# Graduate Courses 2024-2025

## Fall 2024

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Title</th>
<th>Units</th>
<th>Instructor</th>
<th>Breadth area</th>
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<tbody>
<tr>
<td>GEL 214</td>
<td>Active Tectonics</td>
<td>3</td>
<td>Oskin</td>
<td>1</td>
</tr>
<tr>
<td>GEL 290</td>
<td>Seminar</td>
<td>1</td>
<td>TBD</td>
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</tr>
<tr>
<td>GEL 294</td>
<td>Structure &amp; Tectonics forum</td>
<td>1</td>
<td>Roeske</td>
<td>N/A</td>
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<tr>
<td>GEL 390</td>
<td>Methods of Teaching Geology</td>
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<td>Billen</td>
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## Winter 2025

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<tbody>
<tr>
<td>GEL 2xx</td>
<td>TBD</td>
<td>TBD</td>
<td>Montañez</td>
<td>TBD</td>
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<td>GEL 2xx</td>
<td>TBD</td>
<td>TBD</td>
<td>Sumner</td>
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<td>GEL 281</td>
<td>Instrumental Techniques</td>
<td>3</td>
<td>Yin</td>
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<td>GEL 298</td>
<td>TBD CRN: TBD</td>
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<td>Stewart</td>
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## Spring 2025

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<td>Hill</td>
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<td>Ratschbacher</td>
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Course Descriptions

Fall 2024

GEL 214: Active Tectonics (Oskin)
Graduate course breadth area: #1
Active Tectonics is lecture, project, and problem-set based course on tectonic processes taught through the lens of active systems. The course examines the interplay of tectonics and surface processes through observations, quantitative analytical, and numerical modeling techniques. Problem sets emphasize quantitative problem solving in structural geology, tectonics, geomorphology and Quaternary geochronology. We will also work on one or more group projects that vary from year to year, ideally with a fieldwork component.

GEL 290: Seminar (TBD)
Does not count as a breadth or general course for graduate degree requirements.

GEL 294: Structure & Tectonics forum (Roeske)
Does not count as a breadth or general course for graduate degree requirements.
This on-going discussion group meets once/week to discuss a paper selected by participants in the group. The theme of the articles varies each quarter; the seminar's goal is to emphasize breadth and we read and discuss a range of articles that cover the diverse interests of members of the group. As an example, we have recently read articles on subduction zone processes, ranging from UHP metamorphism and exhumation, to response of the upper plate to degree of coupling in the subduction zone. If schedules allow, we plan a multi-day field trip to examine rocks that may show some of the processes of interest to the group and focus the reading around the field trip.

GEL 390: Methods of Teaching Geology (Billen)
Does not count as a breadth or general course for graduate degree requirements.
Description coming soon.

Winter 2025

GEL 281: Instrumental Techniques (Yin)
Graduate course breadth area: 2
Description coming soon.

GEL 2xx: TBD (Montañez)
CRN: TBD
Graduate course breadth area: #TBD
Description coming soon.

GEL 2xx: TBD (Sumner)
CRN: TBD
Graduate course breadth area: #TBD
Description coming soon.
GEL 290: Seminar (TBD)
*Does not count as a breadth or general course for graduate degree requirements.*

GEL 294: Structure & Tectonics forum (Roeske)
*Does not count as a breadth or general course for graduate degree requirements.*
This on-going discussion group meets once/week to discuss a paper selected by participants in the group. The theme of the articles varies each quarter; the seminar's goal is to emphasize breadth and we read and discuss a range of articles that cover the diverse interests of members of the group. As an example, we have recently read articles on subduction zone processes, ranging from UHP metamorphism and exhumation, to response of the upper plate to degree of coupling in the subduction zone. If schedules allow, we plan a multi-day field trip to examine rocks that may show some of the processes of interest to the group and focus the reading around the field trip.

GEL 298: TBD (Stewart)
*Graduate course breadth area: #3*
*CRN: TBD*
Description coming soon.

**Spring 2025**

GEL 232: Oceans & Climate Change (Hill)
*Graduate course breadth area: #4*
Description coming soon.

GEL 2xx: TBD (Ratschbacher)
*Graduate course breadth area: #TBD*
*CRN: TBD*
Description coming soon.

GEL 290: Seminar (TBD)
*Does not count as a breadth or general course for graduate degree requirements.*