

# PREPARATION FOR A-LEVEL: SUBJECT COMBINATIONS

With the release of the S.4 results on 11th February 2025, many learners, parents, and teachers are wondering which subject combinations students should take. This document is designed to help answer some of the common questions you may have. It includes:

1. Subjects offered at A-Level
2. Sample subject combinations learners can choose
3. Subject requirements for specific courses and possible career pathways
4. Key information students need to know about A-Level
5. Tips for students as they prepare for A-Level
6. Frequently asked questions

## What to Consider When Choosing A-Level Combinations

Choosing A-Level subject combinations is a critical decision that can impact a student's future academic and career opportunities. Below is a deeper look into key factors that should guide this choice:

### 1. Career Aspirations & Pathways

Students should consider their long-term career goals when selecting subject combinations. Certain careers require specific subjects at A-Level. Here's a breakdown of different career pathways and their related subjects:

- **Health Care/Science (Investigative):** Suitable for students interested in medicine, pharmacy, nursing, veterinary medicine, laboratory sciences, or biomedical research.  
**Recommended subjects:** Biology, Chemistry, Physics, Mathematics, Agriculture
- **Arts/Humanities (Artistic):** Ideal for those passionate about literature, history, creative arts, media, or languages.  
**Recommended subjects:** Literature in English, History, Fine Art, Music, Religious Education, Foreign Languages
- **Education/Human Services (Social):** For those considering careers in teaching, social work, psychology, or counseling.  
**Recommended subjects:** History, Literature, Geography, Religious Studies, Economics
- **Marketing/Public Service/Hospitality (Enterprising):** Best suited for careers in journalism, communication, public relations, tourism, and hospitality.  
**Recommended subjects:** Literature, Economics, Entrepreneurship, History, ICT
- **Business/Technology/Logistics/Entrepreneurship (Conventional):** A good fit for students interested in finance, accounting, ICT, business management, logistics, or actuarial science.  
**Recommended subjects:** Mathematics, Economics, Entrepreneurship, ICT
- **Engineering/Manufacturing/Construction (Realistic):** For those who want to pursue careers in civil, mechanical, electrical, or computer engineering.  
**Recommended subjects:** Physics, Mathematics, Technical Drawing, ICT

## 2. Entry Requirements

- Universities and professional courses have specific subject requirements.
- For example, to study Medicine, most universities require Biology, Chemistry, and either Mathematics or Physics.
- Research university admission requirements early to make informed choices.

## 3. Personal Strengths and Weaknesses

- Students should reflect on their academic performance in O-Level subjects.
- If a student struggles with Mathematics and Physics, choosing a combination heavy in these subjects may not be the best decision.

## 4. School Choice

- Different schools offer different subject combinations based on available resources and expertise.
- Some schools may have stronger science departments, while others excel in the arts or humanities.
- Investigate the track record of the school in teaching certain subjects.

## 5. Resource Availability

- Are textbooks, lab equipment, and ICT facilities available for practical subjects?
- Science students should have access to well-equipped laboratories.
- Subjects like ICT, Technical Drawing, and Art require specialized tools and facilities.

## 6. Passion and Interest

- Students should choose subjects they enjoy and are motivated to study.
- Interest in a subject increases engagement and performance.

## 7. Mindset and Work Ethic

- A-Level is more demanding than O-Level. Students should be prepared for a heavier workload and more independent learning.
- Science subjects require extensive practical work, while humanities involve a lot of reading and writing.
- Commitment, discipline, and resilience are key to success.

## Final Advice:

- **Consult with teachers, career advisors, and professionals in different fields.**
- **Research university course requirements early.**
- **Choose subjects based on ability, interest, and career goals—not just peer influence.**
- **Be open-minded—interests may evolve, so select flexible subject combinations.**

## Subjects at A level

The aligned A-Level curriculum consists of 29 subjects, with no new subjects added. The table below provides a detailed breakdown to guide you

Humanities	Sciences and Mathematics	Vocational subjects	Languages	Subsidiary
<ul style="list-style-type: none"> <li>• History</li> <li>• Economics</li> <li>• IRE</li> <li>• CRE</li> <li>• Geography</li> </ul>	<ul style="list-style-type: none"> <li>• Physics</li> <li>• Chemistry</li> <li>• Biology</li> <li>• Mathematics</li> </ul>	<ul style="list-style-type: none"> <li>• Art</li> <li>• Music</li> <li>• Clothing and Textiles</li> <li>• Foods and Nutrition</li> <li>• Entrepreneurship</li> <li>• Agriculture principles and practice</li> <li>• Woodwork</li> <li>• Technical drawing</li> <li>• Metal work</li> </ul>	<ul style="list-style-type: none"> <li>• Literature in English</li> <li>• Arabic</li> <li>• Foreign language i.e               <ul style="list-style-type: none"> <li>- French</li> <li>- Latin</li> <li>- German</li> </ul> </li> <li>• Kiswahili</li> <li>• Chinese</li> <li>• Local languages               <ul style="list-style-type: none"> <li>- Luganda</li> <li>- Acoli</li> <li>- Lango</li> <li>- Lugbarati</li> <li>- Dhopadhola</li> <li>- Runyoro –rutooro</li> <li>-Lusoga</li> <li>- Ateso</li> <li>-Runyakore-Rukiga</li> <li>-lumasaaba</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• ICT</li> <li>• Sub math</li> <li>• General paper</li> </ul>

### NOTE:

- Not all schools will be able to offer all the principal subjects listed in the table above due to resource constraints. Therefore, students should seek out a school that offers their preferred subjects and has the necessary resources to support effective learning.

