Board of Trustees
UNIVERSITY of WEST FLORIDA

Academic Affairs Committee Meeting
Thursday, August 14, 2025
UWF Conference Center

Zoom Webinar | Passcode: 25205

Agenda

I. **Call to Order**
II. **Roll Call**
III. **Greeting**
IV. **Public Comment**
V. **Approval of Minutes**
    a. May 8, 2025: Committee Meeting Minutes
VI. **New Business**
    a. Action Items
        i. ACA-1: Tenure as a Condition of Employment
        ii. ACA-2: Academic Affairs Committee Charter Revision
        iii. ACA-3: General Education Course Offerings
        iv. ACA-4: Institutes & Centers Annual Report
        v. ACA-5: Textbook & Instructional Materials Affordability Report
    b. Information Item
        i. INFO-1: Summary of Program Changes
VII. **Good of the Order**
VIII. **Adjournment**

Board of Trustees
UNIVERSITY of WEST FLORIDA

Academic Affairs Committee
May 8, 2025
Zoom Webinar
DRAFT Minutes

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Committee Meeting **10:57 a.m.**

The public was provided with information to join this virtual public meeting on the UWF Board of Trustees website.

I. Call to Order

A. The meeting of the UWF Board of Trustees Academic Affairs Committee was called to order at 10:57 a.m. by Committee Chair Adam Kissel.

II. Roll Call

A. Chair Kissel asked Anna Lochas to conduct roll call. Trustees Adam Kissel, Susan James, and Ashley Ross were in attendance.

B. Other Trustees in attendance included:
   1. Paul Bailey, Trista Bennett, Paul Hsu, Rebecca Matthews, Rachel Moya, Alonzie Scott, Zack Smith, and Chris Young.

C. Others in attendance included:
   1. Jaromy Kuhl, Provost; Gregory Tomso, Vice President of Academic Engagement & Student Affairs; Howard Reddy, Vice President of University Advancement; Betsy Bowers, Vice President of Finance and Administration; Dave Scott, Associate Vice President for Athletics; Jamie Sprague, Chief Human Resource Officer; Susan Woolf, General Counsel; Anamarie Mixson, Assistant Vice President for the Office of the President; Abigail Megginson, Director, Government Relations; Cindy Talbert, Chief Audit Executive; Matt Packard, Chief Compliance Officer; Dallas Snider, Vice Provost; Jeffrey Djerlek, Associate Vice President of Finance and Controller; Dan Lucas, Associate Vice President for Advancement; Christophe Lizen, Director of Institutional Research; Angela Bryan, SACSCOC Liaison and Director of Institutional Effectiveness; Katie Condon, Assistant Vice President of Enrollment Affairs; Brittany Sherwood, Chief Communications Officer; Patrice Moorer, Assistant Vice President; James Adams, Director of Business and Auxiliary Services; Chris Martin, Assistant Vice President for Facilities Management; James Manor, Executive Director of Facilities Management; Lauren Loeffler, Assistant Vice President of Academic Engagement; Mary Anderson, Associate Vice President and Dean of Students; David Earle, Dean of College of Arts, Social Science, and Humanities; Mohamed Khabou, Dean of Hal Marcus College of Science and Engineering; Scott Keller, Dean of Lewis Bear Jr. College of Business; Denise Soares, Dean of the School of Education; Jerry Lin, Associate Vice President of Research Administration; Michael Wyatt, Assistant General Counsel; Mike Cobb, Director of Environmental Health & Safety; Rachel Conway, Director of Financial Aid and Scholarships; Alex Smith, Director of External Affairs; Angela Hahn, Chair of the Department of Health Sciences and Administration; David Bryant, incoming Chief Audit Executive; and Anna Lochas, Board of Trustees Liaison.

III. Greeting

A. Chair Kissel welcomed everyone to the meeting and noted that there were four action items and two information items on the Academic Affairs Committee agenda.

IV. Public Comment

A. Chair Kissel opened the floor for public comment. There was none.

V. Approval of Minutes

A. Chair Kissel reminded the committee members that they had been given the opportunity ahead of time to review the minutes of the February 13, 2025, Academic Affairs Committee Meeting. Chair Kissel asked for a motion to approve the minutes as presented if there were no changes or corrections.
   1. Motion by: Trustee James
   2. Seconded by: Trustee Ross
   3. Motion passed unanimously.

VI. New Business

A. Action and Information Items

1. ACA-1: Approve Tenure
   a. The first action item was presented by Provost, Dr. Jaromy Kuhl, on the approval of Tenure for the following faculty members:
      i. Moh Alzoubi, Cybersecurity and Information Technology
      ii. Jennifer Brinkley, Criminology, Criminal Justice, and Legal Studies
      iii. Gerald Burch, Business Administration
      iv. Holley Handley, Instructional Design and Technology
      v. Chrystina Hoffman, Criminology, Criminal Justice, and Legal Studies
      vi. Erin King, Social Work
      vii. Lauren Ricciardelli, Social Work
      viii. Lauren Rich, Business Administration
      ix. Lisa Waidner, Center for Environmental Diagnostics and Bioremediation
      x. Mengying Xiao, Mathematics and Statistics.

   b. Chair Kissel asked for a motion to approve tenure for the ten faculty members, as presented.
      i. Motion by: Trustee James
      ii. Seconded by: Trustee Ross
      iii. Motion passed unanimously.

2. INFO-1: 2024-2025 Post-Tenure Review
   a. Dr. Kuhl presented the first information item on the 2024-2025 Post-Tenure Review.

3. INFO-2: Updated List of Anticipated New Academic Programs for the 2024-25 Academic Year
    a. Dr. Dallas Snider, Vice Provost, presented the second information item on the updated list of Anticipated New Academic Programs for the 2024-25 Academic Year.

4. ACA-2: Request to Offer a New Degree Program – BS-RT
    a. Dr. Snider presented the second action item on the request to offer the Bachelor of Science in Entry-Level Respiratory Therapy (BS-RT) degree program.

    b. Chair Kissel asked for a motion to approve the request to offer a new degree program, the Bachelor of Science in Entry-Level Respiratory Therapy.
        i. Motion by: Trustee James
        ii. Seconded by: Trustee Ross
        iii. Motion passed unanimously.

5. ACA-3: Specialized Admissions Initial Approval Request – BS-RT
    a. Dr. Snider presented the third action item on the request for specialized admissions status for the proposed new degree program, the Bachelor of Science in Entry-Level Respiratory Therapy (BS-RT).

    b. Chair Kissel asked for a motion to approve the specialized admissions status initial approval request for the Bachelor of Science in Entry-Level Respiratory Therapy.
        i. Motion by: Trustee James
        ii. Seconded by: Trustee Ross
        iii. Motion passed unanimously.

6. ACA-4: Revisions to UWF/REG 3.033 Transfer of Credit
    a. Dr. Kuhl presented the fourth action item on the revisions to UWF Regulation 3.033, Transfer of Credit.

    b. Chair Kissel asked for a motion to approve the revisions to UWF Regulation 3.033, Transfer of Credit, contingent upon no substantive changes following the conclusion of the posting period
        i. Motion by: Trustee James
        ii. Seconded by: Trustee Ross
        iii. Motion passed unanimously.

VII. Announcements

A. Chair Kissel identified that all agenda items had been discussed. Chair Kissel asked if the committee members had any additional business to

discuss. No other business was discussed.

VIII. Adjournment **11:28 a.m.**

A. Chair Kissel thanked those in attendance for their participation. With no other business to discuss, Chair Kissel adjourned the meeting at 11:28 a.m.

Board of Trustees
Academic Affairs Committee
August 14, 2025

Tenure as a Condition of Employment

Recommended Action:
Approve Tenure as a Condition of Employment for Dr. Muhammad Maqbool and Dr. Jeremy Straub

Background Information:
The University of West Florida Board of Trustees considers all nominations for tenure at its June meeting. Tenure nominations as a condition of employment will be considered as needed.

The following faculty is being considered for tenure as a condition of employment:

- **Dr. Muhammad Maqbool**, Chair, Department of Physics; Professor in the Department of Physics, Hal Marcus College of Science and Engineering
- **Dr. Jeremy Straub**, Associate Professor, Center for Cybersecurity; Tenure in the Department of Cybersecurity and Information Technology, Hal Marcus College of Science and Engineering

Implementation Plan:
- Dr. Maqbool's appointment began on August 8, 2025.
- Dr. Straub's appointment began on August 8, 2025.

Fiscal Implications:
None

Relevant Authority:
UWF-UFF Collective Bargaining Agreement (16.9)

Supports Strategic Direction(s):
Strategic Direction 2: Employee Success

Supporting Documents:
1. Tenure Support and CV for Dr. Maqbool
2. Tenure Support and CV for Dr. Straub
3. UWF-UFF CBA Article 16 Tenure

Prepared by:
Jaromy Kuhl, Senior Vice President and Provost, 850.474.2035, jkuhl@uwf.edu

Presenter:
Jaromy Kuhl

UNIVERSITY of WEST FLORIDA

Department of Physics
11000 University Parkway
Pensacola, FL 32514

MEMORANDUM
May 5, 2025

TO: Dr. Mohamed Khabou, Dean, HMCSE

FROM: Dr. Peter Cavnar, Interim Chair, Department of Physics

SUBJECT: Department of Physics Tenure Decision for Dr. Muhammad Maqbool

The tenured faculty in the Department of Physics voted unanimously (4 for, 0 against) in support of granting tenure upon hire to Dr. Muhammad Maqbool for the Professor and Department Chair position #106000. Dr. Maqbool is a tenured professor of Physics and Health Physics at the University of Alabama at Birmingham (UAB). He has established an extensive academic and administrative career spanning over two decades. He has leadership roles at multiple institutions, including Acting Director of the Health Physics Program at UAB, chairing key committees, and leading program development initiatives. Dr. Maqbool has received numerous accolades, such as the SHP Excellence in Research Award, and has mentored students with national recognition. His accomplishments include securing over $1,000,000 in funding from agencies like NSF, IAS, and others. He currently has over $2M in funding under review, which, if funded, can be transferred to UWF. He has over 30 peer-reviewed publications over the last five years.

The Department agrees that Dr. Maqbool exceeds the UWF Department of Physics bylaws requirements for tenure.

UNIVERSITY of WEST FLORIDA

Hal Marcus College of Science and Engineering
11000 University Parkway
Building 4, Office 423
Pensacola, FL 32514

Date: May 5, 2025

From: Dr. Mohamed Khabou
Dean, Hal Marcus College of Science and Engineering

Subject: Support of granting tenue to Dr. Muhammad Maqbool upon hire

I am writing this letter to indicate my support for granting tenure upon hire to Dr. Muhammad Maqbool who was offered position #106000 as full Professor in the Department of Physics with a start date of Aug 8, 2025. Dr. Maqbool will serve as the Chair of the Physics Department.

