Practical Basement rocks course

For

4th-year Geology, Geophysics, and Geology& Chemistry students

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Teaching assistant: Mr. Mahmoud Ahmed

Timetable of course

Week	content
1	Introduction to the basement rocks in Egypt
2	Gneisses and Migmatites
3	Metasediments
4	Metavolcanics
5	Serpentinites
6	Metagabbros and Metadiorites
7	Oldergranitoids and Diorites
8	Dokhan volcanics
9	Hammamat sediments and post-Hammamat sediments
10	Gabbro
11	Younger granitoid and post granitic dikes
12	Revision

Week(1)

Introduction

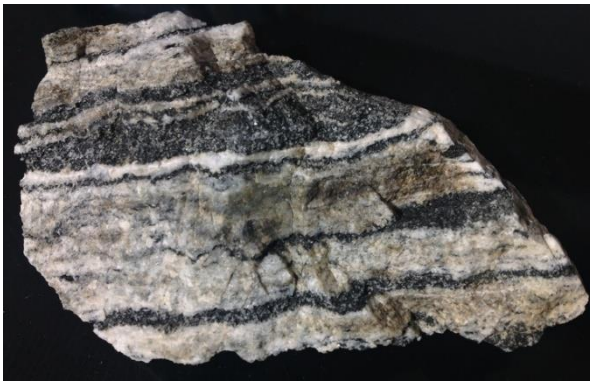
- **El-Ramely & Akaad (1980), classified the Egyptian basement into groups beginning from the oldest as follows:-**

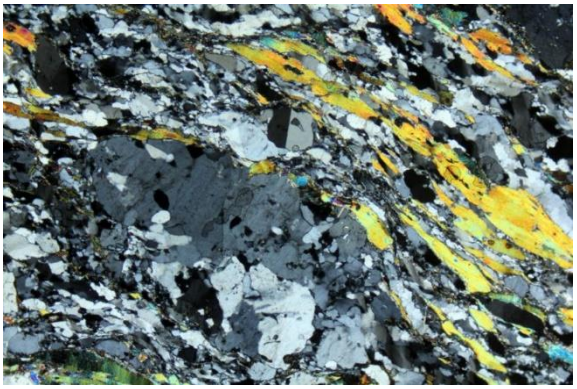
  - Gneisses and Migmatites
  - Metasediments
  - Metavolcanics
  - Serpentinites
  - Metagabbro and Metadiorite
  - Oldergranitoids and Diorites
  - Dokhan volcanics
  - Hammamat sediments
  - Post-Hammamat felsite
  - Gabbro
  - Younger granitoids and post granitic dikes

Week(2)

Gneisses and Migmatites

Migmatite





Gneiss

- **Write a detailed report about the studied thin sections of Gneisses and Migmatite in class. You should refer to the following criteria in your report; texture, type of metamorphism, grade of metamorphism, mineral composition, metamorphic facies, protolith, and the basement group.**

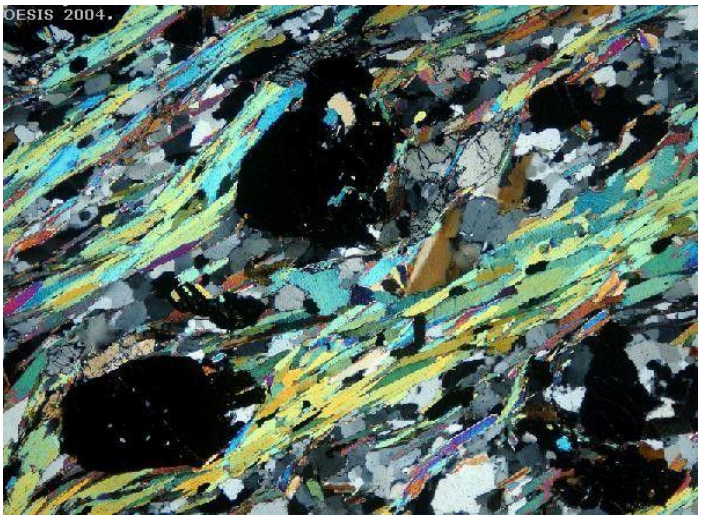
Week(3)