## Sample A-Level Subject Combinations

The following subject combinations have been **carefully designed** to align with **university entry requirements** and career pathways. However, these are **proposals**, and other combinations can be **generated or modified** to meet specific **university admission criteria** and student career aspirations.

### Science Combinations

No.	Combination	Subjects	Subsidiary Subjects
1	PCB/SUB-MATH	Physics, Chemistry, Biology	Subsidiary Mathematics, General Paper
2	PCM/ICT	Physics, Chemistry, Mathematics	Subsidiary Computer, General Paper
3	BCM/ICT	Biology, Chemistry, Mathematics	Subsidiary Computer, General Paper
4	PEM/ICT	Physics, Economics, Mathematics	Subsidiary Computer, General Paper
5	PMTD/ICT	Physics, Mathematics, Geometry and Technical drawing	Subsidiary Computer, General Paper
6	PAM/ICT	Physics, Fine Art, Mathematics	Subsidiary Computer, General Paper
7	PEntM/ICT	Physics, Entrepreneurship Education, Mathematics	Subsidiary Computer, General Paper
8	PAM/ICT	Physics, Agriculture, Mathematics	Subsidiary Computer, General Paper
9	BCFN/ SUB-MATH	Biology ,Chemistry ,Foods and Nutrition	Subsidiary Mathematics, General Paper
10	BCA/ SUB-MATH	Biology ,Chemistry , Agriculture	Subsidiary Mathematics, General Paper
11	BAG/SUB-MATH	Biology,Agriculture ,Geography	Subsidiary Mathematics, General Paper
12	Others		

## Arts Combinations

No.	Combination	Subjects	Subsidiary Subject
1	<b>HEG/SUB-MATH</b>	History, Economics, Geography	Subsidiary Mathematics, General Paper
2	<b>HEntG/ICT</b>	History, Entrepreneurship Education, Geography	Subsidiary Computer, General Paper
3	<b>HDG/ICT</b>	History, CRE, Geography	Subsidiary Computer, General Paper
4	<b>HED/ SUB-MATH</b>	History, Economics, CRE	Subsidiary Mathematics, General Paper
5	<b>HEL/SUB-MATH</b>	History, Economics, Literature in English	Subsidiary Mathematics, General Paper
6	<b>HLD/ICT</b>	History, Literature in English, CRE	Subsidiary Computer, General Paper
7	<b>DEG/ICT</b>	CRE ,Entrepreneurship Education, Geography	Subsidiary Computer, General Paper
8	<b>LED/ICT</b>	Literature in English, Entrepreneurship Education, CRE	Subsidiary Computer, General Paper
9	<b>GEA/SUB-MATH</b>	Geography, Economics, Art	Subsidiary Mathematics, General Paper
10	<b>MEG/SUB-MATH</b>	Mathematics, Economics, Geography	Subsidiary Computer, General Paper
11	<b>MEA/ICT</b>	Mathematics, Economics, Art	Subsidiary Computer, General Paper
12	<b>MEE/ICT</b>	Mathematics,Economics,Entrepreneurship	Subsidiary Computer, General Paper
13	<b>LEE/ICT</b>	Literature,Economics,Entrepreneurship	Subsidiary Mathematics, General Paper

14	<b>HDCT/ICT</b>	History ,CRE,Clothing and Textile	Subsidiary Computer, General Paper
15	<b>FEL/ICT</b>	French, Entrepreneurship, Literature in English	Subsidiary Computer, General Paper
16	<b>HDMus/ICT</b>	History,CRE,MUSIC	Subsidiary Computer, General Paper
17	<b>HLI/ICT</b>	History ,Literature ,IRE	Subsidiary Computer, General Paper
18	<b>HLG/ICT</b>	History ,Literature ,Geography	Subsidiary Computer, General Paper
19	<b>HEI/SUB-MATH</b>	History ,Economics ,IRE	Subsidiary Mathematics, General Paper
20	<b>HEEnt/SUB-MATH</b>	History ,Economics ,Entrepreneurship	Subsidiary Mathematics, General Paper
21	<b>others</b>		

### Key Subjects Abbreviations for Reference

Code	Subject
B	Biology
C	Chemistry
M	Mathematics
P	Physics
E	Economics
Ent	Entrepreneurship
G	Geography
H	History
A	Art
CT	Clothing and Textile
F	French
ID	IRE/CRE (Islamic Religious Education / Christian Religious Education)
F	French
TD	Technical drawing
MUS	Music
L	Literature

## NOTE

- All candidates offering Principal Mathematics (P425) must register for Subsidiary ICT (S850).
- All candidates offering combinations that include Economics (P220), but without Principal Mathematics (P425), must register for Subsidiary Mathematics (S475).
- All Candidates offering Science combinations without Principal Mathematics (e.g. Physics, Chemistry, Biology, Agriculture) must register for Subsidiary Mathematics (S475).
- The rest of the candidates outside the above categories are free to choose between either Subsidiary ICT (S850) or Subsidiary Mathematics (S475) at their discretion.