Dr. Maqbool is currently employed as a tenured full Professor of Physics at the University of Alabama Birmingham (UAB) where he taught classes and conducted high caliber research supported by a variety of major grants.

Given the strong support for Dr. Maqbool by the Interim Chair of UWF's Physics Department and the unanimous vote by its faculty to grant Dr. Maqbool tenure, I fully support granting him tenure in the Physics Department and for his case to go before UWF's BOT for consideration.

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uwf.edu/hmcse

Curriculum Vitae

MUHAMMAD MAQBOOL, Ph.D. M.S. M.Sc.

Professor of Physics, and Health Physics,
Chairperson UAB Laser Safety Committee,
Vice Chair UAB Senate Finance Committee,
The University of Alabama at Birmingham (UAB)
Department of Clinical & Diagnostic Sciences,
School of Health Professions,
1716 9th Avenue South,
Birmingham, AL 35294-0019,
USA.

Citizenship Status: **Citizen of the United States of America.**

LEADERSHIP TRAINING:

05/2019 – 08/2019: Academic Leadership training at the National Center for Faculty Development and Diversity (NCFDD).
The training provided enhanced my leadership skills in managing time and activities, handling challenging situations, working with and resolving conflicts, guiding and training junior faculty and staff, working with financial matters, working with academic matters, advising and guiding students, and many more.

EDUCATION

2005 Ph.D. Doctor of Philosophy in Physics. Ohio University, Athens, Ohio, USA.
Dissertation: Growth, characterization, luminescence, and optical properties of rare-earth elements and transition metals doped in wide bandgap nitride semiconductors.

2002	M.S.	Master of Science in Physics. Ohio University, Athens, Ohio, USA.
1998	M.Sc.	Master of Science in Medical and Radiation Physics. University of Birmingham, Birmingham, UK.
1994	M.Sc.	Master of Science in Physics. University of Peshawar, Pakistan.
1992	B.Sc.	Bachelor of Science in Physics, University of Peshawar, Pakistan.

ACADEMIC AND PROFESSIONAL APPOINTMENTS

10/2022 - Present:	Professor of Physics & Diagnostic Sciences, The University of Alabama at Birmingham (UAB), USA.
05/2017 – 08/2022:	Associate Professor of Physics & Health Physics, The University of Alabama at Birmingham, USA.
05/2017 – 05/2021:	Associate Director and Acting Director (as per need) of MS in Health Physics Program. The University of Alabama at Birmingham, USA.
08/2013 – 05/2017:	Associate Professor of Physics & Astronomy, Department of Physics & Astronomy, Ball State University, Indiana, USA.
08/2010 – 05/2017:	In Charge, Optics & Photonics Research group, Department of Physics & Astronomy, Ball State University, Indiana, USA.
08/2008 – 05/2017:	Coordinator of Medical Physics program, Department of Physics & Astronomy, Ball State University, Indiana, USA.
09/2013 – 08/2014:	Associate Professor and Associate Director of Materials Science & Technology Program, Qatar University, Doha, Qatar.
08/2008 – 08/2013:	Assistant Professor, Department of Physics & Astronomy, Ball State University, Indiana, USA.
08/2005 – 07/2008:	Assistant Professor of Physics & Astronomy, University of Mount Olive, North Carolina, USA.
08/2006 – 08/2008:	Founding Director, Pre-Engineering Program, Mount Olive College, North Carolina, USA.
08/1996 – 11/2000:	Lecturer in Physics, Department of Physics, University of Peshawar, Pakistan.
11/1998 – 11/2000:	Warden (Director). Residence Halls, the University of Peshawar, Pakistan.
10/1996 – 08/1997:	Assistant Warden (Assistant Director). Residence Halls, the University of Peshawar, Pakistan.

HONORS AND AWARDS

09/2024: Article Publications Charges awarded by the University of Alabama at Birmingham (UAB).
05/2024: Travel Award to my 2 mentees based on an outstanding research project.
03/2024: Research Presentation Award, Florida Atlantic University, USA.
10/2023: Certificate for an outstanding member of the University Senate Finance Committee.
09/2023: 'JIEC Most Influential Paper Award' by Korean Society for Industrial and Engineering Chemistry.
04/2023: SHP Excellence in Research and Scholarship Award, The University of Alabama at Birmingham.
04/2023: SHP Research Day Second Best Poster Award.
07/2019: Outstanding Research Project Award, American Health Physics Society (HPS), 64th Annual Meeting, Orlando, Florida, USA.
01/2016: Extra Ordinary Merit Award, Ball State University, USA.
06/2012: Provost Allocation Award, Ball State University, USA
06/2012: Dean's Discretionary Award, Ball State University, USA.
07/2011: Provost Allocation Award, Ball State University, USA.
07/2011: Dean's Discretionary Award, Ball State University, USA
01/2001: Awards of Research Assistantship at Ohio University, USA.
07/1999: Award of Best Organizer of Science Fair, Peshawar University, Pakistan.
06/1999: Travel Award for participation in International Summer College on Physics and Contemporary Needs.
09/1997: Commonwealth Award for MS degree at University of Birmingham, UK.
10/1994: University "Gold Medal", University of Peshawar, Pakistan.
09/1993: Merit Certificate & Scholarships at the University of Peshawar, Pakistan.
05/1991: Merit Scholarships at the University of Peshawar, Pakistan.

PROFESSIONAL MEMBERSHIP

01/2003 – Present: American Physical Society.
06/2017 – Present: Health Physics Society.
06/2018 – Present: Optical Society of America.
10/2021 – Present: Alpha Eta Society
06/2018 – 06/2020: Radiation Research Society.
06/2017 – 06/2018: Society of Nuclear Medicine and Molecular Imaging.
06/2009 – 04/2017: Indiana Academy of Science
11/2003 – 11/2005: Materials Research Society.

ACADEMIC LEADERSHIP AND PROFESSIONAL SERVICES EXPERIENCE

ADMINISTRATIVE POSITIONS and RESPONSIBILITIES:

Programs Director and Coordinator:

- **05/2017 – 05/2021:** Associate Director and Acting Director (per need), MS in Health Physics Program, University of Alabama at Birmingham (UAB).

As an Associate Director / Acting Director, I developed the newly established MS in Health Physics Program from scratch since I was the only full-time faculty member of the program in the given period. I worked hard to develop the program through student recruitment and retention. New methods of student recruitment were developed in the form of recruitment lectures, approaching high school students, developing school workshops, participating in recruitment events, and approaching potential students using social media platforms. I also advised and guided students in their academics and career development. My job also included program assessment and developing methods of effective teaching and learning for students. My job also included new course development and updating the existing courses based on the latest research and discoveries. I also performed the duties of developing online courses and online modes of teaching classes. Moreover, organized educational and study trips for students to national labs and hospitals for their professional development in the field. Mentoring students in research projects was also performed by me. Students completed valuable research projects under my mentorship, published their work, presented in local, national, and international meetings, and obtained awards. Collaboration with national labs, hospitals, and industry was a part of my goals and efforts to develop the program. Initiating efforts for accreditation of the program with ABET was done by me.

- 09/2008 – 04/2017: Director of Optics & Photonics Research and Academic Groups and laboratories at BSU

As a Director of the Optics and Photonics Group for over 8 years, I developed the optics and photonics research at Ball State University. Faculty members and students from physics and other departments were engaged in research, publications, and scholarly activities in optics and photonics. A new advanced optics and spectroscopy research lab was established which produced highly renowned scholars, over 50 peer-reviewed papers, one patent, and many collaborative activities.

I also developed new graduate and undergraduate courses in optics, one optics lab with the latest equipment, and a new major in Applied Physics with a concentration in Optics and Photonics was started due to my leadership and efforts.

- 09/2013 – 06/2014: Associate Director, Master of Science in Materials Science & Technology Program at Qatar University, Doha, Qatar.

As an Associate Director, I developed the newly established MS in Materials Science and Technology Program by student recruitment and retention. developing and participating in academic and industrial workshops, participating in recruitment events, and approaching potential students using social media platforms. I also advised and guided students in their academics and career development. I also developed all teaching labs for the program and research labs in the areas of my expertise. My job also included developing new methods of program assessment and developing methods of effective teaching and learning for students. My job also included new course development based on the latest research and discoveries. I

also performed the duties of developing online courses and online modes of teaching classes. Moreover, organized educational and study trips for students to national labs and hospitals for their professional development in the field. Mentoring students in research projects was also performed by me. Students completed valuable research projects under my mentorship, published their work, presented in local, national, and international meetings, and obtained awards.

- 08/2008 – 04/2017: Coordinator of Medical Physics Program at Ball State University. As a coordinator of medical physics, I developed new undergraduate and graduate medical physics concentrations. I also developed a strong collaboration with the Cancer Center of Ball Memorial Hospital. The Cancer Center funded 3 students of my group every year to pursue their projects at the hospital. Representing the medical physics group of BSU at various forums was my responsibility.
- 08/ 2006 – 08/2008: Founding Director, Pre-Engineering program at the University of Mount Olive (formerly called Mount Olive College), North Carolina, USA.

As the Founding Director of the Pre-Engineering Program, I developed the program from scratch, with the collaboration of North Carolina State University, College of Engineering. A student admitted to the pre-engineering program had to complete one year of the courses (suggested by NC State University) at Mount Olive College and then transfer to the College of Engineering of NC State University in his/her sophomore year. I developed the program, all its courses, and labs from scratch, and as the only faculty member of physics I had to initiate, act, and complete every task by myself.

Administrative Committee and Tasks:

- 2023 – Present: Vice Chair, Senate Finance Committee, The University of Alabama at Birmingham (UAB). Help and support the committee chair to develop advice for all finance-related matters of the University.
- 2023 – Present: Senator at Large (Executive Committee), The University of Alabama at Birmingham (UAB). Discuss and develop strategies for all highly important matters of the University and keep the faculty members of my school informed about new developments.
- 2022 – Present: Faculty Senator, UAB. Helped in various legislative matters.
- 2017 – Present: Faculty Affairs Committee, School of Health Professions. As a long-term member of FAC, I have helped my school in many matters related to rules and regulations, policy implementation, promotion and tenure, hiring new faculty members and staff, new courses and curricula development policies, guiding and helping faculty members in their career development, and many more administrative matters.
- 2020 – 2022: UAB Diversity, Equity, and Inclusion (DEI) Committee.
- 2023 –2024: Vice Chair, Accelerator Section, Health Physics Society (HPS).
- 2018 – 2018: Faculty research areas and needs, Taskforce Chair. Department of

Clinical & Diagnostic Sciences, UAB.