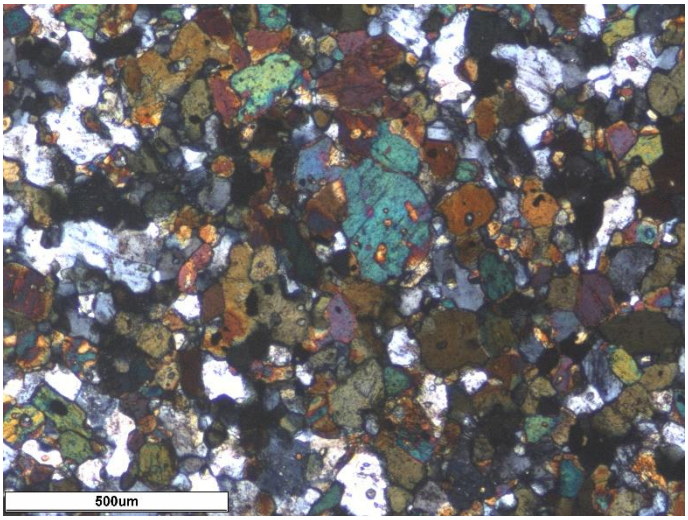
Metasediments

Phyllite

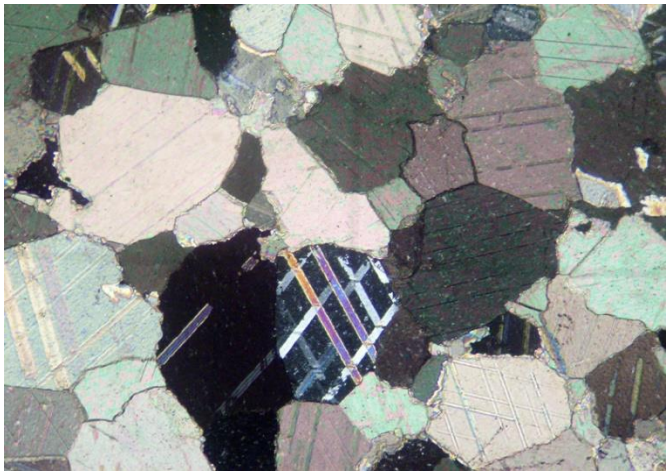
Garnet-mica schist

Garnet-mica schist



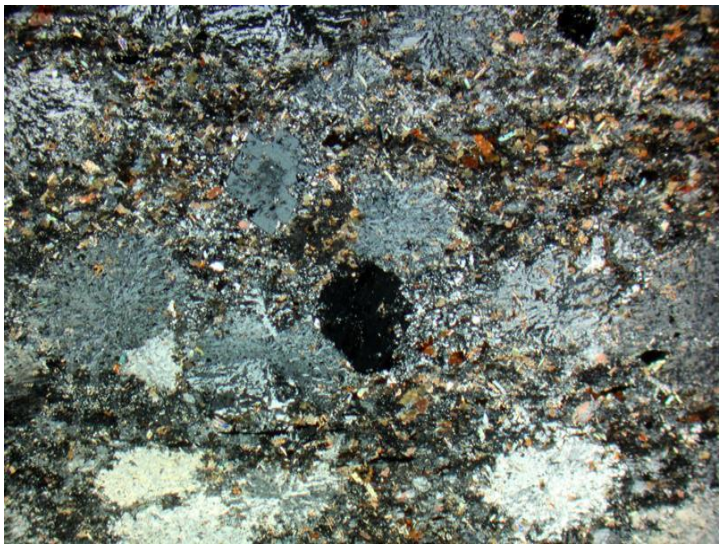


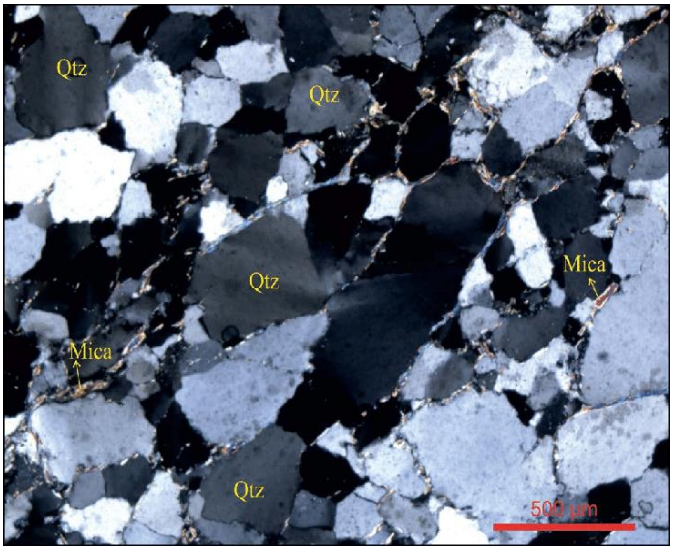
Amphibolite



Marble

Hornfels





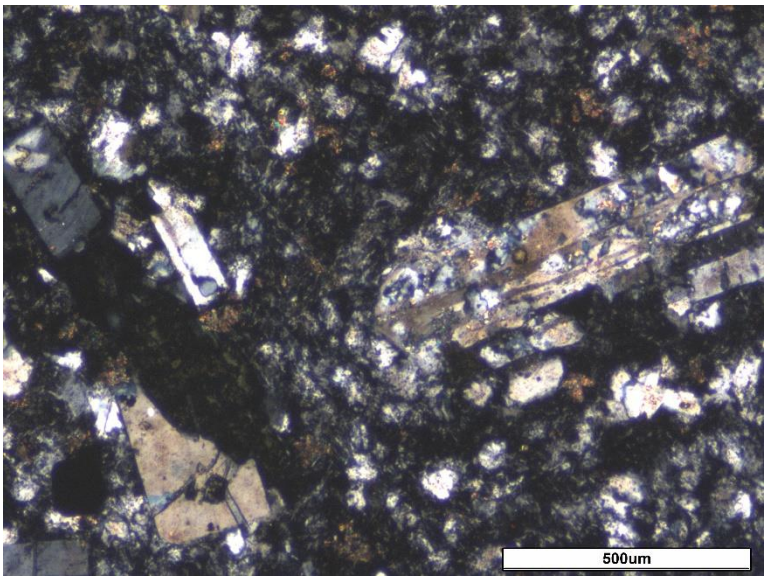
Quartzite

