Integrated Health Sciences & Research Curriculum (IHSR) Overview

https://hst.vt.edu/campus/IHSR.html
Outline for today’s discussion

1) Broad vision for the program
2) Goals of the IHSR curriculum and beyond
3) Target audiences
4) Program structure
5) Curriculum overview
6) Fit into majors
7) Experience of Current Students
Vision: Expand VT Undergraduate Programs in Roanoke

- The Integrated Health Science & Research (IHSR) Program will demonstrate pathways to expand VT undergraduate education opportunities in Roanoke.

- IHSR’s creation and successful launch solidified a productive partnership between a VT academic college and thematic research institute. This work can be further enhanced by adding VTC School of Medicine and clinical partners.

- Ultimately these efforts can help create a Health Sciences Living-Learning Community in Roanoke focused on innovative and sustainable health research and health outcomes through vibrant public-private partnership.
Integrated Health Science & Research (IHSR) Curriculum Goals:

- Increase experiential learning & research opportunities for VT undergraduates at the Fralin Biomedical Research Institute (FBRI) and elsewhere on the Roanoke campus.

- Offer didactic coursework in Roanoke that integrates biomedical science, clinical perspectives and experiences.

- Create outstanding professional development, tailored mentoring, career/post-grad preparation

- Increase competitiveness for VT students’ graduate program applications
Integrated Health Science & Research (IHSR) Curriculum

Target Audiences:

- VT undergraduates interested in careers in biomedical science & health professions.

- First cohort includes VT College of Science students majoring in: Biological Sciences, Nanomedicine, Neuroscience and a few others.

- Program is also open to other majors in College of Science and beyond.
# IHSR Inaugural Cohort (Fall 2022)

<table>
<thead>
<tr>
<th>Applicants</th>
<th>Current Cohort</th>
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<tbody>
<tr>
<td><strong>Size</strong></td>
<td>18</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
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<tr>
<td>21 Male, 50 Female</td>
<td>5 Male, 13 Female</td>
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<tr>
<td><strong>Year</strong></td>
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<tr>
<td>22 Soph, 31 Junior, 20 Senior</td>
<td>9 Soph, 4 Junior, 5 Senior</td>
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<tr>
<td><strong>Major</strong></td>
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<tr>
<td>36 Bio, 20 Neuro, 7 Nano, 10 Other</td>
<td>6 Bio, 6 Neuro, 3 Nano, 3 Other</td>
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- Recruited cohort size was 20
  - Currently at 18 students
## Integrated Health Science & Research (IHSR) Curriculum Overview

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<tr>
<th>Year</th>
<th>Fall</th>
<th>Spring</th>
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<tr>
<td><strong>Sophomore</strong></td>
<td>1 cr AIS 2404 Intro to Biomedical Research&lt;br&gt;Students meet FBRI faculty, begin match process</td>
<td>1 cr AIS 4414 IHSR Presenting Scientific Research&lt;br&gt;Students join FBRI labs&lt;br&gt;3 cr XXXX 2994 Research Credits</td>
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<tr>
<td><strong>Junior</strong></td>
<td>1 cr AIS 4404 IHSR Discussing the Scientific Literature&lt;br&gt;3 cr XXXX 4994 Research Credits</td>
<td>1 cr AIS 4414 IHSR Presenting Scientific Research&lt;br&gt;3 cr XXXX 4994 Research Credits</td>
</tr>
<tr>
<td><strong>Senior</strong></td>
<td>1 cr AIS 4404 IHSR Discussing the Scientific Literature&lt;br&gt;3-6 cr XXXX 4994 Research Credits&lt;br&gt;2 cr TBMH 4964 Shadowing&lt;br&gt;X cr Coursework (Online or in Roanoke)</td>
<td>1 cr AIS 4414 IHSR Presenting Scientific Research&lt;br&gt;3-6 cr XXXX 4994 Research Credits&lt;br&gt;2 cr TBMH 4964 Shadowing&lt;br&gt;X cr Coursework (Online or in Roanoke)</td>
</tr>
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Research Expectations

- Students have to sign up for at least 3 credits of research each semester
  - 3 credits = 10 hours in lab

- Expect lab hours to fit in between your classes

- Challenge: Travel distance/time
  - Smart Way Express bus is wi-fi equipped and is free (with VT ID)
  - Parking garage is free and has plenty of space
IHSR Courses (Approval in Progress)

- **AIS 2404 Intro to Biomedical Research**
  - Hear from faculty interested in recruiting students. Go over requirements.

- **AIS 4414 IHSR Presenting Scientific Research**
  - Seminar for all years
  - Practice presenting your research, get feedback from your peers

- **AIS 4404 IHSR Discussing the Scientific Literature**
  - Journal Club for Juniors and Seniors that have already joined a research group
  - Practice reading and discussing scientific literature with your peers

- **Other classes in development:**
  - Exploring Biomedical Careers: Help with applying to graduate and professional programs
  - Special Topics: Classes focused on biomedical topics
Where Do Courses Fit Into My Major?

- **Biological Sciences (with or without biomedical option)**
  - Intent is for courses to count as Biological/Biomedical Electives
  - Research credits would count as BIOL 4994 (3-4 credits depending on checksheet)

- **Neuroscience**
  - Intent is for courses to count as Restricted Electives
  - Looking into possibility of NEUR 4044 Senior Seminar equivalent being offered in Roanoke
  - Research credits would count as NEUR 4994 (3 credits)

- **Nanoscience/Nanomedicine**
  - Intent is for courses to count as Restricted Electives
  - Research credits would count as NANO 4994 (8 credits)
Experience of Current Students
Questions?

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