- 2015 – 2017: Faculty Council, Ball State University.
- 2014 – 2017: Curriculum Committee, Ball State University.
- 2006 – 2008: Faculty Senator, University of Mount Olive.

Chairing Committees:

- 01/2021 – Present: Chairperson, The University of Alabama at Birmingham (UAB) Laser Safety Advisory Committee.
  Provide help and support to researchers and clinicians in the safe use of lasers in research, teaching, and clinical tasks.
  Develop rules and regulations for laser safety on the UAB campus and affiliated institutes. Develop a database for all lasers in use at UAB. Administer and assign duties and tasks to the committee members.
- 09/2023 – Present: Chairperson SHP Peer-Evaluation Taskforce, UAB.
  Developed peer evaluation rubrics for the following types of courses.
  a. Online Courses
  b. Laboratory Courses
  c. Simulation-based Courses
  d. Team-based Learning Courses
  e. Services Learning Courses
  f. Under-enrolled Courses
  g. Clinical-based Courses
- 03/2023 – 04/2023: Chairperson, Promotion and Tenure Sub-Committee, School of Health Professions, the University of Alabama at Birmingham.
  Evaluate promotion and tenure packages of faculty members who apply for and seek promotion and tenure.
- 03/2021 – 04/2021: Chairperson, Promotion and Tenure Sub-Committee, School of Health Professions, the University of Alabama at Birmingham.
  Evaluate promotion and tenure packages of faculty members who apply for and seek promotion and tenure.
- 01/2020 – 04/2020: Chairperson, Promotion and Tenure Sub-Committee, School of Health Professions, University of Alabama at Birmingham.
  Evaluate promotion and tenure packages of faculty members who apply for and seek promotion and tenure.
- 06/2019 – 01/2020: Chairperson, Research and Scholarly Activity Support Taskforce, University of Alabama at Birmingham. As a chair of the task force I collected information about the research and scholarly needs of faculty members in the department, support the faculty researchers wanted from the department, and lab space provision.
- 08/2019 – Present: Faculty Adviser**,** Pakistani Students Association (PSA), University

of Alabama at Birmingham.
PSA is a cultural organization composed of student body of UAB and the faculty adviser. As a faculty adviser, I have been performing the following jobs.

i. Develop and update the constitution and by-laws for the PSA.
ii. Help the PSA board to Manage meetings and events, and lead all activities of PSA.
iii. Guide and advise the PSA board and general members on the UAB rules and regulations and ensure implementation of the rules and regulations of UAB in all events and activities.
iv. Help PSA in organizing elections every year to elect new board members.
v. Help students of PSA, especially those who came from abroad, how to study, and live peacefully and with harmony in multiple cultures, and traditions.

- 08/2010 – 04/2015: Faculty Adviser, Muslim Students Association, Ball State University (BSU), Muncie, Indiana, USA.
MSA was a religious and cultural organization composed of the student body of BSU and the faculty adviser. As a faculty adviser, I performed the following jobs.

i. Develop and update the constitution and by-laws for the MSA.
ii. Help the MSA board to Manage meetings and events, and lead all activities of MSA.
iii. Guide and advise the MSA board and general members on the BSU rules and regulations and ensure implementation of the rules and regulations of UAB in all events and activities.
iv. Help MSA in organizing elections every year to elect new board members.
v. Help students of MSA, especially those who came from abroad, how to study, and live peacefully and with harmony in multiple cultures, and traditions.
vi. As an interfaith member, advised and helped MSA to organize common activities and events with other religious bodies on campus.

- 12/2014 - 04/2017: Director, Colloquium and Lectures Series,
Department of Physics & Astronomy, Ball State University.
Invited faculty members, research scholars, and professional and clinical staff to give lectures on the latest developments in their areas of expertise.
Organized and managed travel arrangements and hotel accommodations (if needed), meals, and financial needs of the speakers.

- 09/2013 – 06/2014: Director, Program Assessment, Master of Science in Materials Science and Technology Program at Qatar University, Qatar.
  As a director of assessment, I performed the following jobs.
  i. Developed and wrote the goals and objectives of the newly established MS in Materials Science and Technology Program.
  ii. Developed objectives, goals, and expected outcomes for each course, and laboratory.
  iii. Developed assessment method and mechanism to evaluate and make sure all objectives are met each time a course is taught.
  iv. Made sure the goals and objectives of each course are aligned with the program goals. Developed mechanisms and methods of assessment to ensure that fulfilling the required goals and objectives of each course also helps achieve program goals and objectives.
- 09/2013 – 06/2014: Chairperson / Coordinator, Program Accreditation, Master of Science in Materials Science and Technology Program at Qatar University, Qatar.
  Helped the program in achieving accreditation with ABET.
- 09/2013 – 06/2014: Director, Graduate Admissions Committee, Master of Science in Materials Science and Technology Program at Qatar University, Qatar.
  As a director, I directed and managed all plans and schemes for students' admission, retention, and career development.
- 08/2012 – 08/2013: Chairperson, Undergraduate Committee, Department of Physics & Astronomy at Ball State University.
  i. Organized and managed all curriculum activities and engagements of undergraduate students.
  ii. helped the department of Physics and Astronomy in recruiting new undergraduate students by participating in various recruitment events and recruitment talks.
  iii. Scheduled meetings and helped students to make sure they are progressing well in their chosen curricula.
  iv. Scheduled extracurricular activities for undergraduate students.
  v. Developed and organized professional development activities for students. Developing and organizing professional activities for students like taking active membership in the Society of Physics Students on campus and organizing high school workshops where undergraduate students perform hands-on experiments with high school students.
- 08/2010 – 08/2012: Chairperson, Graduate Committee, Department of Physics & Astronomy, Ball State University.

i. Organized and managed all curriculum activities and engagements of undergraduate students.
ii. Helped the Department of Physics and Astronomy in recruiting new graduate students.
iii. Recruiting new Teaching Assistants (TA) and managing stipend for the TAs.
iv. Scheduled meetings and helped students to make sure they are progressing well in their chosen curricula.
v. Scheduled extracurricular activities for graduate students.
vi. Developed and organized professional development activities for students. Developing and organizing professional activities for students like taking active membership in the Society of Physics Students on campus and organizing high school workshops where undergraduate students perform hands-on experiments with high school students.

- 05/2015 – 04/2017: Representative of the College of Science and Humanities at the Athletic Committee of Ball State University.
- 08/2006 – 08/2008: Faculty Senator for School of Arts & Sciences, University of Mount Olive.

Faculty and Staff Training and Mentorship:

- 2017 – Present: Trained guided and mentored junior faculty members at the University of Alabama at Birmingham.
- 2022 – 2024: Workshops on faculty training on promotion and tenure at the Department of Clinical and Diagnostic Sciences, the University of Alabama at Birmingham.
- 2008 – 2017: Trained guided and mentored 4 junior faculty members and 5 staff members at Ball State University.
- 2013 – 2014: Trained guided and mentored 1 junior faculty member and 3 staff members at Qatar University.
- 2005 – 2008: Trained 2 staff members at the University of Mount Olive.

Faculty & Staff Recruitment:

- 2024: Faculty (Associate/Assistant Professor) Recruitment, Health Physics Programs, the University of Alabama at Birmingham.
- 2021: Faculty (Assistant/Associate Professor) Recruitment, School of Health Professions, at the University of Alabama at Birmingham.
- 2019: Faculty (Associate/Assistant Professor) Recruitment, Health Physics and Nuclear Medicine Technology Programs, the University of Alabama at

Birmingham.

- 2018: Faculty (Instructor) Recruitment, Biomedical Sciences Program, University of Alabama at Birmingham.
- 2018: Faculty (Associate/Assistant Professor) Recruitment, Department of Radiology, The University of Alabama at Birmingham Hospital.
- 2016: Faculty (Instructor/Assistant Professor) Recruitment, Department of Physics & Astronomy, Ball State University.
- 2014: Faculty (Assistant / Associate Professor) Recruitment, Materials Science & Technology Program, Qatar University,
- 2013: Lab Assistant Recruitment, Materials Science & Technology Program, Qatar University,
- 2012: Faculty (Assistant / Associate Professor of Physics) Recruitment, Department of Physics & Astronomy, Ball State University.
- 2012: Faculty (Assistant/Associate Professor of Nanosciences) Recruitment, Department of Physics & Astronomy, Ball State University.

Member Committees:

- 2023 – Present: CDS Inclusive Excellence Working Group.
- 2021 – 2022: Dean's Research and Scholarship Strategic Team.
- 2020 – 2022: Evaluating curriculum vitas of candidates for Associate Dean and Program Directors' positions.
- 2021 – 2022: Faculty publications Funding Support Committee.
- 2021 – Present: SHP Grants Review Committee.
- 2020 – 2021: Teaching Taskforce Committee, School of Health Professions
- 2018 – Present: Departmental Review Committee (DRC), Department of Clinical & Diagnostic Sciences.
- 12/2018 – Present: UAB Laser Safety Committee.
- 05/2017 – Present: Students Recruitment Committee, Master of Science in Health Physics and Master of Science in Nuclear Medicine Technology Programs.
- 05/2020 – Present: Wellness Committee, School of Health Professions.
- 09/2021 – Present: CDS Fun Committee.
- 07/2017 – Present: Radiation and Radioisotopes Committee (alternative to PD).
- 08/2014 – 04/2017: Dean's Advisory Committee, College of Science & Humanities, Ball State University, Muncie, Indiana, USA.
- 08/2012 – 05/2017: Faculty Recruitment Committee, Ball State University.
- 08/2014 – 05/2017: Staff Recruitment Committee member, Ball State University.

- 08/2015 – 05/2017: Inter-Universities Collaboration and Students Exchange Committee, Ball State University.
- 08/2014 – 04/2017: Graduate Committee, Dept. of Physics & Astronomy, Ball State University.
- 08/2014 – 04/2017: Undergraduate Committee, Department of Physics & Astronomy, Ball State University.
- 08/2014 – 04/2017: Curriculum Committee, Dept. of Physics & Astronomy, Ball State University.
- 09/2013 – 06/2014: Faculty and Staff Recruitment Committee, Department of Materials Science & Technology, Qatar University, Qatar.
- 05/2009 – 08/2013: Admissions and Credits Committee, Ball State University.
- 09/2008 - 08/2013: Graduate Committee. Dept. of Physics & Astronomy, Ball State University.
- 09/2008 – 08/2013: Undergraduate Committee, Department of Physics & Astronomy, Ball State University.
- 09/2008 - 08/2013: Curriculum & Assessment Committee, Department of Physics & Astronomy, Ball State University.