- **Write a detailed report about the studied thin sections of metasediments in class. You should refer to the following criteria in your report; texture, type of metamorphism, grade of metamorphism, mineral composition, metamorphic facies, protolith, and the basement group.**

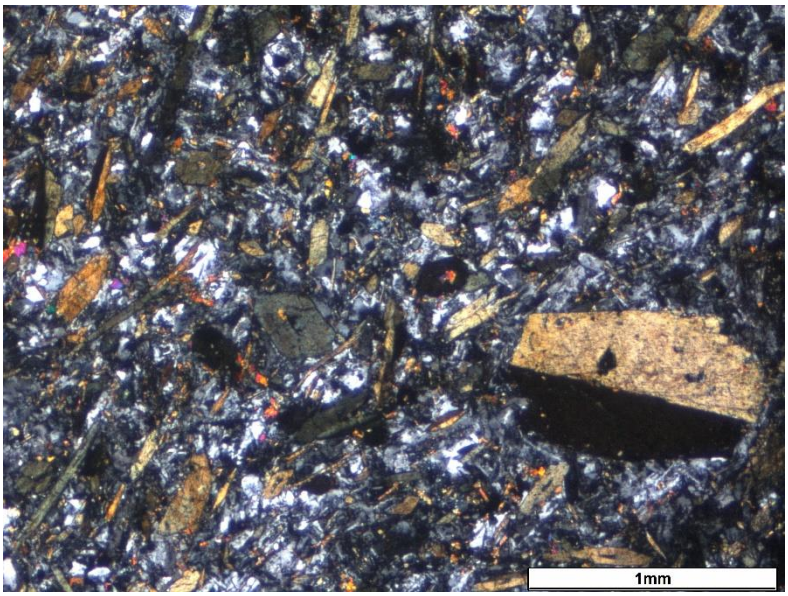
Week(4)

