

HOOSIER STEM | SCIENCE TECHNOLOGY ENGINEERING MATHEMATICS ACADEMY



Course Catalogue IUPUI Summer 2023



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About the Hoosier Stem Academy

The Hoosier STEM Academy is a partnership among Ball State University, IUPUI, and Purdue University to provide graduate-level STEM courses for current Indiana STEM teachers who wish to be credentialed to teach dual credit courses. Courses are designed specifically to meet the needs of Indiana high school teachers, including courses that use online, blended, and/or distance education instructional designs, as well as traditional face-to-face options. STEM teachers who wish to participate must currently teach in underserved Indiana school corporations and Indiana schools experiencing a shortage of qualified STEM teachers. Participants will also be invited to participate in the Hoosier STEM Academy Mentoring Conference. Upon completion of a course with a grade of C or better, participants will receive a \$1,375 stipend to help cover the cost of tuition, fees, and materials.

The Hoosier STEM Academy is now launching the Summer 2020 course catalog. Instruction for how to apply and register for courses at each of the partner institutions follow the list of offerings. Be sure to read carefully as each campus may have slightly different procedures at this time. Participants may take up to two courses per semester, but may only take a total of 15 hours over the four program semesters. Because graduate courses are challenging, it is suggested that participants take only one course per semester during the academic year.

Note: Any participant who registers for a course through the Hoosier STEM Academy is responsible for checking with their dual credit provider institution that the course will count toward their dual credit credential.

Application Process

1. **Go to** <http://graduate.iupui.edu/admissions/apply.shtml>
2. **Click on: Begin your application for graduate or professional school at IUPUI**
3. **If you are new to IUPUI:** click on **"Create New Guest Account"**.
4. If you have been an IU or IUPUI student in the past, you will need access to our university e-mail and passphrase, including a new feature at IU that requires an additional dual authentication or "Duo" log-in.
 - We recommend that you complete this initial registration step with assistance from UITs, by calling our help desk, available 24/7 at (317) 247-HELP or <https://kb.iu.edu/d/abxl#iupui>. They will walk you through the initial process to regain access to your IU/IUPUI account, reset your passphrase, and assist you with the new Duo authentication.
 - Once you have your IU log-in information, Click on **"Log in with Guest acct/User ID"**

Application Steps

The first screen asks about your intentions by selecting one of two options:

Either choice below is acceptable for Hoosier STEM Academy. However, we

recommend that you apply as a Graduate Non-Degree (GND) Student initially:

- To apply to a degree (Master's, PhD, professional) or Graduate Certificate program (Select this only if you are certain you will complete a certificate or MS degree. This will require letters of recommendation, transcripts, a personal statement, and GRE scores).
- **To apply to a Graduate Non-degree (GND) Program to explore courses for future enrollment in a graduate/professional degree program or to take continuing education courses (We recommend selecting this option)**

There are six sections to the on-line Graduate Non-Degree (GND) application.

1. Personal Information
2. Additional Information
3. Application Information (Academic Program: Grad Non-Degree; Academic Plan: Graduate Non-Degree program; Enrollment Summer 2018)
4. Department Information (Do not complete the red survey link for "Departmental Information" – it is not needed for this program)
5. Affirmation Statement
6. Submit and Pay Fee (\$60)

You do not have to send transcripts, letters of reference, or a personal statement as a GND Student.

Once you submit the application, you will receive an e-mail acceptance, usually within ~ 72 hours.

Next Steps

1. **For new IU/IUPUI Students:** Create your IU University username (e-mail address) and passphrase <https://one.iu.edu/task/iu/create-my-first-iu-account>
2. **Duo Authentication:** More information about the Duo phone app here: <https://kb.iu.edu/d/bfgm>
3. **Register for classes at the One.IU Student Center** ([One.iu.edu](https://one.iu.edu) → Student Center SIS)
(Detailed instructions https://ittraining.iu.edu/sis/sis-job-aids/cross-module-general-job-aids/student_center/Student_Registration.pdf)
4. **Tuition and Fees:** Upon completion of a course with a grade of C or better,

the Hoosier STEM Academy will send a stipend of \$1,375 to each participant. At IUPUI, Graduate tuition is **\$347.22** per credit hour plus fees. For a 3-credit hour course,