## Some of the Degree Programmes, Essential Subjects, and Career Paths

Programme	Essential Subjects	Relevant Subjects	Desirable Subjects	Possible Career Path
<b>Agricultural &amp; Environmental Sciences Programmes</b>				
BSc. Agricultural Engineering	Mathematics and Physics	One best done of Chemistry, Agriculture, Economics, Geometry & Mechanical Drawing, Geometry & Building Drawing	General Paper, Computer Studies	Agricultural Engineer, Irrigation Engineer, Farm Equipment Designer, Soil & Water Conservationist
BSc. Food Science & Technology	Biology and Chemistry	One better done of Physics, Agriculture, Foods & Nutrition, Mathematics	General Paper, Sub Maths or Computer Studies	Food Scientist, Quality Control Officer, Nutritionist, Food Safety Inspector
BSc. Agriculture	Two better done of Biology, Chemistry, Agriculture	One better done of Biology, Agriculture, Physics, Chemistry, Maths, Geography	General Paper, Sub Maths or Computer Studies	Agronomist, Crop Scientist, Farm Manager, Agricultural Consultant
Bachelor of Agribusiness Management	Two best done of Mathematics, Biology, Chemistry, Physics, Agriculture, Economics, Geography	One better done of Biology, Chemistry, Agriculture, Geography, Mathematics, Physics, Entrepreneurship	General Paper, Sub Maths or Computer Studies	Agribusiness Manager, Agricultural Economist, Farm Business Consultant, Supply Chain Manager
Bachelor of Agricultural Extension & Rural Innovation	Two best done of Agriculture, Biology, Chemistry, Geography	One best done of Agriculture, Biology, Chemistry, Physics, Mathematics, Entrepreneurship, Economics, Geography, Foods & Nutrition	General Paper, Sub Maths or Computer Studies	Agricultural Extension Officer, Rural Development Specialist, Community Development Officer
BSc. Human Nutrition & Dietetics	Two best done of Biology, Chemistry, Food & Nutrition	One better done of Biology, Chemistry, Food & Nutrition, Agriculture, Physics,	General Paper, Sub Maths or	Dietitian, Clinical Nutritionist, Public Health Nutritionist, Food Service Manager

		Mathematics, Economics	Computer Studies	
BSc. Water & Irrigation Engineering	Mathematics and Physics	Chemistry	General Paper, Computer Studies	Water Resources Engineer, Irrigation Engineer, Hydrologist, Environmental Consultant
BSc. Bio-Processing Engineering	Mathematics and Physics	One better done of Biology, Chemistry, Agriculture, Foods & Nutrition	General Paper, Computer Studies	Bioprocess Engineer, Biotechnology Researcher, Quality Assurance Manager
BSc. Forestry	Two best done of Biology, Chemistry, Agriculture, Physics, Mathematics, Geography	Third best done of Biology, Chemistry, Agriculture, Physics, Mathematics, Geography, Economics, Entrepreneurship, Geometry & Mechanical Drawing, Geometry & Building Drawing, Wood Work, Metal Work, Tech Drawing	General Paper, Sub Maths or Computer Studies	Forester, Conservation Officer, Wildlife Manager, Forest Policy Analyst
Bachelor of Environmental Science	Two best done of Biology, Chemistry, Physics, Mathematics, Agriculture, Economics, and Geography	Third best done of Biology, Chemistry, Physics, Mathematics, Agriculture, Economics, Geography	General Paper, Sub Maths or Computer Studies	Environmental Scientist, Conservation Specialist, Climate Change Analyst, Environmental Consultant
Bachelor of Tourism & Hospitality Management	Two best done of Economics, Geography, Biology, Entrepreneurship, Food and Nutrition	One best done of Mathematics, Chemistry, History, Literature, CRE/IRE, Economics, Any Language subject, Geography, Biology, Agriculture, Foods and Nutrition	General Paper, Sub Maths or Computer Studies	Hotel Manager, Tour Operator, Travel Consultant, Hospitality Consultant
Bachelor of Geographical Sciences	Two best done of Geography, Physics, Economics,	One best done of all A 'Level subjects	General Paper, Sub Maths or	GIS Analyst, Cartographer, Urban Planner, Remote Sensing Specialist

	Biology, Mathematics, Chemistry, Agriculture		Computer Studies	
Bachelor of Agricultural Extension Innovation & Rural (External)	Two best done of Agriculture, Biology, Chemistry, Geography	One best done of Agriculture, Biology, Chemistry, Mathematics, Physics, Entrepreneurship, Economics, Geography, Foods & Nutrition	General Paper, Sub Maths or Computer Studies	Rural Development Specialist, Agricultural Extension Officer, Policy Analyst

<b>Programme</b>	<b>Essential Subjects</b>	<b>Relevant Subjects</b>	<b>Desirable Subjects</b>	<b>Possible Career Path</b>
<b>Humanities and Social Sciences Programmes</b>				
Bachelor of Applied Psychology	Two best done of all A' Level subjects	Third best done of all A' Level subjects	General Paper, Sub- Maths or Computer Studies	Clinical Psychologist, Counsellor, Human Resource Specialist, Mental Health Advocate
Bachelor of Arts (Music)	Two best done of all A' Level subjects	Third best done of all A' Level subjects	General Paper, Sub- Maths or Computer Studies	Musician, Music Producer, Music Teacher, Sound Engineer
Bachelor of Journalism & Communication	Two best done of History, Literature, Economics, Geography	One better done of History, Literature, Economics, Geography, CRE, IRE, Language, Entrepreneurship	General Paper, Sub- Maths or Computer Studies	Journalist, Media Analyst, Public Relations Officer, News Editor
Bachelor of Arts (Arts)	Two best done of all A' Level subjects	Third best done of all A' Level subjects	General Paper, Sub- Maths or Computer Studies	Researcher, Policy Analyst, Administrator, Writer