Metavolcanics

Metaandesite



Metabasalt



- **Write a detailed report about the studied thin sections of Metavolcanics in class. You should refer to the following criteria in your report; texture, type of metamorphism, grade of metamorphism, mineral composition, metamorphic facies, protolith, and the basement group.**

Week(5)

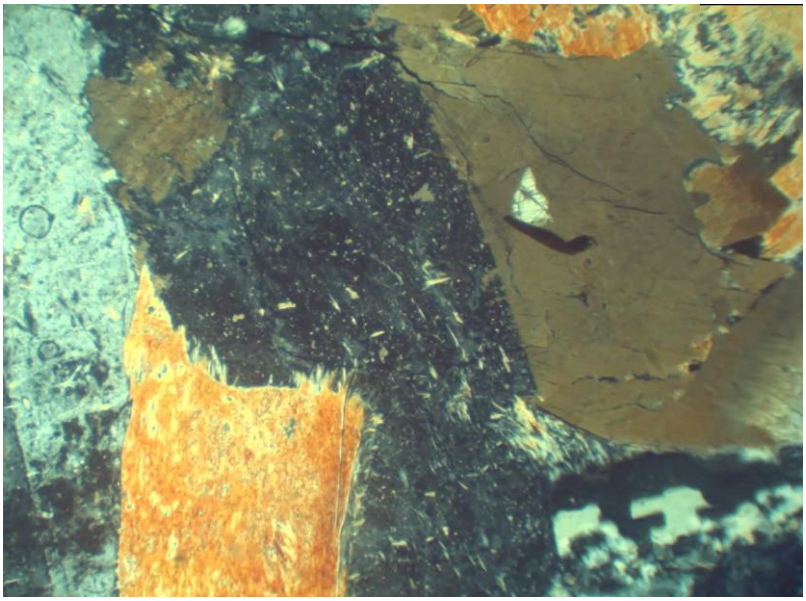
Serpentinites

- **Write a detailed report about the studied thin sections of Serpentinites in class. You should refer to the following criteria in your report; texture, type of metamorphism, grade of metamorphism, mineral composition, metamorphic facies, protolith, and the basement group.**

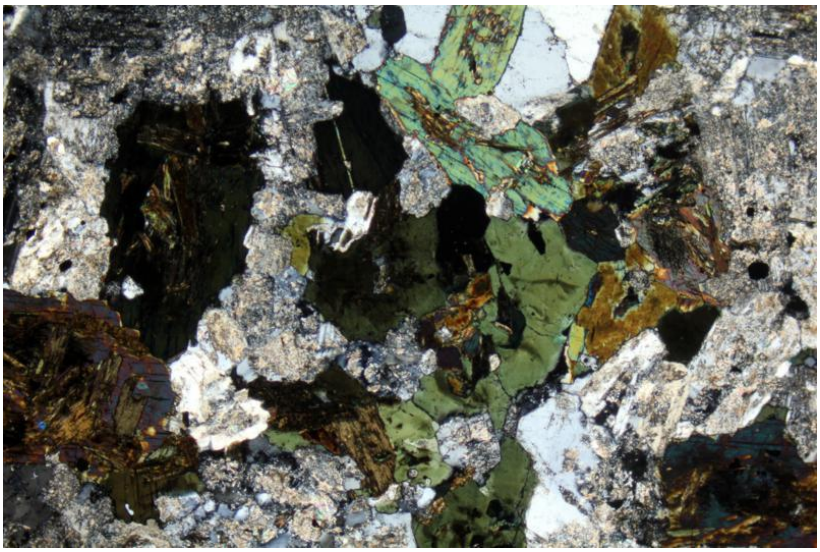
Week(6)