Tuition: \$1,041.66 plus Fees: \$258.61 = Total Cost: \$1,300.27 Parking: \$160 per semester =

Total cost (with parking): \$1,460.77

5. Academic Calendar: Summer 2020:

<http://registrar.iupui.edu/enrollment/4182/cal4182.html>

6. Parking Services: A semester ST (student) pass costs ~\$160.

<https://parking.iupui.edu>

7. To obtain your Crimson Card (student ID) after acceptance to the Graduate School: <https://crimsoncard.iu.edu>. Your Crimson Card is a combination of: Official ID Card, Payment Card, Discount Card to local restaurants & attractions, Printing Card, and Library Card. Once you are on campus, plan to visit the Crimson Card office on the 2nd floor of the [IUPUI Campus Center](#).

IU online course instructions

1. Getting Started – Using Online Class Search – Beginning your search is simple. You can search directly from the IU Online, online.iu.edu, by going to the 'Classes' tab on the menu at the top of the page. From there, if you select 'Search Classes' you will see a menu such as the example at the right. You can make your search as broad or specific as you need, but we suggest at minimum, filling out the 'semester' and putting in a keyword for a subject such as "statistics" or even "stats". There is also the enhanced search if you need other specific options.

2. Need More Info – Getting Course Descriptions – If you've found a class you're interested in, you use the One.IU public class search to find additional information, such as what time the class meets and the course description. You do not have to fill out every field, but at minimum you must select the 'Institution' (the campus), the 'Term', the 'Course Career', the 'Subject', and the 'Mode of Instruction' as highlighted in the example.

3. Register – Sign Up for the Class You Want – Once you've found a class you want to take; you need to register for it with the campus offering the course. For example, if you want to register for a physics course at IU East, you must register with IU East.

If you are a current IU Student – To register for an online undergraduate or graduate course offered at your campus of enrollment, you can register through One.IU as you would for any other class. To register for an online **graduate** course at a campus other than your campus of enrollment, you must contact the graduate department offering the course. See more at <http://online.iu.edu/classes/how-register.php>

If you are not a Current IU Student – You must first apply to the IU campus offering the course. To register for an online **graduate** course you must contact the department offering the course.

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~ We're looking forward to working with you as a member of the Hoosier STEM Academy. Please contact me if you have any questions.

Sincerely,  
Dr. Kathleen A. Marrs  
Associate Professor of Biology  
(317) 278-4551  
[kmarrs@iupui.edu](mailto:kmarrs@iupui.edu)

### **Questions**

Please contact Kizmin M. Jones with questions: [kmjones4@bsu.edu](mailto:kmjones4@bsu.edu).

## **IUPUI Courses**

### ***Anatomy and Cell Biology***

| TITLE                                                                         | COMPONENT  | CREDITS | CLASS | STATUS | TIME                                                                                      | DAY                                                                                       | ATTRIBUTE                                                                                                                                                 |
|-------------------------------------------------------------------------------|------------|---------|-------|--------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ANAT-D 528<br/>Gross<br/>Anatomy for<br/>Health Care<br/>Professionals</b> | LEC ONLINE | 5       | 5078  | Open   | M 3:30<br>pm –<br>5:00<br>ppm<br>W 4:00<br>pm –<br>5:30pm<br>F 1:30<br>pm –<br>3:00<br>pm | M 3:30<br>pm –<br>5:00<br>ppm<br>W 4:00<br>pm –<br>5:30pm<br>F 1:30<br>pm –<br>3:00<br>pm | Prerequisite: Physician<br>Asst Studies MPAS or<br>Physical Therapy DPT<br>or Occupational<br>Therapy OTD<br>NON STANDARD<br>SESSION 1<br>MAY 17-AUGUST 7 |
| <b>ANAT-D 700<br/>Educational<br/>Research<br/>Practicum</b>                  | PCT        | 2       | 4805  | Open   | ARR                                                                                       | ARR                                                                                       | FIRST SUMMER<br>MAY 9-JUNE 21                                                                                                                             |
| <b>ANAT-D 700<br/>Educational<br/>Research<br/>Practicum</b>                  | PCT        | 2       | 6141  | Open   | ARR                                                                                       | ARR                                                                                       | SECOND SUMMER<br>JUNE 26-AUGUST 7                                                                                                                         |
| <b>ANAT-D 860<br/>Research</b>                                                | IND        | 1-10    | 3734  | Open   | ARR                                                                                       | ARR                                                                                       | FIRST SUMMER<br>MAY 9-JUNE 21                                                                                                                             |
| <b>ANAT-D 860<br/>Research</b>                                                | IND        | 1-10    | 3735  | Open   | ARR                                                                                       | ARR                                                                                       | SECOND SUMMER<br>JUNE 26-AUGUST 7                                                                                                                         |
| <b>ANAT-D 878<br/>Anatomy<br/>Teaching<br/>Practicum</b>                      | PCT        | 2       | 4807  | Open   | ARR                                                                                       | ARR                                                                                       | FULL SUMMER<br>MAY 9 – AUGUST 7                                                                                                                           |