New Programs Development Experience:

- **03/2020 – 09/2021:** Developed ***online Master of Science in Health Physics*** program at the University of Alabama at Birmingham. Immediately after the COVID-19 Pandemic, I realized that we need an Online version of our M.S. in Health Physics Program. I developed the entire M.S. program online. Students who cannot participate in person, take advantage of the online program. Currently working as a professor and associate program director.
- **09/2013 – 06/2014:** Developed ***Master of Science in Materials Science & Technology*** for Qatar University, Qatar. I developed the program curricula, courses, labs, assessment procedures, research tracks, industrial collaboration, and its connections with US institutions. The program is still there and students are taking advantage of that program. Many students have got jobs and other opportunities in industry and academia. I administered and run the program for one year.
- **08/2008 – 12/2008:** Developed ***Master of Science (M.S.) in Physics with a concentration in Medical Physics*** at Ball State University, Indiana, with the collaboration of Cancer Center, Ball Memorial Hospital. Students were required to complete coursework in the Department of Physics and Astronomy and then work on a two-semester research project at the Cancer Center of Ball Memorial Hospital. I developed and taught the complete curriculum and courses with labs. The program is still there, and students are taking advantage of that program. I administer and run the program for 8 years.
- **10/2005 – 06/2006:** Developed ***Pre-Engineering Program for Mount Olive College (currently University of Mount Olive)*** with the collaboration of North Carolina State

University (NCSU). Students were required to complete one year at Mount Olive College, taking courses required by the College of Engineering at NCSU. In the second year, the students were placed on priority at the College of Engineering NCSU Sophomores. I developed and taught the complete curriculum and courses with labs. The program is still there, and students are taking advantage of that program. I administered and run the program for 2 years.

President and Chair Professional Organizations:

- 07/2024 – Present: President Accelerator Section of Health Physics Society.
- 06/2023 – 06/2024: President-Elect Accelerator Section of Health Physics Society.
- 11/2019 – 11/2022: President Alabama Chapter Health Physics Society, USA.
- 05/2019 – 09/2019: President-Elect Alabama Chapter Health Physics Society.
- 08/2019 – 08/2022: Chair-Elect UV, x-rays and γ-rays technical section of Optical Society of America.

Chair / Organizer International Meetings and Workshops:

- 04/2021: Review Committee Member, International Conference on Nanomaterials, Nanodevices, Fabrication and Characterization (ICNNFC'20), 04/12/2021-04/14/2021, Lisbon, Portugal. Rescheduled for 04/2022.
- 04/2021: Organizing Committee Member, World Nano 2020 Conference, April 27- 29, 2021 in Orlando, FL, USA. Rescheduled for 04/2022
- 05/2019: Organizer, Alabama Chapter-Atlanta Section Health Physics Society Spring 2019 Meeting, at the University of Alabama at Birmingham, Alabama, USA.
- 10/2011: Organizing Co-Chair, Ohio Region American Physical Society (APS) Fall-2011 Meeting. October 14 - 16, 2011. Indiana, USA.

Chair Technical Sections and Research Panels:

- 08/2019 – Present: Chair-Elect, Gamma, X-rays and UV Photonic Section, Optical Society of America.
- 07/06/19 – 07/11/19: Session Chair, Medical Health Physics Session, 64th Annual Meeting of Health Physics Society, Orlando, Florida, USA.
- 10/19/18 – 10/20/18: Session Chair, Nanoscience session, American Physical Society Texas Section and American Association of Physics Teachers, Fall Meeting 2018, Houston, Texas, USA.
- 10/14/11 – 10/16/11: Session Chair, Medical Physics, Ohio Region American Physical Society (APS) Fall-2011 Meeting. Indiana, USA.

Judge Academic & Professional Bodies:

- 07/06/2019 – 07/11/2019: Judge, Students Poster Presentations, 64th Annual Meeting of Health Physics Society, Orlando, Florida, USA.
- 04/2019: Judge, Students Oral and Poster Presentations. UAB Expo. University of Alabama at Birmingham, USA.
- 12/2018: Judge, Students Oral and Poster Presentations. UAB Expo. University of Alabama at Birmingham, USA.
- 04/2018: Judge, Students Oral and Poster Presentations. UAB Expo. University of Alabama at Birmingham, USA.
- 12/2017: Judge, Students Oral and Poster Presentations. UAB Expo. University of Alabama at Birmingham, USA.
- 11/2013: Judge, Qatar Foundation Annual International Research Conference, Doha, Qatar.
- 03/2002: Judge, Regional Science Fair, Ohio University, USA.
- 03/2004: Judge, Regional Science Fair, Ohio University, USA.

Consultant in International Professional and Academic Organizations:

- 2024 – Present: External Evaluator and Reviewer of the Promotion of Physics Faculty member at Princess Noura Bint Abdulrahman University, Saudi Arabia.
- 2024 – Present: External Reviewer for faculty promotion and tenure for the Ministry of Education Princess Noura Bint Abdulrahman University, Saudi Arabia.
- 2012 – 2022: Consultant and Exam Writer of the American Institute of Research. Reviewer and Writer for the physics section of the exams for the Medical Colleges Admission Test (MCAT) in USA.
- 2007 – 2008: Assistant Examiner Physics, International Baccalaureate Organization (IBO), UK.
- 1998 – 2000: Examiner, University of Peshawar, Pakistan.
- 1994 – 1997: Examiner, Board of intermediate and secondary education, Peshawar, Pakistan.
- 1998 – 2000: Coordinator of the Science Society, University of Peshawar, Pakistan.

Grants Reviewer:

- 09/2014 – Present: Reviewer and Consultant, National Grants Proposals in Science & Technology for the Republic of Kazakhstan.

06/2024: AP23490620 Implementation of Sustainable Tourism Management in the Imantau-Shalkar Resort Area Based on the Application of Smart Technologies.

05/2024: AP23490033 Development of an innovative material based on magnesium, promising for use as an implant.

05/2024: AP23489412 Synthesis of new nanoscale magnetic multicomponent oxide multiferroics and investigation of their physico-chemical properties.

05/2024: AP23487220 AD-LOC: Development of bio-ionic-transistors integrated with a microfluidic chip as an advanced lab-on-a-chip device for biomedical applications.

04/2024: AP23489441 Innovative biological research to enhance sugar beet sustainability and productivity.

04/2024: AP23490918 Comprehensive radioecological study and assessment of reserves of rare and valuable metals of closed uranium mines of Akmola region

03/2024: BR20081011 Development of new scientific research in the field of radiation materials science, structural materials, nanomaterials at the WWR-K research reactor.

03/2023: BR20081011 Development of new scientific research in the field of radiation materials science, design materials, nanomaterials at the WWR-K research reactor

03/2023: AP19678197. Integrating physic-informed neural network bayesuan and convolutional neural networks for early breast cancer detection using thermography.

03/2022: AP13268987 Research and development of a fiber-optic sensor for determining the concentration of viruses in enclosed spaces

09/2020: AP08856017 Study on thea creation of quasi-continuous laser on the p-s transition of a noble gas atom with excitation by-products of 6Li(n,α)3H nuclear reaction. Review completion

11/2019: AP08053074 Development of technology for the synthesis of nano- and micro-diamond crystals with ability to control their properties. Review completion

10/2029: AP08051954 Synthesis and modification of magnetic nanoparticles for targeted delivery of drugs. Review completion

11/2019: AP08052398 Synthesis and research of the biological activity of metal nanoparticles. Review completion

11/2019: AP08052582 Development of technologies for the synthesis of metal-carbon (Me-C) nanocomposites for various purposes. Review completion date:

11/2019: AP08052623 Light-emitting structures based on thin layers of metal-halide perovskites nanocrystals. Review completion

11/2019: AP08052625 Optical, electrical, and structural properties of nanoscale semiconductors for creating sensors of organic compounds. Review completion

11/2019: AP08052735 New preparation methods of doped-TiO2 nanoparticles and TiO2–based heterostructures for photocatalytic air treatment. Review completion

11/2019: AP08053118: Synthesis of silicon, metal and carbon nanoparticles and the production of hydrophobic coatings based on them. Review completion

11/2019: AP08052750 Obtaining of multifunctional nanomaterials from carbon-containing raw materials. Review completion

11/2019: AP08052360 The co-doping influence on the magnetic behavior of a new generation multifunctional magnetic materials> Review completion

- 03/2022 – 04/2022: Reviewer for the Health Physics Society grants.
- 08/2014 – 04/2017: Official Reviewer nominated by Ball State University, College of Science & Humanities to work as reviewer of NIH Grants.

Editorial Experience Research Journals

1. Journal: International Journal of Molecular Sciences
   Role: Guest Lead Editor
   Issue: Radiation-induced DNA Damage and Toxicity
2. Journal: Integrated Nano
   Role: Editor
3. Journal: Nanoscale Research Letters.
   Role: Editor
4. Journal: Radiation Science and Technology
   Role: Editor
5. Journal: Advances in Metallurgical and Material Engineering
   Role: Editor
6. Journal: Frontiers Physiology
   Role: Editor
7. Journal: International Journal of Radiology Case Reports
   Role: Editor
8. Journal: Radiation Science & Technology
   Role: Guest Lead Editor
9. Journal: Journal of Spectroscopy
   Role: Guest Editor-in-Chief
10. Journal: Advances in Metallurgical and Material Engineering
    Role: Editor
11. Journal: American Journal of Optics & Photonics,
    Role: Editorial Board Member
12. Journal: Global Journal of Advanced Radiation Research.
    Role: Editorial Board Member
13. Journal: Journal of Atomic & Nuclear Physics
    Role: Editorial Board Member
14. Journal: SCIREA Journal of Physics
    Role: Editor
15. Journal: Archives of Advanced Chemistry
    Role: Editorial Board Member
16. Journal: Crystal
    Role: Topical Advisory Panel Members
17. Journal: Crystals
    Role: Guest Lead Editor

Journals Review Experience

- Scientific Reports Nature
- Advanced Materials
- Laser and Photonics reviews
- ACS Applied Materials and Interfaces
- Briefings in Bioinformatics
- ACS Applied Energy
- Optical Materials Express
- Applied Physics Letters.
- Optics Express
- Optics Letters
- Nanotechnology Reviews
- Health Physics
- Journal of Applied Physics.
- Applied Accoustics
- Acta Crystallographica
- Photodiagnosis and Photodynamic Therapy
- Physical Review-B
- Journal of the Optical Society of America-B.
- Euro Physics Letters.
- Journal of Physics-D: Applied Physics
- Spectroscopy Letters.
- IEEE Transactions on Nanotechnology
- Material Science & Engineering – B.
- Materials Chemistry and Physics.
- Nanoscale Research Letters.
- Journal of Alloys and Compounds.
- Radiation Physics & Chemistry
- ChemPhysChem.
- Surface and Coating Technology.
- Journal of Radiation Research
- Journal of Photodynamic Therapy
- Journal of Physical Chemistry-C
- Electronic Materials Letters
- Journal of Electronic Materials
- Journal of Physics & Chemistry of Solids
- Journal of Non-Crystalline Solids
- Modern Physics Letters-B
- Journal of Physics Communications
- Physica-A
- Crystal
- Journal of Molecular Liquids