Metagabbros and Metadiorites

Metagabbro



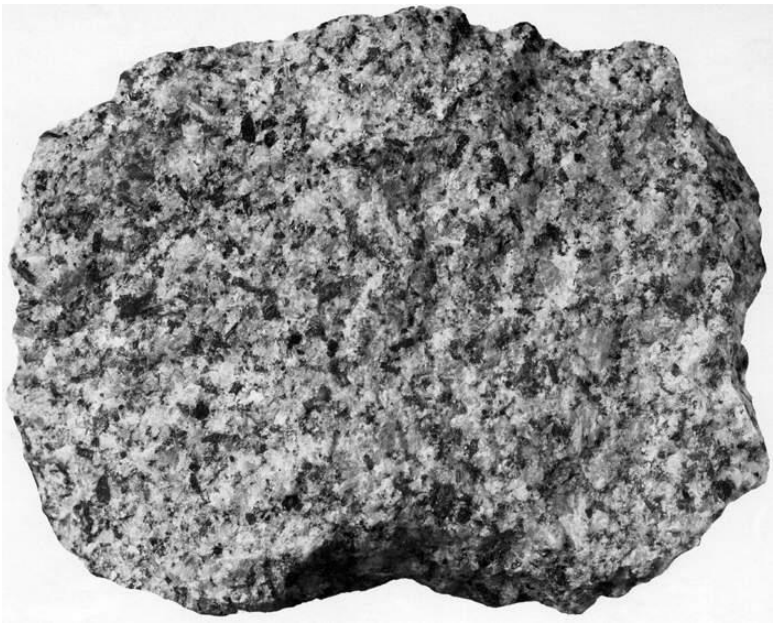
Metadiorite

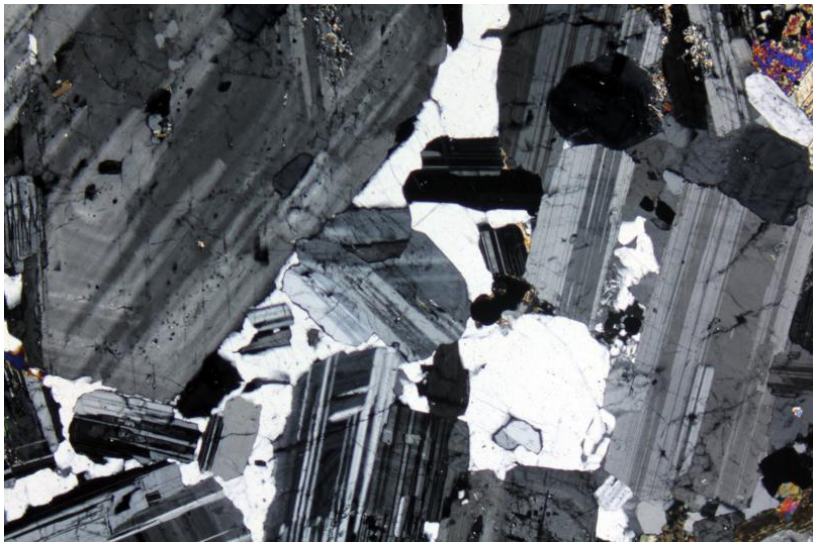


- **Write a detailed report about the studied thin sections of Metagabbros and Metadiorites in class. You should refer to the following criteria in your report; texture, type of metamorphism, grade of metamorphism, mineral composition, metamorphic facies, protolith, and the basement group.**

Week(7)

Oldergranitoids and Diorites





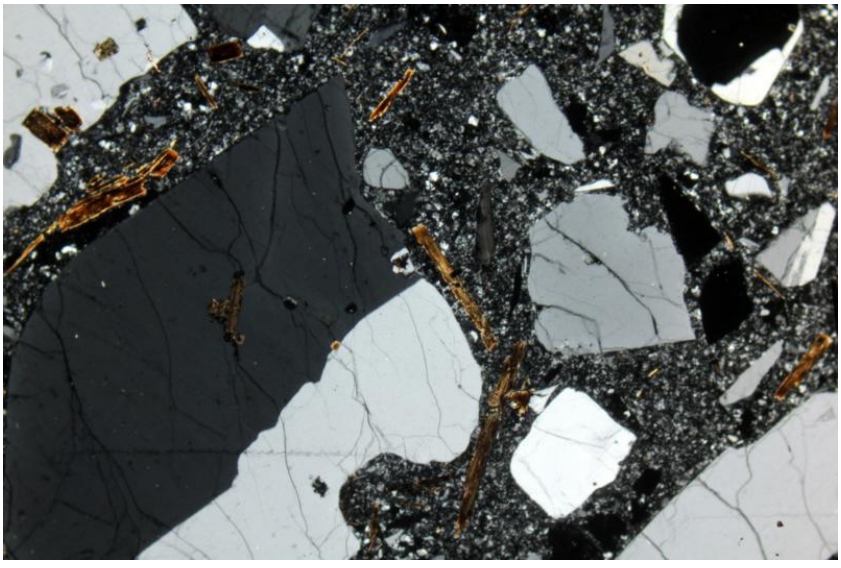
Oldergranite(tonalite)