Programme	Essential Subjects	Relevant Subjects	Desirable Subjects	Possible Career Path
<b>Education and External Studies</b>				
Bachelor of Arts (Education)	Two best done of History, CRE, IRE, Economics, Geography, Literature in English, Kiswahili, French, German, Arabic, Luganda, Entrepreneurship, Art and Design, Music, Chinese, Runyakitara	Third best done of History, CRE, IRE, Economics, Geography, Literature in English, Kiswahili, Arabic, French, German, Luganda, Entrepreneurship, Art and Design, Music, Chinese, Runyakitara	General Paper, Sub-Maths or Computer Studies	Secondary School Teacher, Curriculum Developer, Education Consultant, Language Specialist
BSc. Education (Biological)	Biology and Chemistry	One best done of Physics or Mathematics	General Paper, Sub-Maths or Computer Studies	Science Teacher, Lab Technician, Research Scientist
BSc. Education (Physical)	Mathematics and one better done of Physics or Chemistry	Next better done of Physics, Chemistry, Biology, Economics, Geography	General Paper, Computer Studies	Physics/Chemistry Teacher, Curriculum Designer, Science Communicator
BSc. Education (Economics)	Mathematics and Economics	One better done of Chemistry, Biology, Physics, Geography	General Paper, Computer Studies	Economics Teacher, Financial Analyst, Business Consultant
Bachelor of Early Childhood Care and Education	Two best done of all A' Level subjects	Third best done of all A' Level subjects	General Paper, Sub-Maths or Computer Studies	Nursery School Teacher, Child Development Specialist, Education Consultant
Bachelor of Adult and Community Education	Two best done of all A' Level subjects	Third best done of all A' Level subjects	General Paper, Sub-Maths or Computer Studies	Community Educator, Social Worker, Adult Literacy Trainer, NGO Programme Coordinator

**Important Note :**

If you intend to apply for a government scholarship (National Merit for Education in Arts subjects) in the future, you **must** include at least **one** of the following subjects in your A-Level combination:

- ✓ Literature in English
- ✓ French
- ✓ German
- ✓ Kiswahili

This ensures eligibility for scholarship opportunities and increases your chances of securing funded university placements.

Programme	Essential Subjects	Relevant Subjects	Desirable Subjects	Possible Career Path
<b>Health Science Programmes</b>				
Bachelor of Medicine & Bachelor of Surgery	Biology and Chemistry	One better done of Mathematics, Physics	General Paper, Sub-Maths or Computer Studies	Medical Doctor, Surgeon, General Practitioner, Medical Researcher
Bachelor of Dental Surgery	Biology and Chemistry	One better done of Mathematics, Physics	General Paper, Sub-Maths or Computer Studies	Dentist, Oral Surgeon, Orthodontist, Prosthodontist
Bachelor of Pharmacy	Biology and Chemistry	One better done of Mathematics, Physics	General Paper, Sub-Maths or Computer Studies	Pharmacist, Clinical Researcher, Pharmaceutical Scientist
Bachelor of Nursing Science	Biology and Chemistry	One best done of Agriculture, Maths, Physics, Foods & Nutrition, Economics	General Paper, Sub-Maths or Computer Studies	Registered Nurse, Midwife, Public Health Nurse, Nurse Educator
BSc. Medical Radiography	Biology and Physics	One best done of A' Level Science Subjects	General Paper, Sub-Maths or Computer Studies	Radiographer, Sonographer, Medical Imaging Specialist
Bachelor of Language and Speech Therapy	Biology and Chemistry	One best done of A 'Level Science Subjects	General Paper, Sub-Maths or Computer Studies	Speech Therapist, Audiologist, Communication Disorder Specialist
Bachelor of Environmental Health Science	Biology and Chemistry	One better done of Physics, Mathematics, Agriculture, Food & Nutrition, Geography, Geom. & Bld.	General Paper, Sub-Maths or Computer Studies	Environmental Health Officer, Public Health Specialist, Occupational Health Consultant

		Drawing, Geom. & Technical Drawing, Economics		
BSc. Biomedical Engineering	Mathematics and one better done of Physics or Biology	One best done of Physics, Chemistry, Biology, Geom. & Mechanical Drawing, Geom. & Building Drawing, Economics	General Paper, Computer Studies	Biomedical Engineer, Medical Equipment Designer, Healthcare Technologist
BSc. Biomedical Sciences	Biology and Chemistry	One best done of Physics, Mathematics, Agriculture, Food & Nutrition	General Paper, Sub-Maths or Computer Studies	Biomedical Scientist, Laboratory Technician, Geneticist, Medical Researcher
Bachelor of Cytotechnology	Biology and Chemistry	One best done of Physics, Mathematics, Agriculture, Food & Nutrition, Economics	General Paper, Sub-Maths or Computer Studies	Cytotechnologist, Pathology Technician, Medical Laboratory Scientist
Bachelor of Optometry	Biology and either Physics or Mathematics	One better done of Chemistry, Physics, Mathematics	General Paper, Sub-Maths or Computer Studies	Optometrist, Vision Scientist, Ophthalmic Technician
Bachelor of Science in Dental Technology	Biology and Chemistry	One better done of Physics, Mathematics, Geom. & Mechanical Drawing, Geom. & Building Drawing	General Paper, Sub-Maths or Computer Studies	Dental Technician, Prosthetic Specialist, Orthodontic Appliance Designer

Programme	Essential Subjects	Relevant Subjects	Desirable Subjects	Possible Career Path
<b>Natural Sciences Programmes</b>				
<b>Bachelor of Science (Biological)</b>	Biology and Chemistry	One best done of Mathematics, Physics	General Paper, Computer Studies	Biologist, Microbiologist, Ecologist, Laboratory Technician
<b>Bachelor of Science (Physical)</b>	Mathematics and One better done of	One best done of Chemistry, Physics,	General Paper,	Physicist, Chemist, Data Scientist, Engineer