Budgeting Experience:

- 2017 – 2024: Research Grants Proposals budgets, Health Physics program at the The University of Alabama at Birmingham (UAB), USA.
- 2017 – 2021: MS in Health Physics students recruitment and professional development budget, at UAB, USA.
- 2008 – 2017: Developed budgets for the Optics and Photonics Research Laboratory at Ball State University (BSU), USA.
- 2010 – 2017: Developed budgets for Optics and Spectroscopy teaching lab at BSU, USA.
- 2014 – 2017: Undergraduate teaching labs equipment budgets Department of Physics & Astronomy, BSU, USA.
- 2008 – 2017: Research Grants Proposals budgets Optics & Photonics Research, BSU, USA.
- 2008 – 2017: Research Grants Proposals Medical Physics Research, BSU, USA.
- 2013 – 2014: Research Lab budgets, Materials Science & Technology Program, Qatar University, Qatar.
- 2013 – 2014: Teaching Lab budgets, Materials Science & Technology Program, Qatar University, Qatar.
- 2013 – 2014: Research Grants Proposals budgets, Materials Science & Technology Program, Qatar University, Qatar.
- 2005 – 2008: Teaching Lab budgets, Physics laboratories, University of Mount Olive, USA.
- 2005 – 2008: Research Lab budgets, Physical Sciences laboratory, University of Mount Olive, USA.

Extra-Curriculum Activities:

- Interfaith member of Birmingham Islamic Society. Deliver talks and organize events to create a friendly and mutually-supportive relationship and environment between Muslims, Christians, and Jews.
- Faculty Adviser, Pakistani Students Association at the University of Alabama at Birmingham.
- Faculty Adviser, Muslim Students Association, Ball State University, Muncie, Indiana, USA. 08/2010 – 03/31/2015.
- President, Islamic Center of Muncie, Indiana, USA. 04/2015 – 03/2016.
- Teacher, Birmingham Islamic Society, Weekend School. 08/2017 – Present.

TEACHING EXPERIENCE AND ACTIVITIES

New Courses Development:

- MHP 654: Laser safety and Protection (Taught course and Lab)
- MHP 645: Radiation Shielding and Protection
- MHP 653: Research Methodology and Publications Analysis
- NMT 610: Medical Radiation Physics
- NMT 653: Research Methodology and Publications Analysis
- APHY 515: Medical Physics-1 (graduate)
- APHY 315: Medical Physics-1 (undergraduate)
- APHY 516: Medical Physics-2 (graduate)
- APHY 316: Medical Physics-2 (undergraduate)
- PHYC 485: GRE Subject (Physics)
- PHYC 540L: Optics Lab (graduate)
- PHYC 340L: Optics Lab (undergraduate)
- PHYS 110: Physics for Non-Majors
- PHYS 331: University Physics (with Lab)
- PHYS 332: University Physics (with Lab)
- PHYS 351: Radiation Physics-1
- PHYS 352: Radiation Physics-2

New Programs Development:

- Developed online Master of Science in Health Physics program at the University of Alabama at Birmingham.
- Developed Master of Science in Medical Physics program at Ball State University, fulfilling the American Association of Physicists in Medicine requirements.
- Developed Master of Science in Medical Physics program for Hofstra University, fulfilling the American Association of Physicists in Medicine requirements.
- Developed BS in Applied Physics program with a concentration in Optics and Photonics at Ball State University.
- Developed BS in Applied Physics with a concentration in Medical Physics at Ball State University.
- Development of Pre-Engineering program at the University of Mount Olive, with the collaboration of North Carolina State University, College of Engineering.

Curriculum Development, and Improvement:

- Modified and updated curriculum for the Master of Science in Health Physics Program, at the University of Alabama at Birmingham.
- Developed a new Research Methodology and Publications Analysis course at the University of Alabama at Birmingham.
- Developed a complete curriculum and experimental setup for a new Laboratory course in Optics at Ball State University.
- Developed a complete curriculum for a new course “Research Methods in Physical Sciences” at Ball State University.
- Developed a complete curriculum for a new Physics major ‘Applied Physics with a concentration in Medical Physics” at Ball State University.
- Developed and taught GRE Physics course for graduate and Physics major students at Ball State University.
- Modified and re-organized many laboratory courses and lab manuals for Physics 100 and 200 level courses at Ball State University and University of Mount Olive.
- Developed the program assessment rules and regulations for the Master of Science in Materials Science and Technology at Qatar University.

Experience with Adult Education:

Broad experience in teaching and educating working adults. The working adults work in the daytime and take part in classes, and other academic activities in the evening. I have developed, implemented, and taught in-person and online classes for adults.

Experience with K-12 Education and Research:

I have a unique experience of engaging high school students in mini-research projects. Currently, two grade-11 students enrolled at Hoover High School and two grade-11 students at Vestavia Hills High School in Alabama have been working on research projects under my mentorship. The students are fully engaged in the projects. Both students have performed big calculations in their investigations, obtained graphs and figures, and aimed to publish research papers. The scholarly research work performed by these students will certainly encourage other high school students as well, which is the goal of my initiative.

Courses Taught at UAB:

Course Number	***Course Title***	***Credit Hours***	***Level***
MHP 601	Principles of Health Physics	3	Graduate
MHP 602	Radiation Physics	3	Graduate

MHP 611	Physics of Diagnostic Imaging	3	Graduate
MHP 654	Laser Safety	3	Graduate
MHP 620	Principles of Dosimetry	3	Graduate
MHP 621	Nonionizing Radiation	3	Graduate
MHP 651	Advanced Radiation Biology	3	Graduate
MHP 653 / NMT 653	Research Methodology & Publications Analysis	3	Graduate
MHP 691	Supervised Practice	12	Graduate
MHP 698	Non-thesis Research	4	Graduate
NMT 610	Medical Radiation Physics	4	Graduate
NMT 623	Computed Tomography	3	Graduate
NMT 698	Non-thesis Research	4	Graduate

Courses taught at Ball State University, Muncie, Indiana, USA:

Course Number	***Course Title***	***Credit Hours***	***Level***
APHY 550	Medical Physics-1	3	Graduate
APHY 552	Medical Physics-2	3	Graduate
PHYC 534	Thermal Physics	3	Graduate
PHYC 564	Intro- to Quantum Mechanics	3	Graduate
PHYC 565	Quantum Mechanics	3	Graduate
PHYC 552	Electricity & Magnetism-2	3	Graduate
PHYC 540	Physical Optics	3	Graduate
PHYC 540L	Physical Optics Lab	1	Graduate
PHYC 553	Math Methods for Physicists	3	Graduate
PHYC 683	Seminars in Physics	3	Graduate
APHY 350	Medical Physics-1	3	Undergraduate
APHY 352	Medical Physics-2	3	Undergraduate
PHYC 353	Math Methods for Physicists	3	Undergraduate
PHYC 434	Thermodynamics & Statistical-Mechanics	3	Undergraduate
PHYC 464	Intro- to Quantum Mechanics	3	Undergraduate
PHYC 465	Quantum Mechanics	3	Undergraduate
PHYC 340	Physical Optics	3	Undergraduate
PHYC 340L	Physical Optics Lab	3	Undergraduate
PHYC 485	Measures of Learning in Physics (GRE Physics subject)	3	
PHYC 483	Seminars in Physics	3	Undergraduate
PHYC 482	Independent Studies in Physics	3	Undergraduate
PHYC 120	College Physics-1 (calc. based)	4	Undergraduate
PHYC 120L	College Physics-1 Lab	1	Undergraduate
PHYC 122	College Physics-2 (calc. based)	4	Undergraduate
PHYC 122L	College Physics-2 Lab	1	Undergraduate
PHYC 110	College Physics-1	4	Non-Major
PHYC 110L	College Physics-1 Lab	1	Non-Major
PHYC 112	College Physics-2	4	Non-Major

PHYC 112L	College Physics-2 Lab	1	Non-Major
PHYC 111	Problems in College Physics	1	Non-Major
PHYC 101	Physics for Teachers	3	Non-Major

Courses taught at Qatar University, Doha, Qatar:

Course Number	*Course Title*	*Credit Hours*	*Level*
MATS 511	Materials Principles & Characterization	3	Graduate
MATS 512	Thermodynamics of Materials	3	Graduate
MATS 513	Functional Properties Materials	3	Graduate
MATS 514	Research Methodology	3	Graduate
MATS 530	Radiation Technology Materials	3	Graduate
MATS 570	Nanotechnology & Advanced Characterization Methods	3	Graduate

Courses taught at University of Mount Olive, North Carolina, USA:

Course Number	*Course Title*	*Credit Hours*	*Level*
PHY 331	University Physics-1 (with Lab)	5	Undergraduate
PHY 332	University Physics-2 (with Lab)	5	Undergraduate
PHY 350	Radiation Physics-1	3	Undergraduate
PHY 351	Radiation Physics-1	3	Undergraduate
ASTR 100	Introductory Astronomy	3	Non-Major
PHYS 110	Physics for Non-Majors with Lab	3	Non-Major
PHYS 221	College Physics-1	4	Undergraduate
PHYS 221L	College Physics-1L	1	Undergraduate
PHYS 222	College Physics-2	4	Undergraduate
PHYS 222L	College Physics-2L	1	Undergraduate
MATH 130	Pre-Algebra	3	Non-Major
MATH 132	Pre-Calculus	3	Non-Major
MATH 140	Contemporary Mathematics	3	Non-Major
ENVR 110	Introduction to Environmental Science	3	Non-Major

Online Courses:

Taught the following course online at the University of Alabama at Birmingham and Universities I worked prior to joining UAB.