### **ANAT-D 528 Gross Anatomy for Health Care Professionals**

5 Credits.

This is an introductory course in human gross anatomy designed to introduce the principal concepts, basic structure and function of the human body. Students will have the opportunity to learn, through dissection and demonstration of human cadaveric specimens, clinical and functional correlates of human anatomy.

### **ANAT-D 700 Educational Research Practicum**

2 Credits.

This course is designed to provide students with structured and supervised educational research experiences, as well as critical reviews of individual performance

## **ANAT-D 860 Research**

1-10 Credits.

## **ANAT-D 878 Anatomy Teaching Practicum**

2 Credits.

This course is designed to provide each student with supervised teaching experiences in Gross Anatomy. Histology, and Neuroscience, as well as critical reviews of all teaching duties.

## ***Biology***

| TITLE                                                      | COMPONENT     | CREDITS | CLASS | STATUS | TIME | DAY | ATTRIBUTE                                 |
|------------------------------------------------------------|---------------|---------|-------|--------|------|-----|-------------------------------------------|
| <b>BIOL-T 571<br/>Introductory<br/>Biochemistry</b>        | LEC<br>ONLINE | 3       | 12029 | Open   | ARR  | ARR | IU EAST<br>JUNE 5- JULY 29                |
| <b>BIOL-T 585<br/>Model<br/>Organisms in<br/>Research</b>  | LEC<br>ONLINE | 3       | 13545 | Open   | ARR  | ARR | ONLINE 8 WEEK-<br>FIRST<br>JUNE 5-JULY 29 |
| <b>BIOL- 59500<br/>Special<br/>Assignments-<br/>Purdue</b> | LEC           | 3       | 3746  | Open   | ARR  | ARR | SECOND SUMMER<br>JUNE 26-AUGUST<br>7      |
| <b>BIOL- 59500<br/>Special<br/>Assignments-<br/>Purdue</b> | IND           | 3       | 4590  | Open   | ARR  | ARR | SECOND SUMMER<br>JUNE 26-AUGUST<br>7      |
| <b>BIOL- 59500<br/>Special<br/>Assignments-<br/>Purdue</b> | IND           | 3       | 4591  | Open   | ARR  | ARR | SECOND SUMMER<br>JUNE 26-AUGUST<br>7      |
| <b>BIOL- 59500<br/>Special<br/>Assignments-<br/>Purdue</b> | IND           | 3       | 5619  | Open   | ARR  | ARR | SUMMER SESSION<br>1 MAY 9 – JUNE<br>21    |
| <b>BIOL- 59500<br/>Special<br/>Assignments-<br/>Purdue</b> | IND           | 3       | 6186  | Open   | ARR  | ARR | SUMMER SESSION<br>1 MAY 9 – JUNE<br>21    |
| <b>BIOL- 59500<br/>Special</b>                             | IND           | 3       | 6187  | Open   | ARR  | ARR | SECOND SUMMER<br>JUNE 26-AUGUST<br>7      |