	Physics or Chemistry	Economics, Biology	Computer Studies	
<b>Bachelor of Science (Economics)</b>	Mathematics and Economics	One best done of Physics, Chemistry, Biology	General Paper, Computer Studies	Economist, Financial Analyst, Data Analyst
<b>Bachelor of Sports Science (Exercise Science)</b>	Two best done of Biology, Chemistry, Maths, Physics, Agriculture, Food & Nutrition	One best done of Biology, Chemistry, Physics, Mathematics, Agriculture, Food & Nutrition	General Paper, Sub-Maths or Computer Studies	Sports Scientist, Physiotherapist, Fitness Trainer, Rehabilitation Specialist
<b>Bachelor of Sports Science (Sports Management)</b>	Two best done of all A' Level Subjects	Third best done of all A' Level Subjects	General Paper, Sub-Maths or Computer Studies	Sports Manager, Event Organiser, Athletic Director
<b>BSc. Industrial Chemistry</b>	Chemistry and Maths or Physics	One best done of Biology, Physics, Mathematics	General Paper, Sub-Maths or Computer Studies	Industrial Chemist, Chemical Engineer, Quality Control Analyst
<b>BSc. Fisheries &amp; Aquaculture</b>	Two best done of Chemistry, Biology, Agriculture	One better done of Mathematics, Physics, Biology, Chemistry, Agriculture	General Paper, Sub-Maths or Computer Studies	Fisheries Officer, Aquaculturist, Marine Biologist
<b>BSc. Petroleum Geoscience &amp; Production</b>	Two best done of Chemistry, Physics, Mathematics	One best done of Biology, Physics, Chemistry, Maths, Economics	General Paper, Sub-Maths or Computer Studies	Petroleum Geologist, Oil & Gas Engineer, Environmental Consultant
<b>BSc. Conservation Biology</b>	Two best done of Biology, Chemistry, Agriculture	One best done of Geography, Biology, Chemistry, Physics, Agriculture	General Paper, Sub-Maths or Computer Studies	Conservation Biologist, Wildlife Ecologist, Environmental Scientist
<b>BSc. Biotechnology</b>	Two best done of Biology, Chemistry, Agriculture	One better done of Mathematics, Biology, Chemistry, Physics, Agriculture	General Paper, Sub-Maths or Computer Studies	Biotechnologist, Genetic Engineer, Biomedical Researcher

<b>Programme</b>	<b>Essential Subjects</b>	<b>Relevant Subjects</b>	<b>Desirable Subjects</b>	<b>Possible Career Path</b>
<b>Business and Management Sciences Programmes</b>				
<b>Bachelor of Statistics</b>	Mathematics	One best done of Economics or Physics	General Paper, Computer Studies & One best done of Chemistry, Physics, Economics, Entrepreneurship, Geography, Biology	Statistician, Data Analyst, Market Researcher, Risk Analyst
<b>BSc. Actuarial Science</b>	Mathematics	Two best done of Chemistry, Physics, Economics, Geography, Entrepreneurship	General Paper, Computer Studies	Actuary, Risk Manager, Financial Analyst, Insurance Analyst
<b>BSc. Quantitative Economics</b>	Mathematics and Economics	One better done of Physics, Geography, Entrepreneurship	General Paper, Computer Studies	Economist, Financial Consultant, Data Scientist, Policy Analyst
<b>BSc. Population Studies</b>	Two best done of All A' Level subjects	One better done of the remaining A' Level subjects	General Paper, Sub-Maths or Computer Studies	Demographer, Social Researcher, Policy Analyst, Public Health Analyst
<b>Bachelor of Arts (Economics)</b>	Economics	Two best done of Mathematics, Physics, Geography, Entrepreneurship, History, Agriculture	General Paper, Sub-Maths or Computer Studies	Economist, Policy Advisor, Financial Planner, Market Analyst
<b>Bachelor of Commerce</b>	Economics and/or Mathematics	One or Two better done of Physics, Mathematics, Geography, Entrepreneurship, Geom. & Mech. Drawing, Geom. & Bld. Drawing	General Paper, Sub-Maths or Computer Studies	Accountant, Auditor, Business Consultant, Investment Banker
<b>Bachelor of Business Administration</b>	Economics and/or Entrepreneurship	One or Two better done of the remaining A' Level Subjects	General Paper, Sub-Maths or Computer Studies	Business Manager, Entrepreneur, Marketing

				Executive, HR Manager
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Programme	Essential Subjects	Relevant Subjects	Desirable Subjects	Possible Career Path
<b>Engineering, Design, Art, and Technology Programmes</b>				
<b>Bachelor of Architecture</b>	Mathematics & one better done of Fine Art, Geom. & Mech. Drawing, Geom. & Bld. Drawing	One better done of Physics, Economics, Geography, Fine Art, Geom. & Mech. Drawing, Geom. & Bld. Drawing, Entrepreneurship	General Paper, Computer Studies	Architect, Urban Planner, Interior Designer
<b>BSc. Civil Engineering</b>	Mathematics & Physics	One better done of Chemistry, Economics, Geom. & Mech. Drawing, Geom. & Bld. Drawing, Entrepreneurship, Geography	General Paper, Computer Studies	Civil Engineer, Structural Engineer, Construction Manager
<b>BSc. Electrical Engineering</b>	Mathematics & Physics	One better done of Chemistry, Economics, Geom. & Mech. Drawing, Geom. & Bld. Drawing, Entrepreneurship, Geography	General Paper, Computer Studies	Electrical Engineer, Power Systems Engineer, Telecommunications Engineer
<b>BSc. Mechanical Engineering</b>	Mathematics & Physics	One better done of Chemistry, Economics, Geom. & Mech. Drawing, Geom. & Bld. Drawing, Entrepreneurship, Geography	General Paper, Computer Studies	Mechanical Engineer, Automotive Engineer, Manufacturing Engineer
<b>BSc. Land Surveying &amp; Geomatics</b>	Mathematics & Physics	One better done of Chemistry, Economics, Fine Art, Geom. & Mech. Drawing, Geom. & Bld. Drawing, Entrepreneurship	General Paper, Computer Studies	Land Surveyor, Geospatial Analyst, GIS Specialist