- MHP 601: Principles of Health Physics
- MHP 602: Radiation Physics
- MHP 611: Physics of Medical Imaging

- MHP 620: Principles of Dosimetry
- MHP 653: Research Methodology and Publications Analysis
- MHP 621: Non-Ionizing Radiation
- MHP 651: Advanced Radiation Biology
- MHP 654: Laser Safety and Protection
- NMT 610: Medical Radiation Physics
- NMT 653: Research Methodology and Publications Analysis
- PHYC 110: College Physics (at Ball State University)
- PHYS 101: Introductory Physics (at University of Mount Olive)

Courses Revisions at UAB:

- MHP 601: Principles of Health Physics
- MHP 611: Physics of Diagnostic Imaging
- MHP 620: Principles of Dosimetry
- MHP 621: Non-ionizing Radiation
- MHP 651: Advanced Radiation Biology

Certificates & Training:

1. AT RISK for University and College Faculty and Staff
2. Financial Conflict of Interest in Research
3. HIPAA Privacy and Security Online Training
4. Policy and Students Code
5. Family Educational Rights and Privacy Act (FERPA)
6. Radiation Safety
7. Radiation Lab Protocols
8. Chemical Training Safety
9. Hazardous waste handling and packing

Students Advising/Mentoring Experience:

20 years of successful experience advising graduate and undergraduate students majoring in Physics, Medical Physics, Health Physics, Optics & Photonics, Mathematics, Engineering, and Chemistry students at various institutes. A list of advisees is given below.

- Kylie Blue, The effect of ultraviolet radiation on Covid-19. Health Physics Master's Program, 2022-23.
- Alexandra Hillman, Biomedical applications of Terahertz Radiation: Benefits, risks, and protection. Health Physics Master's Program, 2019-21.

- Ezequiel Gonzalez, Microwaves, and radiofrequency radiation: benefits, risks, and protection. Health Physics Master's Program, 2019 – 21.
- Kendall Williams, Electronic cross-sections and Compton attenuation and transfer coefficients of Tin, Iron, Zinc, Calcium, and Copper, using Klein-Nishina Formula. Health Physics Master's Program, 2020 – 21.
- Michael Perrigin, Atomic cross-sections, and Compton mass attenuation and transfer coefficients of MCP-69, CP-200, and MCP-96 alloys using Klein-Nishina Formula. Health Physics Master's Program, 2019 – 21.
- Brandon Wright, Increase in linear attenuation coefficient by changing the crystal structure of simple cubical structured materials for radiation shielding. Health Physics Master's Program, 2019 – 21.
- Caitlynn Couch, Efficiency increase in NaI(Tl), CsI(Tl), BaF_2(Eu), and CaF_2 scintillation detectors by increasing valance band electron density and due to changing crystal structures. Health Physics Master's Program, 2019 – 20.
- Elijah Halliwell, Increase in linear attenuation coefficient of metallic alloys by changing the crystal structure of materials for radiation shielding and biomedical devices safety. Health Physics Master's Program, 2019 – 20.
- Rahima Begum, Ultraviolet Radiation: Benefits, Hazards, and Protection. Health Physics Master's Program, 2019 – 20.
- Vikram Pillai, UV protective role of Silybum marianum plant extract. Health Physics Master's Program, 2019 – 20.
- Courtney Taylor, Thermotherapy: A Closer Look at Microwave Hyperthermia. Health Physics Master's Program, 2019 – 20.
- Guy Yembi, Medical Application (Ophthalmology) and Safety of Ultrafast Lasers. Health Physics Master's Program, 2018 – 20.
- Sharon Samuel, The use of CT and MRI in Radiotherapy. Health Physics Master's Program, 2018 – 20.
- Dylan Ochoa, Mathematical Identification and Comparison of Transfer Coefficients for Magnesium, Bromine, and Mercury. Health Physics Master's Program, 2018 – 20.
- Stefanie Yates, Cosmic Radiation, and their effects on life on the Earth. Health Physics Master's Program, 2018 – 20.
- Raven Alexander, Infrared and Visible spectroscopies in Medical Imaging. Health Physics Master's Program, 2018 – 19.
- Katy Thiele,
- Christopher Canada, Systematic Review and Meta-Analysis of the Possible Concerns of 5G Radiation and Radiation Emitting Materials**.** Health Physics Master's Program, 2018 – 19.
- Melissa Do, 3D CT tomosynthesis in breast cancer detection. Health Physics Master's Program, 2018 – 19.

- Jayson Reynold, Nanoparticles in Medical Imaging. Health Physics Master's Program, 2018 – 19.
- Kayla Stinson, Photoacoustic Effect, Photoacoustic Imaging, and Applications**.** Health Physics Master's Program, 2018 – 19.
- Katy Thiele, Utilizing Laser Therapies over Traditional Modalities for the Treatment of Onychomycosis**.** Health Physics Master's Program, 2018 – 19.
- Dominica Pringle, Laser safety review. Health Physics Master's Program, 2017 – 19.
- John Ptecek, Comparison of Ultrasound and MRI imaging. Health Physics Master's Program, 2017 – 18.

Students' Job Placement Efforts:

Experience in communicating with various employers and helping the students who graduated from the Health Physics program in getting jobs. I have helped our outgoing students in getting jobs in hospitals, industries, private sectors, and academia. I have been able to help my students get good jobs with high salaries and good benefits.

Program Assessment Experience:

Broad experience in program assessment at Ball State University, Qatar University, and the University of Mount Olive. To meet the learning objectives, institute's goals, and mission, programs were assessed numerous times.

Accreditation Experience:

- 2017-28: Engaged in the accreditation of the Master of Science in Health Physics program of the University of Alabama at Birmingham, USA, with the Accreditation Board for Engineering & Technology (ABET).
- 2023-14: Initiated the accreditation of the Master of Science in Materials Science & Technology program of Qatar University, with ABET.

RESEARCH AND SCHOLARLY ACTIVITIES

Research Interests:

Optics & Photonics, Nanostructured materials, Condensed Matter Physics, Semiconductors, Laser cavities, Health Physics, Medical Physics, Radiation Protection, Materials for Radiation Shielding, Quantum Mechanical Modeling in Health Sciences,.

Patents and Inventions:

1. Patent achieved for inventing "Titanium doped aluminum nitride infrared microlaser on optical fiber". **Patent # US 9,515,447 B2**.
2. Invented the smallest size semiconductor ring laser (SRL) reported by Wikipedia (online encyclopedia). http://en.wikipedia.org/wiki/Semiconductor_ring_laser

Grant Proposals Submitted to Funding Agencies and in Review:

1. **Grant Title:** Developing Optical and Physical Markers to differentiate between Healthy subjects and those with Mild Cognitive Impairment and Alzheimer's Disease
   Role: PI
   Sponsor: NSF
   Requested Fund: $ 980,000.00
   Status: Submitted on 12/10/2024

2. **Grant Title:** Radiation-induced Cancer diagnosis and detection and treatment recommendations using the optical constants, luminescence properties, and elemental concentrations of human blood.
   Role: PI
   Sponsor: NIH (U 01).
   Requested Fund: $ 2,250,000.00
   Status: Submitted on 05/30/2024 and is Under Review

3. **Grant Title:** Comparison and Harmonization of Radiation and Laser Standard and Dose in Pakistan, India, Saudi Arabia, South Africa, Australia, UK, and USA.
   Role: PI
   Sponsor: Nuclear Regulatory Commission
   Requested Fund: $ 500,000.00
   Status: Submitted on 04/05/2024 and is Under Review

4. **Grant Title:** Diagnosing Alzheimer's disease through brain plasma elemental concentration analysis, optical properties, and treatment recommendations.
   Role: Co-PI
   Sponsor: NIH (R-21).
   Requested Fund: $ 275,000.00
   Status: Submitted on 11/05/2023 and is Under Review

4. **Grant Title**: Developing innovative optical and physical markers to diagnose cancer in its early stage
   Role: PI
   Sponsor: O'Neal Invest Program

Requested Fund: $ 50,000.00
Status: Submitted on 08/28/2024

5. Grant Title: Whispering gallery mode micro and nano-laser cavities on metallic fibers for optical device applications.
Role: PI
Sponsor: NSF
Status: In preparation

Funded Grant Proposals

6. **Grant Title:** Diagnosing Alzheimer's disease through brain plasma Elemental Concentration, Optical Density, Index of Refraction, and Transmission Coefficient.
Role: PI
Sponsor: SHP, UAB
Status: Funded (US$ 70000.00)
Period: ***02/2022 – 02/2024***

7. Grant Title: MS in Health Physics Program Development Grant.
Role: Collaborative Senior Personnel
Sponsor: Nuclear Regulatory Commission (NRC)
Status: Funded (US$ 370152.00)
Period: ***03/2022 – 02/2025***

8. Grant Title: Scattering properties of radiation shielding materials and tissues.
Role: PI
Sponsor: The University of Alabama at Birmingham
Status: Funded (US$ 1500.00)
Period: ***08/2022 – 12/2023***

9. Grant Title: Faculty Success and Development Grant.
Role: PI
Sponsor: National Center for Faculty Development and Diversity (NCFDD), the USA.
Status: Funded (US$ 13000.00)
Period: May 12, 2019 – August 12, 2019.

10. Grant Title: Faculty and Students Research Travel grant.
Role: PI
Sponsor: Oak Ridge National Laboratories and Associated Universities, Tennessee, USA.
Status: Funded (US$ 7000.00)

Period: July 1 - 31, 2017.

11. Grant Title: Cancer Detection, prevention, and radiation shielding
    Role: PI
    Sponsor: The Cancer Center, Ball Memorial Hospital
    Status: Funded (US$ 3000.00 each semester)
    Period: 08/2009 – 04/2017

12. Grant Title: Light Emission from Erbium Oxide Nanoparticles for Biomedical applications.
    Role: PI
    Sponsor: Discovery Grant
    Status: Funded (US$ 20000.00)
    Period: 08/2015 – 08/2016

13. Grant Title: The use of SAVI applicator in breast cancer therapy.
    Role: Co-PI
    Sponsor: Ball Memorial Hospital, Cancer Center.
    Status: Funded (US$ 10000.00)
    Period: January 2016 – December 2016.

14. Grant Title: Transmission Electron Microscope for Interdisciplinary Research
    Grant Number: 267-11.
    Role: Co-PI
    Sponsor: National Science Foundation (NSF), USA.
    Status: Funded (US$ 497000.00)
    Period: August 2011 – August 2014.

15. Grant Title: Transfer Functions, Build-up factors, and Mass attenuation coefficients of MCP-69 alloy and Wax, for their use in radiation oncology and health physics.
    Grant Number: 015-10
    Role: PI
    Sponsor: Indiana Academy of Science, USA.
    Status: Funded (US$ 30000.00)
    Period: April 2009 – August 2010.

16. Grant Title: Cathodoluminescence Book Publication.
    Role: PI
    Sponsor: Publications and Intellectual Properties, BSU, USA.
    Status: Funded (US$ 4500.00)
    Period: May 2012.

17. Grant Title: Buildup Factor and Attenuation Coefficients of Materials for Radiation Shielding & Protection.
    Role: PI
    Sponsor Qatar University.
    Status: Funded (US$ 20000.00 or QAR 74000.00)

Period: 10/2013 – 07/2014

18. Grant Title: Direct characterization of MCP-96 alloy using Linear Accelerator for beam collimation and radiation protection during treatment.
Role: PI
Sponsor: Ball Memorial Hospital, Cancer Center.
Status: Funded (US$ 4000.00 as a partial tuition fee to one graduate student)
Period: May 2011 – December 2011.