Diorite

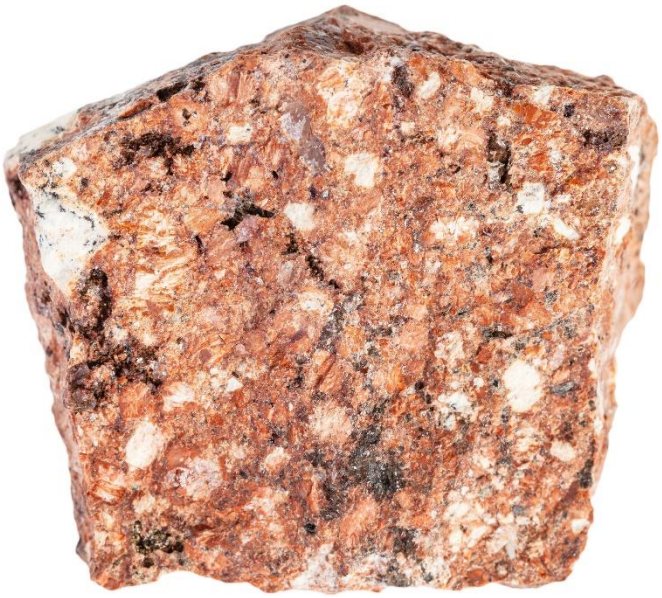
- **Write a detailed report about the studied thin sections of oldergranites and diorites in class. You should refer to the following criteria in your report, texture, grain size, origin, mineral composition, chemical classification, and the basement group.**

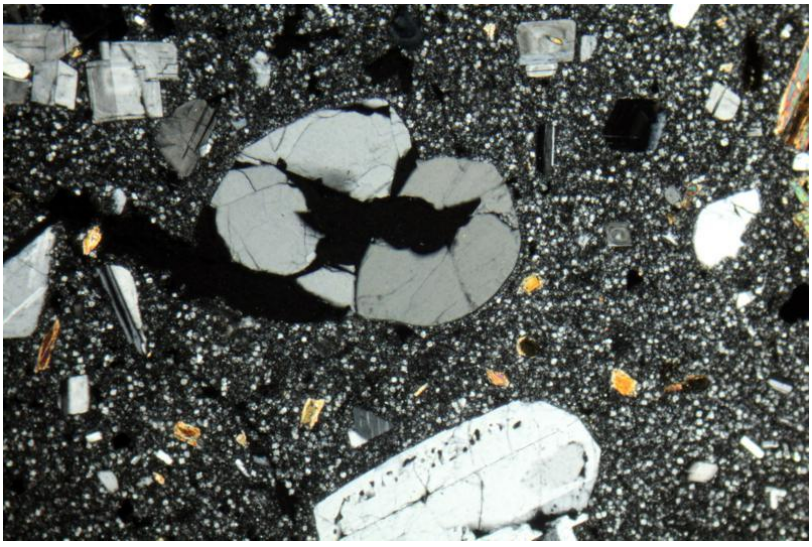
Week(8)