|                                               |     |   |      |      |     |     |                                        |
|-----------------------------------------------|-----|---|------|------|-----|-----|----------------------------------------|
| <b>Assignments-Purdue</b>                     |     |   |      |      |     |     |                                        |
| <b>BIOL- 59500 Special Assignments-Purdue</b> | IND | 3 | 3745 | Open | ARR | ARR | SUMMER SESSION<br>1 MAY 9 – JUNE<br>21 |
| <b>BIOL-69600 Seminar</b>                     | SEM | 1 | 3747 | Open | ARR | ARR | SUMMER SESSION<br>1 MAY 9 – JUNE<br>21 |
| <b>BIOL-69600 Seminar</b>                     | SEM | 1 | 3748 | Open | ARR | ARR | SECOND SUMMER<br>JUNE 26-AUGUST<br>7   |
| <b>BIOL-69600 Seminar</b>                     | SEM | 1 | 5169 | Open | ARR | ARR | SECOND SUMMER<br>JUNE 26-AUGUST<br>7   |
| <b>BIOL-69600 Seminar</b>                     | SEM | 1 | 6397 | Open | ARR | ARR | SUMMER SESSION<br>1 MAY 9 – JUNE<br>21 |

### **BIOL-T 571 Introductory Biochemistry**

3 Credits.

Protein composition and structure, Enzyme kinetics, catalytic and regulatory strategies, Carbohydrates, Nucleic acids, Lipids and cell membranes, Transducing and storing energy - metabolic cycles, Responding to environmental changes.

### **BIOL-T 585 Model Organisms in Research**

3 Credits.

Students will be introduced to the evolutionary similarities that allow study of human disease in certain organisms and the differences that limit the conclusions that can be made from that research. Students will be introduced to the history of the use of these organisms and the characteristics that give these organisms the label or 'model' organism. Students will be asked to think critically and be able to evaluate primary sources of research.

### **BIOL- 59500 Special Assignments-Purdue**

1-4 Credits.

Special work, such as directed reading, independent study or research, supervised library, laboratory, or field work, or presentation of material not available in the formal courses of the department.

## **BIOL- 69600 Seminar**

1 Credit.

Each semester there are several separate seminar offerings. They will likely be on the following topics: biochemistry, crystallography, ecology and population biology, genetics, mechanisms of development, microbiology, neurobiology, and plant physiology.

## ***Chemistry and Chemical Biology***

| TITLE                                | COMPONENT | CREDITS | CLASS | STATUS | TIME | DAY | ATTRIBUTE                                                                         |
|--------------------------------------|-----------|---------|-------|--------|------|-----|-----------------------------------------------------------------------------------|
| <b>CHEM-59900 Special Assignment</b> | IND       | 1-4     | 3843  | Open   | ARR  | ARR | Must Complete Arrangements Prior To Registration SUMMER SESSION 1 MAY 9 – JUNE 21 |
| <b>CHEM-59900 Special Assignment</b> | IND       | 1-4     | 3844  | Open   | ARR  | ARR | Must Complete Arrangements Prior To Registration SECOND SUMMER JUNE 26- AUGUST 7  |
| <b>CHEM-59900 Special Assignment</b> | IND       | 1-4     | 4644  | Open   | ARR  | ARR | Must Complete Arrangements Prior To Registration SUMMER SESSION 1 MAY 9 – JUNE 21 |
| <b>CHEM-59900 Special Assignment</b> | IND       | 1-4     | 4646  | Open   | ARR  | ARR | Must Complete Arrangements Prior To Registration SECOND SUMMER                    |

|                                              |     |     |      |      |     |     |                                                                                                                       |
|----------------------------------------------|-----|-----|------|------|-----|-----|-----------------------------------------------------------------------------------------------------------------------|
|                                              |     |     |      |      |     |     | JUNE 26-<br>AUGUST 7                                                                                                  |
| <b>CHEM-59900<br/>Special<br/>Assignment</b> | IND | 1-4 | 5159 | Open | ARR | ARR | Must<br>Complete<br>Arrangements<br>Prior To<br>Registration<br>SECOND<br>SUMMER<br>JUNE 26-<br>AUGUST 7              |
| <b>CHEM-59900<br/>Special<br/>Assignment</b> | IND | 1-4 | 5333 | Open | ARR | ARR | Must<br>Complete<br>Arrangements<br>Prior To<br>Registration<br>REGULAR<br>ACADEMIC<br>SESSION<br>MAY 9 –<br>AUGUST 7 |
| <b>CHEM-59900<br/>Special<br/>Assignment</b> | IND | 1-4 | 5430 | Open | ARR | ARR | Must<br>Complete<br>Arrangements<br>Prior To<br>Registration<br>SECOND<br>SUMMER<br>JUNE 26-<br>AUGUST 7              |

## **CHEM-59900 Special Assignment**

1-4 Credits.