19. Grant Title: Whispering Gallary Mode Microlaser on Optical Fibers.
Role: PI
Sponsor: Ball State University
Status: Funded (US$ 55000.00)
Period: August 2008 – July 2010

20. Grant Title: Carbon doped AlN thin films growth, fabrication, and Optical and Electronic characterization.
Role: PI
Sponsor: ACS Hydrocarbon Grants
Status: Funded (US$ 3000.00)
Period: 08/2007 – 08/2008

21. Grant Title: RF Magnetron sputtering system for thin film deposition.
Role: PI
Sponsor: University of Mount Olive Internal Grant.
Status: Funded (US$ 60000.00)
Period: 01/2007 -01/ 2008

22. Grant Title: Growth, Luminescence properties, and characterization of AlN:Pr and AlN:Ho thin films.
Role: Student Researcher
Sponsor: Nanohmics Inc., USA.
Status: Funded (US$ 37000.00)
Period: August 2004 – June 2005.

Adviser/Co-Adviser of Doctoral Students & Research Projects:

2021 – Present: Co-Adviser and Doctoral Committee member of Saugat Ghimire, a graduate student in the Department of Physics, at the University of Alabama at Birmingham, USA.
Dissertation title: Fe:ZnSe mid-IR gain materials and lasers.

2017 - 2021: Co-Adviser and Doctoral Committee member of Shova Subedi, graduated with a Ph.D. degree from the Department of Physics, at the University of Alabama at Birmingham, USA.

Dissertation title: Characterization of color centers in diamond for laser applications.

2013 – 2016: Co-Adviser and Doctoral Committee member of Khurram Shehzad, graduated with a Ph.D. degree from Leipzig University, Germany.
Dissertation title: Structural health stability and stress monitoring by ultrasound.

2010 – 2015: Tahirzeb Khan graduated with a Ph.D. degree from Jacobs University, Germany.
Dissertation title: Ultrafast laser spectroscopy in combination with scanning near field microscopy (SNOM).

2009 – 2015: Barbara Fennell, graduated with a Doctoral degree in Physics Education. College of Science & Humanities at Ball State University.
Dissertation title: The effects of introductory (non-science major) physics courses on students' view of the nature of science: the roles of instructional type and religiosity.

2008 – 2011**:** Bin Amin, graduated with a Ph.D. degree from Hazara University, Pakistan.
Dissertation title: Structural Electronic, Optical, and Magnetic properties of metals doped III-V Semiconductors.

2013 - 2017: Co-Adviser and Doctoral Committee member of Mustafa Harb, graduated with a Ph.D. degree from Ball State University, USA.
Dissertation title: Linguistic representation of culture in the Middle Eastern countries.

External Reviewer of Doctoral Dissertation:

2023. Mirza Z.D.B. Baig, a Ph.D. student at Riphah International University, Pakistan.
Dissertation: Tribological Properties of Engineering Materials Through Plasma Processing

2023. Maqbool Rehman, a Ph.D. student at the University of Science & Technology, Bannu, Pakistan.
Dissertation: Fabrication and Designing of Eco-Friendly BaTiO3-based Ceramic Capacitors for Pulsed Power Applications

2023. Bakhtawar Bakhtawar, a Ph.D. student at Hazara University, Pakistan.
Dissertation: Surface plasmon mode Engineering for induced reduced temporal cloaking.

2022. Sadia Nazir, a Ph.D. student at the University of Punjab, Pakistan.
Dissertation: DFT-based Investigation of Pressure induced Properties of the Perovskites used in Scintillators.

2022. Asad Ali, a Ph.D. student at Riphah International University, Islamabad, Pakistan.
Dissertation: The Analysis of Dielectric Properties of BaTi4O9 Based Complex Perovskite Ceramic Structure.

2022. Muhammad Shafique, a Ph.D. student at the University of AJK, Pakistan.

Dissertation: Microplasma assisted synthesis of Transition Metal Oxide nanocomposites and their applications.

2021. Muhammad R. Khan, a Ph.D. student at the University of AJK, Pakistan.
Dissertation: Ion Irradiation-Induced effects in Silicon Carbide Nanowires.

2020. Saif Ullah, a Ph.D. student at the University of Malakand, Pakistan.
Dissertation: Physical properties and Correlation Effects of Transition metal Perovskite Oxides.

2020. Syed Adeel Abbas, a Ph.D. student at the University of Punjab, Pakistan.
Dissertation: Ab-initio Simulation of Ternary Spinel Oxides for Energy Renewable Devices

2019. Naveed A. Noora a Ph.D. student at the University of Punjab, Pakistan.
Dissertation: Under Pressure Study of Fundamental Properties of Perovskite Oxides using Density Functional Theory (DFT).

2018. Afshan Ashraf, a Ph.D. student at Pakistan Institute of Engineering & Applied Sciences (PIEAS), Pakistan.
Dissertation: Study of Carbon Coating on Different Metallic Substrates with respect to Applied Sciences Hybridization.

2016. Hazrat Ali, a Ph.D. student at the University of Malakand, Pakistan.
Dissertation: The effect of Kerr nonlinearity, Doppler broadening, and spontaneously generated coherence on slow light propagation.

2014. Mohammad Haneef, a Ph.D. student at Hazara University, Pakistan.
Dissertation: Photo-detachment of negative ions near a surface.

2014. F. Ali. Ph.D. student at PIEAS Pakistan.
Dissertation: Corrosion-resistant Zr-based nitride alloys fabrication.

2014. Ziaur Rahma, a Ph.D. student at PIEAS, Pakistan.
Dissertation: Internal Radiation Dosimetry of Human Organs

2014. M. Tahir, a Ph.D. student at PIEAS, Pakistan.
Dissertation: Impedance Spectroscopy of Nanoporous Anodic Alumina Structures.

2013. Zahid Ali, a Ph.D. student at Hazara University, Pakistan.
Dissertation: Structural & magnetic Properties of cubic Perovskites by Density Function Theory.

2011. Naveed Aa li, Ph.D. student at PIEAS, Pakistan.
Dissertation: Study of Aerosol Deposition Rates using ^{210}Pb, ^{137}Cs, and ^{7}Be inventories in soil.

2011. Ghulam Murtaza, a Ph.D. student at Hazara University, Pakistan.
Dissertation: Optoelectronic properties Of cubic Perovskites.

Chairperson and Mentor of MS Thesis or Research Projects at UAB:

Year	Student Name	Project
2023	Farah Al-Saeed	Radiation shielding characterization of Antimony (Sb), Titanium (Ti), Germanium (Ge), Silver (Ag), and Mercury (Hg) using Klein-Nishina formula.
2023	Sarah Al-Massloof	A review of Serotonin-1A receptor binding quantification in non-

		medicated bipolar patients using Positron Emission Tomography
2022	Lael Gore	Analysis of radiation shielding materials using Klein-Nishina formula.
2021	Michael Perrigin	Atomic cross-sections and Compton mass attenuation and transfer coefficients of MCP-69, CP-200, and MCP-96 alloys using Klein-Nishina Formula.
2021	Alexandra Hillman	Terahertz Radiation: benefits, risks, and protection.
2021	Kendall Williams,	Electronic cross-sections and Compton attenuation and transfer coefficients of Tin, Iron, Zinc, Calcium, and Copper, using Klein-Nishina Formula.
2021	Brandon Wright,	Increase in linear attenuation coefficient by changing crystal structure of simple cubical structured materials for radiation shielding.
2021	Ezequiel Gonzalez,	Microwaves, and radiofrequency radiation: benefits, risks, and Protection.
2020	Elijah Halliwell	Increase in Linear Attenuation Coefficient and radiation shielding ability of materials by changing their crystal structures.
2020	Caitlynn Coach	Efficiency increase in NaI(Tl), CsI(Tl), BaF_2(Eu) and CaF_2 scintillation detectors by increasing valance band electron density and due to changing crystal structures.
2020	Rahima Begum	Ultraviolet Radiation: Benefits, hazards, and protection.
2020	Guy Yumbi	Determination of Compton cross-sections, Scattering & Absorption coefficients of Brain, Soft Tissue, and Fat, using γ-rays.
2020	Dylan Ochoa	Mathematical Identification and Comparison of Transfer Coefficients for Magnesium, Bromine, and Mercury.
2019	Katherine Thiele	Characterization of $_{83}Bi^{209}$, $_{74}W^{184}$, $_{48}Cd^{112}$, $_{30}Zn^{65}$, $_{28}Ni^{59}$ and $_{26}Fe^{56}$ using Modified Klein-Nishina formula, for radiation shielding and dosimetry.
2019	Raven Alexander	Electronic cross-sections and Compton attenuation and transfer coefficients of $_{82}Pb^{208}$, $_{29}Cu^{64}$, $_{27}Co^{59}$, $_{20}Ca^{40,}$ and $_{13}Al^{27}$ for applications in radiation shielding and dose.
2019	Andre Elder	Absorption and scattering coefficients of bone using Klein-Nishina Scattering Formula.

Chairperson and Mentor of MS Thesis / Research Committees before UAB:

Year	Student Name	Area of Research
2017	Manar Alenezi	Buildup Factors of biomedical alloys
2015	Khattar. Shammari,	Linear attenuation coefficient of alloys for beam collimation.
2015	Abbas. M. Jammali	Use of an applicator in breast cancer treatment planning
2014	Amani. Al-Ruwaili	Structural properties of AlN:Tm
2014	Kent Bayens	Linear attenuation coefficients and Buildup factors of MCP-96 alloys
2013	Ismail Balagoon	Structural and optical properties of AlN:Gd

2012	Krysta White	Best host evaluation for optical properties of AlN:Er
2012	Joshua Clark	Linear attenuation coefficients and Buildup factors of MCP-69 alloys
2011	Lynda Wilkinson	Light emission from erbium oxide nanoparticles
2010	Tyler Corn	Electron transfer mechanism in AlN:Er/AlN:Y
2010	Deidre N. Hopkins	Linear attenuation coefficients and Buildup factors of MCP-200 alloys

Member of Master's Degree / B.S. Honors Thesis Committees:

Year	Student's name	Research Project
2023	Nandini Vobbilisetty	Identification of a Biomarker for Cognitive Impairment: A Prospective Study.
2019	Abdullah AlOsamy	Use of Ga-67 in Medical Imaging.
2016	Albert DiBenedetto	Density function theory DFT, in investigating localized States.
2016	Scott Whitsitt	Role of Physics Education in STEM
2015	Spencer Young	Investigating optical properties of materials using DFT
2012	Eduardo Beltran	Effect of running on the treadmill on bones using CT scan
2012	Sadeq Malakooti	Electron tunneling in biological tissue molecules
2012	Imendra Ranatunga	Effect of magnetic field on the nervous system
2012	Vida Teye	Dose calibration and calculation for LINAC
2012	Dale Igram	Electron transport through body cells
2011	Christopher Wagner	Nanocellular studies using electron beams
2010	Brian Dolasinski	Effect of magnetic field on action potential of body cells
2010	Sunhee Lee	Electronic characterization of body cells
2010	Seth Ross	High voltage treatment of hot electron in the Space Charge effect.

