BHS in Clinical and Diagnostic Sciences with Emphasis in Diagnostic Medical Ultrasound

Degree Program Description

Ultrasoundography, commonly called sonography, is a diagnostic medical procedure that uses high-frequency sound waves to produce dynamic visual images of organs, tissues, or blood flow inside the body. This type of procedure is often referred to as a sonogram or ultrasound scan. Ultrasoundography can be used to examine many parts of the body, such as the abdomen, breasts, female reproductive system, superficial structures, prostate, heart, and blood vessels. Ultrasoundography can capture size, function, structure and any pathological lesions with real time tomographic images in 2D, 3D. The professionals who perform these procedures are known as sonographers or ultrasound technologists. There are several areas of specialization in the field of ultrasound: Abdomen, Obstetrics/Gynecology, Echocardiography, and Vascular technology. The Diagnostic Medical Sonographer performs an essential role in the process of data gathering and synthesis required to reach a diagnosis. Ultrasound is a profession requiring a high degree of independence, skill, judgment and knowledge. Sonographers work in hospitals, clinics, private physician offices and other medical facilities performing examinations in their areas of specialization. The Diagnostic Medical Ultrasound (DMU) Program offers multiple educational options.

Major Program Requirements

The Diagnostic Medical Ultrasound (DMU) Program offers multiple educational options.

Students must complete Program Pre-requisite courses below with a grade of C- or higher to be eligible to apply to the BHS in Clinical and Diagnostic Sciences with an emphasis in Diagnostic Medical Ultrasound. Major Core Requirements must be completed with a grade of C (2.0) or higher within the program, unless otherwise noted. In addition, students must meet degree and University requirements (http://catalog.missouri.edu/academicdegreerequirements/universityrequirements), including University general education (http://catalog.missouri.edu/academicdegreerequirements/generaleducationrequirements) requirements. In addition to the degree requirements below, the Diagnostic Medical Ultrasound program requires an application, including an interview, and students are encouraged to work with an advisor in order to best structure the pre-requisites and prepare for the program application.

Program Pre-requisite

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGLISH 1000</td>
<td>Exposition and Argumentation</td>
<td>3</td>
</tr>
<tr>
<td>or ENGLISH 1000H</td>
<td>Honors Exposition English</td>
<td></td>
</tr>
<tr>
<td>MATH 1100</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 1000</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or PSYCH 1000H</td>
<td>General Psychology - Honors</td>
<td></td>
</tr>
<tr>
<td>COMMUN 1200</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>or COMMUN 1200H</td>
<td>Public Speaking - Honors</td>
<td></td>
</tr>
</tbody>
</table>

Major Core Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO_SC 1010 &amp; BIO_SC 1020</td>
<td>General Principles and Concepts of Biology and General Biology Laboratory</td>
<td>5</td>
</tr>
<tr>
<td>or BIO_SC 1500</td>
<td>Introduction to Biological Systems with Laboratory</td>
<td></td>
</tr>
<tr>
<td>or BIO_SC 1500H</td>
<td>Introduction to Biological Systems with Laboratory Honors</td>
<td></td>
</tr>
<tr>
<td>CHEM 1320</td>
<td>College Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 1320H</td>
<td>College Chemistry I - Honors</td>
<td></td>
</tr>
<tr>
<td>PHYSCS 1210</td>
<td>College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>CDS 2190</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2440</td>
<td>Medical Ethics</td>
<td>3</td>
</tr>
<tr>
<td>or HLTH_SCI 4480</td>
<td>Clinical Ethics</td>
<td></td>
</tr>
<tr>
<td>or HLTH_SCI 4480W</td>
<td>Clinical Ethics - Writing Intensive</td>
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</tr>
<tr>
<td>or CDS 4480</td>
<td>Clinical Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PTH_AS 2201 &amp; PTH_AS 2203</td>
<td>Human Anatomy Lecture and Human Anatomy Laboratory</td>
<td>5</td>
</tr>
<tr>
<td>MPP 3202</td>
<td>Elements of Physiology</td>
<td>5</td>
</tr>
<tr>
<td>STAT 1200</td>
<td>Introductory Statistical Reasoning</td>
<td>3</td>
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<tr>
<td>or STAT 1300</td>
<td>Elementary Statistics</td>
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</tr>
<tr>
<td>or ESC_PS 4170</td>
<td>Introduction to Applied Statistics</td>
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<tr>
<td>HLTH_SCI 3900W</td>
<td>Introduction to The Research Process</td>
<td>3</td>
</tr>
<tr>
<td>and Evidence Base - Writing Intensive</td>
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<td></td>
</tr>
<tr>
<td>DMU 1000</td>
<td>Introduction to Diagnostic Medical Ultrasound</td>
<td>1</td>
</tr>
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*Denotes courses in which a grade of B (3.0) or higher is required.

Professional Certification

Upon successfully completing the requirements of the program, BHS graduates are eligible to apply to the American Registry of Diagnostic Medical Sonographers (ARDMS) for certification in Abdomen, Obstetrics and Gynecology and Vascular Technology.
# Semester Plan

Below is a sample plan of study, semester by semester. A student's actual plan may vary based on course choices where options are available.

## First Year

### Fall
- **CR**
  - PSYCH 1000: 3
  - MATH 1100: 3
  - HIST 1100, 1200, or POL_SC 1100: 3
  - BIO_SC 1010 & BIO_SC 1020: 5
  - CHEM 1320: 4

### Spring
- **CR**
  - ENGLSH 1000: 3
  - DMU 1000 Introduction to Diagnostic Medical Ultrasound: 1
  - SOCIOL 1000: 3
  - Humanities: 3
  - CHEM 1320: 4

### Total Credits: 14

## Second Year

### Fall
- **CR**
  - COMMUN 1200: 3
  - PHYSCS 1210: 4
  - PTH AS 2201 & PTH AS 2203: 5
  - PHIL 2440: 3

### Spring
- **CR**
  - CDS 2190: 3
  - MPP 3202: 5
  - HLTH SCI 3900W: 3
  - STAT 1200: 3

### Summer
- **CR**
  - DMU 3313: 3
  - DMU 4312: 3
  - DMU 4085 (Writing Intensive Course): 1

### Total Credits: 15

## Third Year

### Fall
- **CR**
  - DMU 4085W: 1
  - DMU 4234: 3
  - DMU 4309: 5
  - DMU 4315: 3
  - DMU 4322: 3

### Spring
- **CR**
  - DMU 4085W: 1
  - DMU 4314: 5
  - DMU 4318: 3
  - DMU 4320: 3
  - DMU 4325: 3

### Summer
- **CR**
  - DMU 4941: 7

### Total Credits: 15

## Fourth Year

### Fall
- **CR**
  - DMU 4326: 3
  - DMU 4332: 4
  - DMU 4993: 8

### Spring
- **CR**
  - DMU 4001: 3
  - DMU 4342: 5
  - DMU 4944: 7

### Total Credits: 15

**Total Credits: 137**

**DMU 1000 Introduction to Diagnostic Medical Ultrasound is required for application to the DMU Program. Prospective students may enroll in the fall semester or the spring semester.**