Directed reading or special work not included in other courses.

## ***IU Online Chemistry***

| TITLE                                               | COMPONENT | CREDITS | CLASS | STATUS | TIME | DAY | ATTRIBUTE                                                           |
|-----------------------------------------------------|-----------|---------|-------|--------|------|-----|---------------------------------------------------------------------|
| <b>CHEM-T 550<br/>Introductory<br/>Biochemistry</b> | Online    | 3       | 12034 | Open   | OL   | OL  | SUMMER<br>EAST<br>SOUTH<br>BEND<br>OL 8WEEK 1<br>JUNE 1-<br>JULY 25 |

## **CHEM-T 550 Introductory Biochemistry**

3 Credits.

Protein composition and structure, Enzyme kinetics, catalytic and regulatory strategies, Carbohydrates, Nucleic acids, Lipids and cell membranes, Transducing and storing energy - metabolic cycles, Responding to environmental changes.

## ***Computer Science***

| TITLE                                        | COMPONENT | CREDITS | CLASS | STATUS | TIME | DAY | ATTRIBUTE                                        |
|----------------------------------------------|-----------|---------|-------|--------|------|-----|--------------------------------------------------|
| <b>CSCI-59000 Topics in Computer Science</b> | IND       | 1-5     | 4498  | Open   | ARR  | ARR | REGULAR ACADEMIC SESSION<br><br>MAY 9 – AUGUST 7 |
| <b>CSCI-59000 Topics in Computer Science</b> | IND       | 3       | 7230  | Open   | ARR  | ARR | REGULAR ACADEMIC SESSION<br><br>MAY 9 – AUGUST 7 |
| <b>CSCI-59000 Topics in Computer Science</b> | IND       | 3       | 7299  | Open   | ARR  | ARR | SECOND SUMMER<br><br>JUNE 26- AUGUST 7           |

## **CSCI- 59000 Topics in Computer Science**

1-5 Credits.

Directed study for students who wish to undertake individual reading and study on approved topics.

## ***Geology***

| TITLE                               | COMPONENT | CREDITS | CLASS | STATUS | TIME | DAY | ATTRIBUTE                           |
|-------------------------------------|-----------|---------|-------|--------|------|-----|-------------------------------------|
| <b>GEOL-G 700 Geologic Problems</b> | IND       | 1-5     | 3931  | Open   | ARR  | ARR | SUMMER SESSION 1<br>MAY 9 – JUNE 21 |