<b>BSc. Quantity Surveying</b>	Mathematics & one better done of Physics, Economics, Fine Art, Geography, Geom. & Mech. Drawing, Geom. & Bld. Drawing	One better done of Chemistry, Physics, Economics, Geography, Fine Art, Geom. & Mech. Drawing, Geom. & Bld. Drawing, Entrepreneurship	General Paper, Computer Studies	Quantity Surveyor, Cost Estimator, Construction Project Manager
<b>BSc. Valuation</b>	Mathematics & one better done of Physics, Economics, Geography, Fine Art, Geom. & Mech. Drawing, Geom. & Bld. Drawing	One better done of Economics, Physics, Chemistry, Geography, Fine Art, Geom. & Mech. Drawing, Geom. & Bld. Drawing, Entrepreneurship	General Paper, Computer Studies	Real Estate Valuer, Property Manager, Land Economist
<b>Bachelor of Fine Art</b>	Fine Art and/or Geom. & Mech. Drawing, Geom. & Bld. Drawing or Music	One or two better done of the remaining A 'Level Subjects	General Paper, Sub-Maths or Computer Studies	Fine Artist, Illustrator, Art Teacher, Museum Curator
<b>Bachelor of Industrial Art &amp; Applied Design</b>	One best done of Fine Art or Geom. & Mech. Drawing, or Geom. & Bld. Drawing	Two better done of the remaining A 'Level Subjects	General Paper, Sub-Maths or Computer Studies	Industrial Designer, Product Designer, Craft Artist
<b>Bachelor of Visual Communication, Design &amp; Multimedia</b>	One best done of Fine Art or Geom. & Mech. Drawing, or Geom. & Bld. Drawing	Two better done of Biology, Chemistry, Physics, Maths, Music, Economics, History, Geography, CRE/IRE, Entrepreneurship, Lit. in English	General Paper, Sub-Maths or Computer Studies	Graphic Designer, Multimedia Artist, Digital Marketer

Programme	Essential Subjects	Relevant Subjects	Desirable Subjects	Possible Career Path
<b>Computing and Information Sciences Programmes</b>				
<b>BSc. Computer Science</b>	Mathematics and one best done of Physics, Chemistry, Economics, Geom. & Mech. Drawing, Geom. & Bld. Drawing, Biology	One better done of the remaining A' level subjects	General Paper, Computer Studies	Software Developer, Data Scientist, Cybersecurity Specialist, AI Engineer
<b>BSc. Software Engineering</b>	Mathematics and one best done of Physics, Economics, Geography, Chemistry, Biology	Third better done of Physics, Chemistry, Economics, Geography	General Paper, Computer Studies	Software Engineer, App Developer, Systems Analyst, DevOps Engineer
<b>Bachelor of Information Systems and Technology</b>	Two better done of Chemistry, Physics, Mathematics, Economics, Geography, Entrepreneurship	One better done of the remaining A' level subjects	General Paper, Sub-Maths or Computer Studies	IT Manager, Systems Administrator, Business Analyst, Database Administrator
<b>Bachelor of Library and Information Science</b>	Two best done of all A' level subjects	Third best done of all A' level subjects	General Paper, Sub-Maths or Computer Studies	Librarian, Data Archivist, Knowledge Manager, Research Analyst

Programme	Essential Subjects	Relevant Subjects	Desirable Subjects	Possible Career Path
<b>Veterinary Medicine, Animal Resources, and Bio-Security Programmes</b>				
<b>Bachelor of Veterinary Medicine</b>	Biology and Chemistry	One better done of Maths, Physics, Agriculture, Foods & Nutrition	General Paper, Sub-Maths or Computer Studies	Veterinary Doctor, Animal Health Specialist, Wildlife Conservationist
<b>Bachelor of Biomedical Laboratory Technology</b>	Biology and Chemistry	Third best done of All A' level subjects	General Paper, Sub-Maths or Computer Studies	Laboratory Technician, Medical Researcher, Clinical Scientist

<b>Bachelor of Animal Production Technology and Management</b>	Biology and Chemistry	One better done of Maths, Physics, Agriculture, Foods & Nutrition	General Paper, Sub Maths or Computer Studies	Animal Scientist, Farm Manager, Livestock Consultant
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Programme	Essential Subjects	Relevant Subjects	Desirable Subjects	Possible Career Path
<b>Law Programme</b>				
<b>Bachelor of Laws (LLB)</b>	Two best done of all A' level subjects	Third best done of all A' level subjects	General Paper, Sub-Maths or Computer Studies	Lawyer, Judge, Legal Consultant, Human Rights Advocate, Corporate Legal Advisor

### Emerging courses

Programme	Essential Subjects	Relevant Subjects	Desirable Subjects	Possible Career Path
Bachelor of Science in Visual Effects and Animation (	Two best done of Economics, Geography, Entrepreneurship, Fine Art, Literature, Computer Studies, Electronics, Mathematics, Physics, Chemistry, Foods and Nutrition, Biology, , and Agriculture.	Third best done of all A' level subjects	General Paper, Sub-Maths or Computer Studies	<ul style="list-style-type: none"> <li>• Visual Effects Artist</li> <li>• Animation Artist</li> <li>• Multimedia Designer</li> <li>• Game Developer</li> <li>• User Experience (UX) Designer</li> <li>• Web Designer</li> <li>• Motion Graphics Designer</li> <li>• Interactive Media Designer</li> <li>• Virtual Reality (VR) Developer</li> <li>• Augmented Reality (AR) Developer</li> </ul>
Bachelor of International Business	Two best done of All A' Level subjects	One better done of the remaining A' Level subjects	General Paper, Sub-Maths or Computer Studies	<ul style="list-style-type: none"> <li>• International Business Manager</li> <li>• Global Marketing Manager</li> <li>• International Trade Specialist</li> <li>• International Business Consultant</li> <li>• Global Supply Chain Manager</li> <li>• International Project Manager</li> </ul>

