

(0 Credit Hours)

Prerequisite: None

General
Human performance and limitations
Social psychology
Factors affecting performance
Physical environment Tasks
Communication
Human error
Hazard in the workplace

0994159# Licensing Module 10: Aviation Legislation (Part 1)

(0 Credit Hours)

Prerequisite: None

Regulatory framework certifying staff-maintenance
Approved maintenance organizations
Air operations
Independent Certifying staff
Certification of aircraft, parts and appliances

0994251 Licensing Module 10: Aviation Legislation (Part 2)

(0 Credit Hours)

Prerequisite: 0994159

Continuing airworthiness
Oversight principle in continuing airworthiness
Maintenance and certification beyond the current EU regulations
Cybersecurity in aviation maintenance


0994155 Licensing Module 6: Materials & Hardware
(0 Credit Hours)
Prerequisite: None

Fasteners
Pipes and unions
Springs
Bearings
Transmissions
Control cables
Electrical cables and connectors
Aircraft materials-ferrous
Aircraft materials-non ferrous
Aircraft materials-composite and non-metallic
Corrosion

0994156 Licensing Module 8: Basic Aerodynamics (Part 1)
(0 Credit Hours)
Prerequisite: None

Physics of the atmosphere
Aerodynamics
High speed airflow

0994157 Licensing Module 8: Basic Aerodynamics (Part 2)
(0 Credit Hours)
Prerequisite: 0994156

Theory of flight
Flight stability and dynamics

0994352 Licensing Module 11: Aeroplane Aerodynamics and Structures and Systems (Part 1)
(0 Credit Hours)
Prerequisite: None

Theory of flight
Airframe structures-general concepts
Airframe structures-aeroplanes
Air conditioning and cabin pressurization (ATA21)
Equipment and furnishings (ATA 25)
Flight controls (ATA 27)



Fuel systems (ATA 28)
 Hydraulic power (ATA 29)
 Ice and Rain protection (ATA 30)
 Landing gear (ATA 32)
 Oxygen (ATA 35)
 Pneumatics/vacuum (ATA 36)
 Water/ waste (ATA 38)

0994353 Licensing Module 11: Aeroplane Aerodynamics and Structures and Systems (**Part 2**)

(0 Credit Hours)

Prerequisite: 0994352

Instruments/ avionics systems
 Electrical power (ATA 24)
 Fire protection (ATA26)
 Lights (ATA 33)
 On board maintenance systems (ATA 45)
 Integrated Modular Avionics (ATA42)
 Cabin Systems (ATA 44)
 Information Systems (ATA46)

0994254 Licensing Module 15: Gas Turbine Engine (**Part 1**)

(0 Credit Hours)

Prerequisite: None

Fundamentals
 Engine performance
 Inlet
 Compressors
 Combustion section
 Turbine section
 Exhaust
 Bearings and seals
 Lubricants and fuels
 Lubrication systems
 Fuel systems
 Air systems



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|-----------|---|------------------|
| 0994255 # | Licensing Module 15: Gas Turbine Engine (Part 2) | (0 Credit Hours) |
|-----------|---|------------------|

Prerequisite: 0994254

Starting and ignition systems
 Engine indication systems
 Power augmentation systems
 Turbo-prop engines
 Turbo-shaft engines
 Auxiliary power units (APUs)
 Power plant installation
 Fire protection systems
 Engine monitoring and ground operation
 Engine storage and preservation

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|----------|--------------------------------|------------------|
| 0994256# | Licensing Module 17: Propeller | (0 Credit Hours) |
|----------|--------------------------------|------------------|

Prerequisite: None

Fundamentals
 Propeller construction
 Propeller pitch control
 Propeller synchronizing
 Propeller ice protection
 Propeller maintenance
 Propeller storage and Preservation

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|---------|--|------------------|
| 0994252 | Licensing Module 7: Maintenance Practice I | (3 Credit Hours) |
|---------|--|------------------|

Prerequisite: None

Safety precautions – aircraft and workshop
 Workshop practices, Tools,
 Engineering drawings, diagrams, and standards,
 Fits and clearances,
 Electrical wiring interconnection system (EWIS), Riveting.

| | | |
|---------|---|------------------|
| 0994253 | Licensing Module 7: Maintenance Practice II | (3 Credit Hours) |
|---------|---|------------------|

Prerequisite: 0994252

Pipes and hoses, Springs, Bearings, Transmissions, Control cables, Material handling, Aircraft weight and balance, Aircraft handling and storage, Disassembly, inspection, repair, and assembly techniques, Abnormal events, Maintenance procedures, Documentation and Communication.



| | | |
|----------|---|------------------|
| 0994351# | Maintenance Practice III: Aircraft Practical Experience | (3 Credit Hours) |
|----------|---|------------------|

Prerequisite: 0994202

Practical experience in aircraft maintenance typically involves hands-on tasks and activities to ensure the safety, reliability, and performance of aircraft. This course focusing in the following practical topics:

Inspection and Diagnosis: Conducting routine and detailed inspections to identify any wear, damage, or malfunction. This includes visual inspections and using diagnostic tools. Routine Maintenance: Performing regular maintenance tasks such as oil changes, filter replacements, and checking fluid levels. Repair and Replacement: Fixing or replacing faulty components, including engines, avionics, hydraulic systems, and landing gear. Testing and Calibration: Ensuring all systems and instruments are functioning correctly through various tests and calibrations. Documentation: Maintaining accurate records of all maintenance work performed, including any discrepancies and corrective actions taken. Compliance: Ensuring all work is done in accordance with aviation regulations and manufacturer specifications. Safety Procedures: Adhering to strict safety protocols to protect both the personnel and the aircraft.

| | | |
|---------|--|------------------|
| 0994451 | Maintenance Practice IV: Work Experience | (3 Credit Hours) |
|---------|--|------------------|

Prerequisite: 0994471*

Performing many types of tasks related to aircraft systems

| | | |
|---------|---|------------------|
| 0994551 | Maintenance Practice V: Work Experience | (3 Credit Hours) |
|---------|---|------------------|

Prerequisite: 0994581*

Performing many types of tasks related to aircraft systems

| | | |
|---------|--|------------------|
| 0994552 | Maintenance Practice VI: Work Experience | (3 Credit Hours) |
|---------|--|------------------|

Prerequisite: 0994461*

Performing many types of tasks related to aircraft systems

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|----------|-------------------|------------------|
| #0994354 | Work Experience 1 | (0 Credit Hours) |
|----------|-------------------|------------------|

Prerequisite: None

Performing many types of tasks related to aircraft systems.

| | | |
|---------|-------------------|------------------|
| 0994452 | Work Experience 2 | (0 Credit Hours) |
|---------|-------------------|------------------|

Prerequisite: None

Performing many types of tasks related to aircraft systems.



0994453 Work Experience 3 (0 Credit Hours)

Prerequisite: None

Performing many types of tasks related to aircraft systems.

#0994454 Work Experience 4 (0 Credit Hours)

Prerequisite: None

Performing many types of tasks related to aircraft systems.

0994553 Work Experience 5 (0 Credit Hours)

Prerequisite: None

Performing many types of tasks related to aircraft systems.

0994554 Work Experience 6 (0 Credit Hours)

Prerequisite: None

Performing many types of tasks related to aircraft systems.

#0994555 Work Experience 7 (0 Credit Hours)

Prerequisite: None

Performing many types of tasks related to aircraft systems.

Licensing Module 1: Mathematics: Arithmetic, Algebra, Geometry.

Licensing Module 2: Physics 1: Matter, Mechanics.

This course is 12 weeks' course.



List of Field Courses Delivered by JORAMCO Licensed Engineer under Supervision of UJ Instructor

| Course Number | Course Title |
|---------------|--|
| 0994151 | Licensing Module 3: Electrical Fundamentals |
| 0994152 | Licensing Module 4: Electronic Fundamentals |
| 0994153 | Licensing Module 5: Digital Techniques/ Electronic Instrument Systems (Part 1) |
| 0994154 | Licensing Module 5: Digital Techniques/ Electronic Instrument Systems (Part 2) |
| 0994155 | Licensing Module 6: Materials & Hardware |
| 0994156 | Licensing Module 8: Basic Aerodynamics (Part 1) |
| 0994157# | Licensing Module 8: Basic Aerodynamics (Part 2) |
| 0994158# | Licensing Module 9: Human Factors |
| 0994159# | Licensing Module 10: Aviation Legislation (Part 1) |
| 0994251 | Licensing Module 10: Aviation Legislation (Part 2) |
| 0994252 | Licensing Module 7: Maintenance Practice I |
| 0994253 | Licensing Module 7: Maintenance Practice II |
| 0994254 | Licensing Module 15: Gas Turbine Engine (Part 1) |
| 0994255# | Licensing Module 15: Gas Turbine Engine (Part 2) |
| 0994256# | Licensing Module 17: Propeller |
| 0994351# | Maintenance Practice III: Aircraft Practical Experience |
| 0994352 | Licensing Module 11: Aeroplane aerodynamic, structure and systems (Part 1) |
| 0994353 | Licensing Module 11: Airplane aerodynamic, structure and systems (Part 2) |
| 0994354# | Work Experience 1 |
| 0994451 | Maintenance Practice IV: Work Experience |
| 0994452 | Work Experience 2 |
| 0994453 | Work Experience 3 |
| 0994454# | Work Experience 4 |
| 0994551 | Maintenance Practice V: Work Experience |
| 0994552 | Maintenance Practice VI: Work Experience |
| 0994553 | Work Experience 5 |
| 0994554 | Work Experience 6 |
| 0994555# | Work Experience 7 |
| 0994593 | Employability Readiness and Field Training (Aeronautical Engineering) |

This course is 12 weeks' course