|                                                 |     |     |      |      |     |     |                                           |
|-------------------------------------------------|-----|-----|------|------|-----|-----|-------------------------------------------|
| <b>GEOL-G<br/>700<br/>Geologic<br/>Problems</b> | IND | 1-5 | 3932 | Open | ARR | ARR | SECOND<br>SUMMER<br>JUNE 26-<br>AUGUST 7  |
| <b>GEOL-G<br/>700<br/>Geologic<br/>Problems</b> | IND | 1-5 | 4807 | Open | ARR | ARR | SUMMER<br>SESSION 1<br>MAY 9 –<br>JUNE 21 |
| <b>GEOL-G<br/>700<br/>Geologic<br/>Problems</b> | IND | 1-5 | 4808 | Open | ARR | ARR | SUMMER<br>SESSION 1<br>MAY 9 –<br>JUNE 21 |
| <b>GEOL-G<br/>700<br/>Geologic<br/>Problems</b> | IND | 1-5 | 4809 | Open | ARR | ARR | SUMMER<br>SESSION 1<br>MAY 9 –<br>JUNE 21 |
| <b>GEOL-G<br/>700<br/>Geologic<br/>Problems</b> | IND | 1-5 | 4810 | Open | ARR | ARR | SUMMER<br>SESSION 1<br>MAY 9 –<br>JUNE 21 |
| <b>GEOL-G<br/>700<br/>Geologic<br/>Problems</b> | IND | 1-5 | 4811 | Open | ARR | ARR | SECOND<br>SUMMER<br>JUNE 26-<br>AUGUST 7  |
| <b>GEOL-G<br/>700<br/>Geologic<br/>Problems</b> | IND | 1-5 | 4812 | Open | ARR | ARR | SECOND<br>SUMMER<br>JUNE 26-<br>AUGUST 7  |
| <b>GEOL-G<br/>700<br/>Geologic<br/>Problems</b> | IND | 1-5 | 4813 | Open | ARR | ARR | SECOND<br>SUMMER<br>JUNE 26-<br>AUGUST 7  |
| <b>GEOL-G<br/>700<br/>Geologic<br/>Problems</b> | IND | 1-5 | 4814 | Open | ARR | ARR | SECOND<br>SUMMER<br>JUNE 26-<br>AUGUST 7  |
| <b>GEOL-G<br/>700<br/>Geologic<br/>Problems</b> | IND | 1-5 | 4855 | Open | ARR | ARR | SECOND<br>SUMMER<br>JUNE 26-<br>AUGUST 7  |
| <b>GEOL-G<br/>700<br/>Geologic<br/>Problems</b> | IND | 1-5 | 4856 | Open | ARR | ARR | SECOND<br>SUMMER<br>JUNE 26-<br>AUGUST 7  |
| <b>GEOL-G<br/>700<br/>Geologic<br/>Problems</b> | IND | 1-5 | 4857 | Open | ARR | ARR | SECOND<br>SUMMER<br>JUNE 26-<br>AUGUST 7  |
| <b>GEOL-G<br/>700<br/>Geologic<br/>Problems</b> | IND | 1-5 | 4858 | Open | ARR | ARR | SECOND<br>SUMMER<br>JUNE 26-<br>AUGUST 7  |
| <b>GEOL-G<br/>700</b>                           | IND | 1-5 | 4859 | Open | ARR | ARR | SUMMER<br>SESSION 1                       |

|                                     |     |     |      |      |     |     |                                     |
|-------------------------------------|-----|-----|------|------|-----|-----|-------------------------------------|
| <b>Geologic Problems</b>            |     |     |      |      |     |     | MAY 9 – JUNE 21                     |
| <b>GEOL-G 700 Geologic Problems</b> | IND | 1-5 | 4860 | Open | ARR | ARR | SUMMER SESSION 1<br>MAY 9 – JUNE 21 |
| <b>GEOL-G 700 Geologic Problems</b> | IND | 1-5 | 4861 | Open | ARR | ARR | SUMMER SESSION 1<br>MAY 9 – JUNE 21 |
| <b>GEOL-G 700 Geologic Problems</b> | IND | 1-5 | 4862 | Open | ARR | ARR | SUMMER SESSION 1<br>MAY 9 – JUNE 21 |

## **GEOL-G 700 Geologic Problems**

1-5 Credits.

Consideration of special geological problems.

## ***Mathematics***

| TITLE                                              | COMPONENT  | CREDITS | CLASS | STATUS | TIME              | DAY  | ATTRIBUTE                                                                                                                                             |
|----------------------------------------------------|------------|---------|-------|--------|-------------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MATH-51100 Linear Algebra with Applications</b> | ONLINE LEC | 3       | 3974  | Open   | 1:00 pm – 3:15 pm | MWTh | Completed MATH 26100 SUMMER SESSION 1 MAY 9- JUNE 21                                                                                                  |
| <b>Math-59800 Topics in Math</b>                   | IND        | 0-6     | 3975  | Open   | ARR               | ARR  | Before registering, student must contact individual math professor for course requirements and department permission. SUMMER SESSION 1 MAY 9 -JUNE 21 |
| <b>Math-59800 Topics in Math</b>                   | IND        | 0-6     | 3976  | Open   | ARR               | ARR  | Before registering, student must contact individual math                                                                                              |

|  |  |  |  |  |  |  |                                                                                                |
|--|--|--|--|--|--|--|------------------------------------------------------------------------------------------------|
|  |  |  |  |  |  |  | professor for course requirements and department permission. SUMMER SESSION 2 JUNE 26-AUGUST 7 |
|--|--|--|--|--|--|--|------------------------------------------------------------------------------------------------|

## **MATH-51100 Linear Algebra with Applications**

3 Credits.

Real and complex vector spaces; linear transformations; Gram-Schmidt process and projections; least squares; QR and LU factorization; diagonalization, real and complex spectral theorem, Shur triangular form; Jordon canonical form, quadratic forms.