Dokhan volcanics



Rhyolite

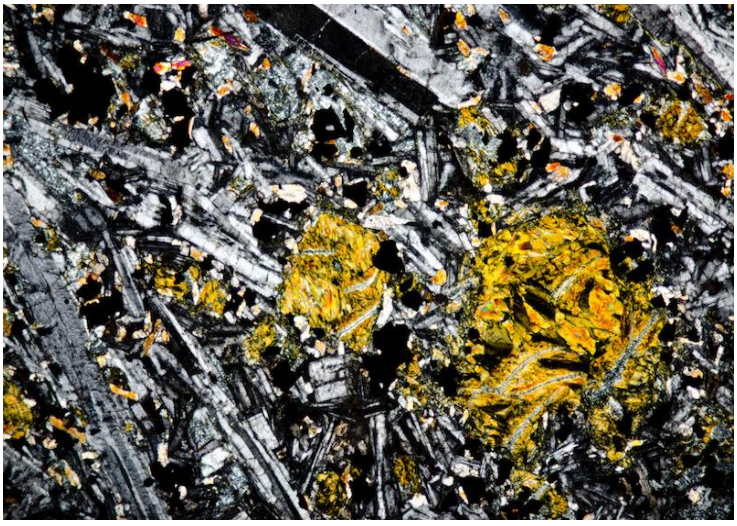




Dacite

Andesite

Basalt

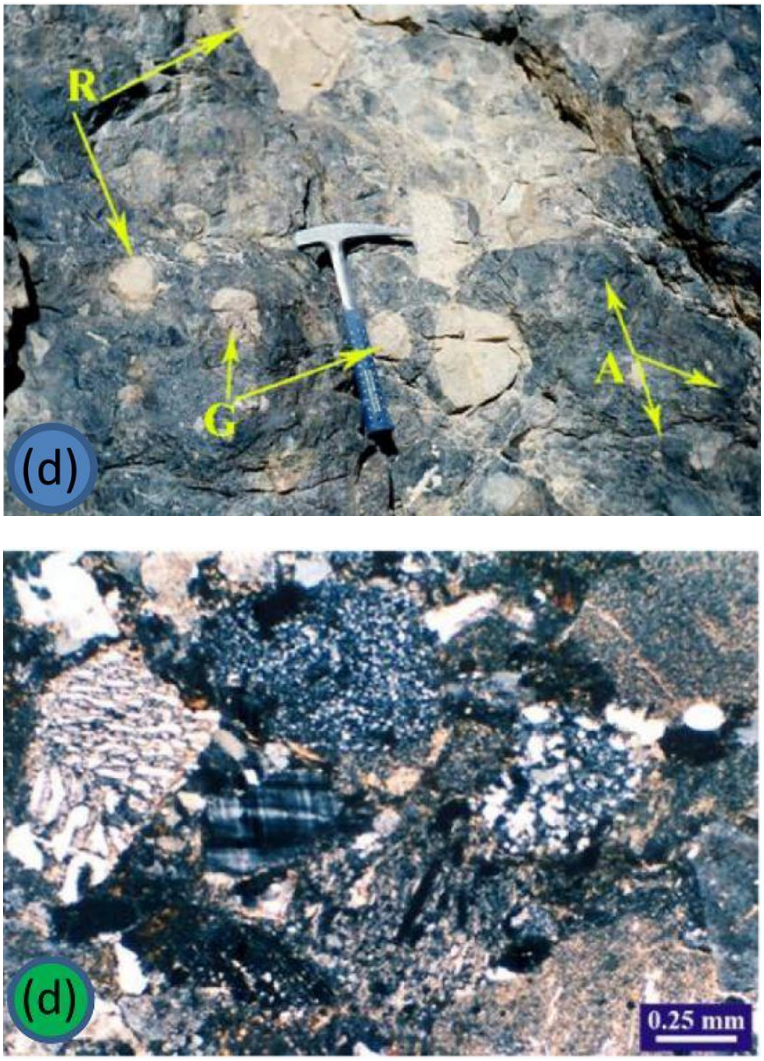


Diabase

- **Write a detailed report about the studied thin sections of Dokhan volcanics in class. You should refer to the following criteria in your report, texture, grain size, origin, mineral composition, chemical classification, and the basement group.**

Week(9)