				<ul style="list-style-type: none"> <li>• Entrepreneur</li> </ul>
Bachelor of Science in Artificial Intelligence & Machine Learning (B.Sc. AI & ML)	Two best done of All A' Level subjects	One better done of the remaining A' Level subjects	General Paper, Sub-Maths or Computer Studies	<ul style="list-style-type: none"> <li>• AI Research Scientist</li> <li>• Machine Learning Engineer</li> <li>• Robotics Engineer</li> <li>• Data Scientist</li> </ul>
Bachelor of Science in Networking and Cyber Security (B.Sc. NCS)	Two best done of All A' Level subjects	One better done of the remaining A' Level subjects	General Paper, Sub-Maths or Computer Studies	<ul style="list-style-type: none"> <li>• Cyber security Analyst</li> <li>• Network Engineer</li> <li>• Penetration Tester</li> <li>• IT Security Consultant</li> </ul>

**Note:**

Many of the courses and subject requirements mentioned above have been extracted from the **PUJAB booklet**. While not all courses are included, the information provided should give you a clear picture to guide your search for further details.

## What to Expect at A-Level

**1. More Free Time:**

Expect at least one or two free periods each day. Use this time wisely for self-study, revision, or even pursuing personal interests. The freedom to manage your schedule is a key part of the A-level experience.

**2. Greater Responsibility:**

You'll have more control over your learning process. Organisation and proactive study habits are essential. It's important to stay on top of your coursework, assignments, and revision to ensure success.

**3. Less Spoon-feeding:**

Teachers will guide and support you, but you'll need to manage your assignments and deadlines independently. Expect to take more initiative and responsibility for your work.

**4. Increased Pressure:**

Although there are fewer immediate consequences for missing deadlines, it will impact your grades in the long run. Self-discipline and time management will be crucial to stay on track and meet your goals.

**5. Self-Motivation:**

Staying motivated is key to succeeding at A-level. Develop a system for managing your workload, and set both short-term and long-term goals to help you stay focused and achieve the best results.

## Preparing for A-Level Success: Essential Strategies for Students

1. **Have the Right Mindset:** Approach your subjects with a positive and focused mindset, ready to tackle challenges and stay motivated.
2. **Attitude is Key:** Cultivate a growth mindset. A positive attitude will help you stay resilient, improve problem-solving, and succeed in exams.
3. **Choose Subjects Aligned with Your Career Goals:** Select subjects that are in line with the career path you want to pursue, ensuring your choices are meaningful for your future.
4. **Follow Your Heart, Not the Crowd:** Don't be influenced by what others are choosing; choose subjects that match your interests and strengths.
5. **Prioritize Learning a Skill:** Focus on acquiring practical skills like critical thinking, research, and time management, which will benefit you in both academics and beyond.
6. **Plan and Be Self-Driven:** Take ownership of your education. Develop a study schedule, set goals, and stay disciplined to ensure consistent progress.
7. **Utilize Textbooks:** Engage actively with your textbooks by making notes, summarizing key points, and revisiting difficult topics regularly.
8. **Engage in Research:** Go beyond the textbook by exploring additional resources, including online platforms, academic journals, and discussions with teachers and peers.
9. **Master Time Management:** Balance your studies and other activities with effective time management. Create a timetable that includes study periods, breaks, and time for revision.
10. **Seek Help When Needed:** Don't hesitate to ask for assistance from teachers, classmates, or tutors when you encounter difficult topics.
11. **Stay Consistent with Revision:** Start revising early and establish a regular routine to ensure that all topics are covered before exams. Avoid cramming.
12. **Build Exam Techniques:** Practice past papers and mock exams to get familiar with exam formats, question types, and time management strategies.
13. **Stay Physically and Mentally Healthy:** Prioritize your health by eating well, getting enough sleep, and engaging in activities that help you relax and recharge.
14. **Stay Positive and Believe in Yourself:** Maintain a positive outlook, even during challenging times. Confidence in your abilities can enhance your performance.
15. **Engage with Learning Beyond the Classroom:** Participate in extracurricular activities or online courses to expand your knowledge and gain practical experience.
16. **Develop Critical Thinking Skills:** Go beyond rote memorization. Learn to analyze, evaluate, and apply information critically for a deeper understanding of your subjects.
17. **Stay Organized:** Keep your study materials, notes, and assignments well-organized. A tidy workspace and structured resources can save time and reduce stress.
18. **Set Realistic Goals:** Break down long-term goals into smaller, achievable steps. Set clear targets for each week or month to stay on track.
19. **Balance Social Life and Studies:** While studying is important, make time for social activities and relaxation to maintain a healthy work-life balance.
20. **Be Adaptable to Changes:** Be flexible in your approach. If something isn't working, try a new method or resource to keep improving.

21. **Track Your Progress:** Regularly assess how well you're doing in each subject, and adjust your study plan based on areas where you need more focus.
22. **Build Confidence in Your Abilities:** Recognize your strengths and acknowledge your progress. Confidence is crucial for tackling challenges and performing well.
23. **Avoid Procrastination:** Tackle tasks early by breaking them down into manageable steps. Use strategies like the Pomodoro Technique to stay focused.
24. **Stay Informed and Updated:** Keep up with relevant news, especially for subjects that connect to real-world issues, enriching your understanding and contextual knowledge.
25. **Reflect on Your Learning:** Regularly reflect on your learning progress. Identify areas for improvement and adjust your study strategies as needed.