## **MATH-59800 Topics in Math**

0-6 Credits.

Supervised reading courses as well as dual-level special topics courses are given under this number.

## ***IU ONLINE MATH***

| TITLE                                                 | COMPONENT | CREDITS | CLASS | STATUS | TIME | DAY | ATTRIBUTE |
|-------------------------------------------------------|-----------|---------|-------|--------|------|-----|-----------|
| <b>MATH- T 601<br/>Topics in Algebra</b>              | Online    | 3       | 1439  | Open   | OL   | OL  | TBA       |
| <b>MATH-T 650<br/>Topics in<br/>Probability/Stats</b> | Online    | 3       | 1469  | Open   | OL   | OL  | TBA       |

## **MATH-T 601 Topics in Algebra**

3 Credits.

This course will cover core topics in Algebra, including Group Theory, Ring Theory, Field Theory, Commutative and Noncommutative Algebra, Number Theory, and other topics in Algebra.

## **MATH-T 650 Topics in Probability/Statistics**

3 Credits.

This course will cover graduate-level knowledge of key concepts of Probability/Statistics.

### ***Physiology***

| TITLE                                                      | COMPONENT  | CREDITS | CLASS | STATUS | TIME | DAY | ATTRIBUTE                                           |
|------------------------------------------------------------|------------|---------|-------|--------|------|-----|-----------------------------------------------------|
| <b>PHYSL-F 595<br/>Advanced<br/>Physiology</b>             | IND        | 1-15    | 4010  | Open   | ARR  | ARR | REGULAR<br>ACADEMIC<br>SEASON<br>MAY 9-<br>AUGUST 7 |
| <b>PHYSL-F 595<br/>Advanced<br/>Physiology</b>             | IND        | 1-15    | 6762  | Open   | ARR  | ARR | SUMMER<br>SEASON 1<br>MAY 9-<br>JUNE 21             |
| <b>PHYSL-F 595<br/>Advanced<br/>Physiology</b>             | IND        | 1-15    | 6763  | Open   | ARR  | ARR | SUMMER<br>SEASON 2<br>JUNE 26-<br>AUGUST 7          |
| <b>PHYSL-F 701<br/>Research in<br/>Physiology</b>          | LEC ONLINE | 1-15    | 6249  | Open   | ARR  | ARR | REGULAR<br>ACADEMIC<br>SEASON<br>MAY 9-<br>AUGUST 7 |
| <b>PHYSL-F 701<br/>Research in<br/>Physiology</b>          | LEC ONLINE | 1-15    | 6764  | Open   | ARR  | ARR | SUMMER 1<br>SEASON<br>MAY 9-<br>JUNE 21             |
| <b>PHYSL-F 701<br/>Research in<br/>Physiology</b>          | LEC ONLINE | 1-15    | 6765  | Open   | ARR  | ARR | SUMMER 2<br>SEASON<br>JUNE 21-<br>AUGUST 7          |
| <b>PHSL-F 702<br/>SEMINAR IN<br/>PHYSIOLOGY</b>            | SEM ONLINE | 1       | 6768  | Open   | ARR  | ARR | SUMMER 1<br>SEASON<br>MAY 9-<br>JUNE 21             |
| <b>PHSL-F 702<br/>SEMINAR IN<br/>PHYSIOLOGY</b>            | SEM ONLINE | 1       | 6769  | Open   | ARR  | ARR | SUMMER 2<br>SEASON<br>JUNE 26-<br>AUGUST 7          |
| <b>PHSL-F 780<br/>Special<br/>Topics in<br/>Physiology</b> | IND        | 1-24    | 5849  | Open   | ARR  | ARR | REGULAR<br>ACADEMIC<br>SEASON<br>MAY 9-<br>AUGUST 7 |
| <b>PHSL-F 780<br/>Special</b>                              | IND        | 1-24    | 6766  | Open   | ARR  | ARR | SUMMER 1<br>SEASON                                  |