Hammamat sediments and post-Hammamat sediments

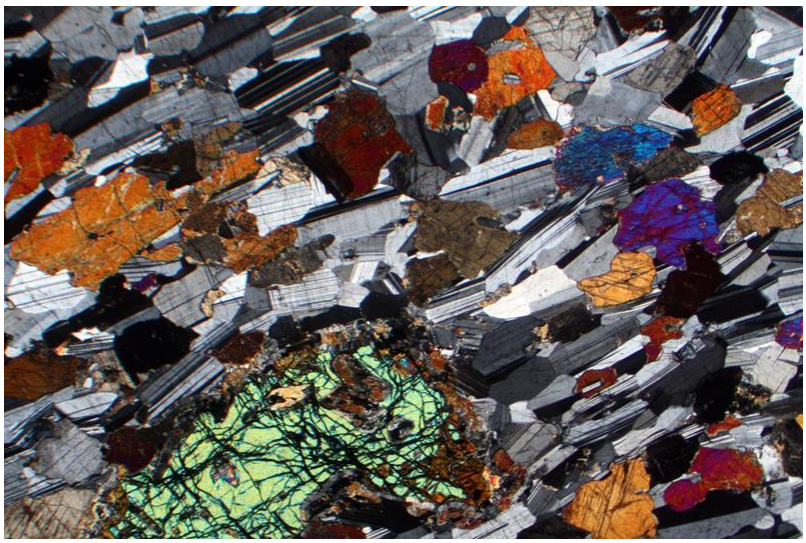


Hammamat sediments

- **Write a detailed report about the studied thin sections of Hammamat sediments in class. You should refer to the following criteria in your report, texture, grain size, origin, mineral composition, chemical classification, and the basement group.**

Week(10)

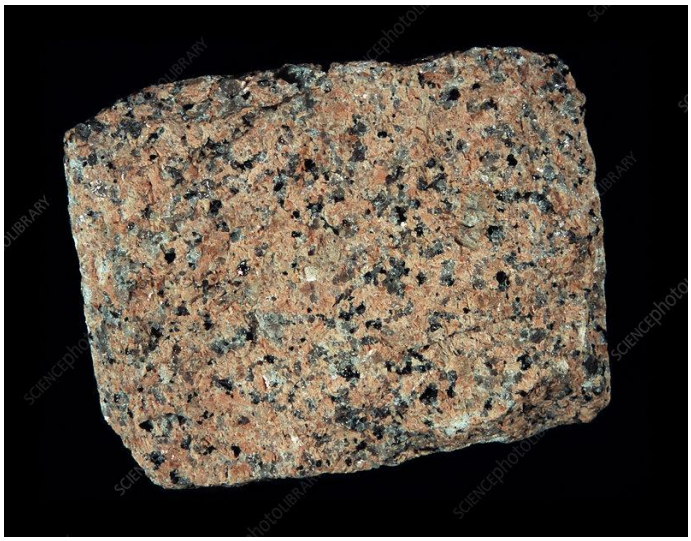
Gabbro

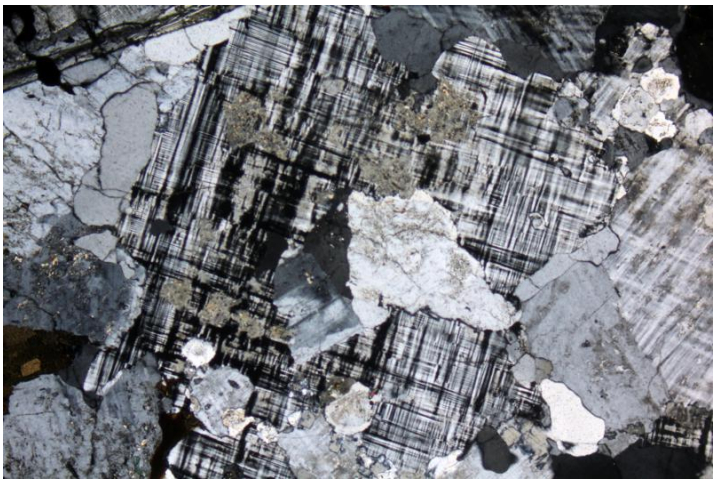


- **Write a detailed report about the studied thin sections of Gabbros in class. You should refer to the following criteria in your report, texture, grain size, origin, mineral composition, chemical classification, and the basement group.**

Week(11)

Younger granitoid and post granitic dikes





Youngergranite

- **Write a detailed report about the studied thin sections of Youngergranites in class. You should refer to the following criteria in your report, texture, grain size, origin, mineral composition, chemical classification, and the basement group.**