## **Frequently Asked Questions (FAQs)**

### **1. What is an Advanced Level (A-Level)?**

- A two-year advanced qualification typically taken after completing lower secondary school (O-Level).
- Focuses on in-depth study of specific subjects.
- Key to university admissions and career planning.

### **2. Does A-Level matter?**

- Most universities require A-levels for admission, with specific subject requirements.
- Your choice of A-levels can influence the career fields you're eligible for.

### **3. How many years will A-Level last?**

- A-level will take two years, i.e., 2025 and 2026.
- Your child will sit for their assessments in November/December 2026.

### **4. Are children doing the old curriculum or the new curriculum?**

- Children are taking on an aligned curriculum that integrates well with the competency-based curriculum they have been following in lower secondary.
- The new curriculum prioritizes competency, learner-centered pedagogy, and skill acquisition.

### **5. Can my child change their combination after some time?**

- The school has a timeframe for combination changes. Children may not be allowed to change after a full term of studying a combination.

### **6. How many subjects will the children study?**

- Children will take 3 principal subjects and 2 subsidiary subjects.

### **7. How does a child choose which combination to pursue?**

- The combination depends on the child's career aspirations, university requirements, mindset, and passion.

### **8. How will the children be assessed?**

- The assessment modalities are still being designed, but they will follow a competency-based approach.
- Students should expect scenario-based items in the assessments.

### **9. How will the children be taught at A-Level?**

- Teaching will follow a learner-centered approach where students are at the center of learning.
- Students will make their own notes, engage in discussions to develop communication skills, and facilitators will integrate ICT into lessons.

## 10. Will we need to buy new books for the new curriculum?

- No, the old textbooks will still be used. However, adjustments will be made in the notes to include activities and additional guidance on how to effectively use the textbooks in line with the new curriculum.

## 11. How can I support my child's learning at home?

- Parents can support their child's learning by creating a conducive study environment, helping them manage their time, and encouraging self-discipline. Staying involved in their academic progress and engaging in discussions about their subjects can also make a big difference.

## 12. How Are A-Level Subject Combinations Assigned to Students?

The criteria for assigning subject combinations vary depending on the school's philosophy and culture. Some schools:

1. **Follow a Holistic Approach** – They do not strictly rely on past grades but instead focus on the student's interests and potential. These schools believe that with the right mindset, resources, and a supportive environment, every child can excel in their chosen combination.
2. **Use Academic Performance as a Key Factor** – Some schools prioritise past academic achievements, selecting students based on their O-Level grades in relevant subjects.
3. **Consider Passion and Career Goals** – Schools may also assess a student's career aspirations and motivation when assigning subject combinations.

Ultimately, success in A-Level depends on passion, self-discipline, a growth mindset, availability of resources, and a strong support system.

## 13. Can I Take a Subject at A-Level If I Scored a C at O-Level?

The grade you scored at O-Level does not necessarily determine your full potential in a particular subject. While some schools may have minimum grade requirements, what truly matters is your **self-assessment and reflection** on the following key factors:

✓ **Personal Strengths and Abilities** – Do you have the capacity to improve and excel in the subject with effort and dedication?

✓ **Passion and Interest** – Are you genuinely interested in the subject, or are you choosing it based on external pressure? Passion fuels motivation and commitment.

✓ **Self-Discipline and Mindset** – Are you willing to put in the work required to succeed at A-Level? A growth mindset and strong work ethic are crucial.

✓ **Career Alignment** – Does the subject align with your future aspirations? Consider how it fits into your career pathway.

After carefully reflecting on these aspects, you can make an informed decision that best supports your academic and career goals. **With the right mindset, resources, and support, you can succeed in any subject you are passionate about!**

#### 14. What Advice Would You Give to a Child Who Scored Es and Ds?

Children are all gifted in different ways, and sometimes academic success in traditional subjects does not reflect their full potential. Some students excel in **vocational fields** or other alternative education pathways, where they can thrive by developing practical skills.

While the linear education pathway (such as A-Level) is often emphasized, it's crucial to **understand your child's interests, abilities, and aspirations**. If your child shows interest in vocational work or hands-on careers, **support them in pursuing these interests** rather than focusing heavily on A-Level education, which may not align with their strengths.

I recommend that you take the time to **carefully observe your child** and have open discussions about their passions and future goals. **Vocational education and training can offer valuable opportunities** for personal growth and career development. By supporting your child's strengths, you can help them chart a path toward success that aligns with their natural abilities and interests.

#### 15. Will Children Manage the A-Level Syllabus Content and Be Prepared for University?

As humans, we often resist change, believing that things will always stay the same. However, to bring about real transformation, we must shift our mindset. It's important not to focus only on potential challenges but to also recognise the **positive aspects** the new curriculum can bring. If we, as educators, fully embrace and implement the A-Level syllabus with dedication, I strongly believe that **children will be able to handle the content and be well-prepared for university**.

The success of the A-Level syllabus depends on how **effectively we, as educators, guide and support our students**. When we approach the curriculum with optimism and **collaborate as a team**, we create a positive learning environment that fosters student growth.

We must **be lifelong learners ourselves**, continuously improving our methods and strategies to support our students. By doing so, we will help them manage the rigorous syllabus and equip them with the skills and knowledge they need for university and beyond.

In everything we do, **let's remember to work for the learners** and ensure that their success is our ultimate goal.

Together, we can improve the education sector of our country through collaborative efforts and a shared commitment to excellence

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