|                                                |     |      |      |      |     |     |                                      |
|------------------------------------------------|-----|------|------|------|-----|-----|--------------------------------------|
| <b>Topics in Physiology</b>                    |     |      |      |      |     |     | MAY 9 – JUNE 21                      |
| <b>PHSL-F 780 Special Topics in Physiology</b> | IND | 1-24 | 6767 | Open | ARR | ARR | SUMMER 2 SEASON<br>JUNE 26- AUGUST 7 |

## **PHSL-F 595 Advanced Physiology**

1-15 Credits.

## **PHSL-F 701 Research in Physiology**

1-15 Credits.

## **PHSL-F 702 Seminar in Physiology**

1 Credits.

## **PHSL-F 780 Special Topics in Physiology**

1-24 Credits.

## ***Physics***

| TITLE                                  | COMPONENT | CREDITS | CLASS | STATUS | TIME | DAY | ATTRIBUTE                                   |
|----------------------------------------|-----------|---------|-------|--------|------|-----|---------------------------------------------|
| <b>PHYS-59000 Reading and Research</b> | IND       | 1-3     | 4032  | Open   | ARR  | ARR | SUMMER SESSION 1<br>MAY 9-JUNE 21           |
| <b>PHYS-59000 Reading and Research</b> | IND       | 1-3     | 4033  | Open   | ARR  | ARR | SUMMER SESSION 2<br>JUNE 26- AUGUST 7       |
| <b>PHYS-59000 Reading and Research</b> | IND       | 6       | 6022  | Open   | ARR  | ARR | REGULAR ACADEMIC SESSION<br>MAY 9- AUGUST 7 |
| <b>PHYS-59000 Reading and Research</b> | IND       | 2       | 6023  | Open   | ARR  | ARR | REGULAR ACADEMIC SESSION<br>MAY 9- AUGUST 7 |

## **PHYS- 59000 Reading and Research**

1-6 Credits.

Reading and research in Physics.

## ***Statistics***

| TITLE                                             | COMPONENT | CREDITS | CLASS | STATUS | TIME | DAY | ATTRIBUTE                             |
|---------------------------------------------------|-----------|---------|-------|--------|------|-----|---------------------------------------|
| <b>STAT-51500 Statistical Consulting Problems</b> | IND       | 1-3     | 4102  | Open   | ARR  | ARR | SUMMER SESSION 1<br>MAY 9- JUNE 21    |
| <b>STAT-51500 Statistical Consulting Problems</b> | IND       | 1-3     | 4103  | Open   | ARR  | ARR | SUMMER SESSION 2<br>JUNE 26- AUGUST 7 |
| <b>STAT-59800</b>                                 | IND       | 1-3     | 4104  | Open   | ARR  | ARR | SUMMER SESSION 1<br>MAY 9- JUNE 21    |
| <b>STAT-59800</b>                                 | IND       | 1-3     | 4105  | Open   | ARR  | ARR | SUMMER SESSION 2<br>JUNE 26- AUGUST 7 |

## **STAT- 51500 Statistical Consulting Problems**

1-3 Credits.

A written report of a consultation problem involving a designed experiment or sample in which the student participates with a faculty member

## **STAT- 59800 Topics in Statistical Methods**

1-3 Credits.

Directed study and reports for students who wish to undertake individual reading and study on approved topics.

## ***TECHNOLOGY***

| TITLE                                                    | COMPONENT | CREDITS | CLASS | STATUS | TIME | DAY | ATTRIBUTE                          |
|----------------------------------------------------------|-----------|---------|-------|--------|------|-----|------------------------------------|
| <b>TECH<br/>58100<br/>Workshop<br/>in<br/>Technology</b> | Online    | 1-3     | 4520  | Open   | ARR  | ARR | SUMMER IUPUI<br>MAY 9- AUGUST<br>7 |

### **TECH 58100 Workshop in Technology**

1-3 Credits.

Advanced study in various fields of technology.