Mentor Undergraduate Research Projects:

2022-23	Zuha Fatima	Biomedical Physics
2022-23	Nayab Ali	Biomedical Physics
2022-23	Mackenzie Williams	Biomedical Physics
2022-23	Sohan Dhar	Biomedical Physics
2017	Kayla Stinson	Medical & Health Physics
2015	Dunja Milinovic	Condensed Matter Physics
2012	Barak Pauley	Photonics
2012	Andrew Burk	Condensed Matter Physics
2011	Casey Whittern	Biomedical Physics
2010	Kyle Main	Laser Physics & Photonics
2010	Michael Gebs	Condensed Matter Physics
2010	Guy Crowder	Biomedical Physics
2009	Evan Wilson	Photonics

Books and Chapters:

1. Book Title **An Introduction to Non-Ionizing Radiation**
   ISBN # 978-981-5136-90-6
   Role: Editor and Author
   Contribution: Contributed 9 chapters
   Link: https://www.eurekaselect.com/ebook_volume/3616

2. Book's Title: **An Introduction to Medical Physics**
   ISBN # 978-3-319-61540-0
   Role: Editor and Author
   Contribution: Contributed 5 chapters
   Link: http://www.springer.com/us/book/9783319615387

3. Book's Title: **Cathodoluminescence**
   ISBN # 979-953-307-319-3
   Chapter's Title: Cathodoluminescence from Amorphous and Nano-crystalline Nitride and Oxide Thin Films Doped with Rare Earth and Transition Metals
   Link: http://www.intechopen.com/books/cathodoluminescence

Research Scholar Profiles

Peer-Reviewed Paper: **116**
Citations received: **5200**
Scopus h index: **34**
Scopus: https://www.scopus.com/authid/detail.uri?authorId=57209426807
Publons: https://publons.com/researcher/1349443/muhammad-maqbool/publications/
Google Scholar: https://scholar.google.com/citations?user=oLHYGB0AAAAJ&hl=en

Peer-Reviewed Publications

118. M. Maqbool, and W. Li, Optical properties and elemental concentration of blood plasma, a new approach to diagnose Alzheimer's Disease. In preparation. Planning to submit it to Nature.
117. Imtiaz Ahmad, Amna Rehman, Maryam Zahid, Sidra Saleem, Umer Majeed, Qasim Khan, and ***Muhammad Maqbool***. A Comprehensive Review on Blinking Effect in Quantum Dots: Mechanism, Suppression Strategies, and Biomedical Applications. Under Review in Colloids and Surfaces-B: Biointerfaces.
116 A. Ullah, N. Mabood, M. Ullah, M. Shafi, and ***M. Maqbool***, Single-Molecule Methods, Activation-Induced Cytidine Deaminase, and Quantum Mechanical Approach to explore

and prevent Carcinogenesis**.** VIEW 2024, 20240018. https://doi.org/10.1002/VIW.20240018

115. A. Ullah, M. Ullah, G. Ali, and ***M. Maqbool***, Quantum Mechanical Modelling of Perpetual Immunity to SARS-CoV-2 (COVID-19) Infection. *Under Consideration* in VIEW.
114. F. Jamal, A. Rafique, S. Moeen, J. Haider, W. Nabgan, A. Haider, M. Imran, G. Nazir, M. Alhassan, M. Ikram, Q. Khan, G. Ali, M. Khan, W. Ahmad, and ***M. Maqbool,*** Review of Metal Sulfide Nanostructures and their Applications. *ACS Applied Nano Materials* 6(9): 7077–7106 (2023). https://doi.org/10.1021/acsanm.3c00417
113. S. Anwar, Q. Khan, G. Ali, M. Khan, ***M. Maqbool***, Triple-band terahertz metamaterial absorber with enhanced sensing capabilities. European Physical Journal-D 77, Article: 69, (2023). https://doi.org/10.1140/epjd/s10053-023-00658-w
112. Z. Fatima, N. Ali, M. Williams, S. Dhar, and M. Maqbool, X-ray scattering and attenuation cross-sections and coefficients of bone, brain, lung, fat, and soft tissue for applications in dosimetry, cancer detection, and treatment. Radiation Physics and Chemistry 208, 110908 (2023). https://www.sciencedirect.com/science/article/pii/S0969806X23001536
111. W. Li, P. L Fazeli, G. Wang, ***M. Maqbool***, V. A. Del Bene, K. Triebel, K. M. Martin, and D. Vance, Predictors of an Active Lifestyle in Middle-Aged and Older Adults with HIV in the United States Deep South. HIV/AIDS - Research and Palliative Care 15, 63 – 70 (2023). https://doi.org/10.2147/HIV.S399842
110. Z. Rauf, A. Sohail, S.H. Khan, A. Khan, J. Gwak, and M. Maqbool, Attention-guided multiscale deep object detection framework for lymphocyte analysis in IHC histological images. Microscopy 72(1): 27 – 42 (2023). https://academic.oup.com/jmicro/article-abstract/72/1/27/6761104?redirectedFrom=fulltext
109. S. Tayaba, H. Sethi, H. Shahid, R. Malik, M. Ikram, S. Ali, S. Khaliq, Q. Khan, and ***M. Maqbool***, Silicon-Germanium and carbon-based superconductors for electronic, industrial, and medical applications. Materials Science & Engineering-B 290, 116332 (2023). https://www.sciencedirect.com/science/article/pii/S0921510723000740
108. K. A. Williams, B. K. Wright, M. W. Perrigin, E. Caffrey, Q. Khan, and ***M. Maqbool*****,** Radiation shielding characterization of 83Bi209, 74W184, 50Sn119, ZnS, and CaCO3 using the modified Klein-Nishina formula. Radiation Physics and Chemistry 205, 110712 (2023). https://doi.org/10.1016/j.radphyschem.2022.110712
107. W. Ahmad, A.K. Tareen, K. Khan, M. Khan, Q. Khan, Z. Wang, and ***M. Maqbool***, A review of the Synthesis, Fabrication, and Recent Advances in Mixed Dimensional Heterostructures for Optoelectronic Devices Applications. Applied Materials Today 30, 101717 (2023). https://doi.org/10.1016/j.apmt.2022.101717
106. M. W. Perrigin, K. A. Williams, B. K. Wright, M. Maqbool, E. Caffrey, R. George, G. Ali, and M. Maqbool, Low melting point MCP-69, MCP-96, MCP-137, and MCP-200 alloys for radiation protection in radiological and therapeutic processes. Radiation Medicine and Protection 3, 175 – 182 (2022). https://doi.org/10.1016/j.radmp.2022.08.003
105. M. Ikram, M. A. Bari, M. Bilal, F. Jamal, W. Nabgan, J. Haider, A. Haider, G. Nazir, A. D. Khan, K. Khan, A. K. Tareen, Q. Khan, G. Ali, M. Imran, E. Caffrey, and ***M. Maqbool***, Innovations in the synthesis of graphene nanostructures for bio and gas sensors. Biomaterials Advances 145, 213234 (2023).

https://doi.org/10.1016/j.bioadv.2022.213234

104. Y. Iqbal, J. Wang, C. Wang, P. Muhammad, A. Zada, M. Khan, H. Maab, Q. Khan, and ***M. Maqbool***, Designing and enhancing the thermoelectric performance of MgAgSb alloy for highly efficient energy devices. International Journal of Energy Research 46, 22266 – 22284, (2022). https://onlinelibrary.wiley.com/doi/10.1002/er.8600

103. J. Haider, A. Shahzadi, M. U. Akbar, I. Hafeez, I. Shahzadi, A. Khalid, A. Ashfaq, S. O. A. Ahmad, S. Dilpazir, M. Imran, M. Ikram, G. Ali, M. Khan, Q. Khan, and ***M. Maqbool***, A review of synthesis, fabrication, and emerging biomedical applications of metal-organic frameworks. Biomaterials Advances 140, Article: 213049 (2022). https://doi.org/10.1016/j.bioadv.2022.213049

102. M. Ikram, R. Malik, R. Raees, M. Imran, F. Wang, S. Ali, M. Khan, Q. Khan, and ***M. Maqbool***, Recent advancements and future insight of lead-free non-toxic perovskite solar cells for sustainable and clean energy production: A review, Sustainable Energy Technologies, and Assessments 53, Article: 102433, 2022. https://www.sciencedirect.com/science/article/pii/S2213138822004854?dgcid=coauthor

101. C. Couch, E. Halliwell, R. Begum, G. Ali and ***M. Maqbool***, Efficiency Increase in Scintillation Detectors by Increasing Valance Band Electron Density due to Changing Crystal Structures. Journal of Applied Crystallography 55, 615 -620 (2022). https://doi.org/10.1107/S160057672200005X

100. S. Anwar, G. Ali, H. Maab, Q. Khan, S. Akhtar, S. Karim, M. Khan, and ***M. Maqbool***, Six band Terahertz absorption in metamaterial for optical sensors and filters applications. Optical & Quantum Electronics 54, Article: 436, 2022. https://doi.org/10.1007/s11082-022-03821-6

99. N. Abid, A. M. Khan, S. Shujait, K. Chaudhary, M. Ikram, M. Imran, J. Haider, M. Khan, Q. Khan, and ***M. Maqbool***, Synthesis of nanomaterials using various top-down and bottom-up approaches, influencing factors, advantages, and disadvantages: A review. Advances in Colloid and Interface Science 300, 102597 (2022). https://www.sciencedirect.com/science/article/pii/S0001868621002384?via%3Dihub

98. A. Ullah, M. Usman, A. Shah, I. Ahmad and ***M. Maqbool***, Fabrication and Ions Irradiation Study of AlN:Gd Thin Films. ECS Journal of Solid State Science & Technology 11(4): 043002 (2022). https://iopscience.iop.org/article/10.1149/2162-8777/ac6116/pdf

97. Asmat Ullah, Muhammad Usman, Ahmer Hussain Shah, Altaf Hussain Shar, and ***Muhammad Maqbool***, Ion Beam Effect on the Structural and Optical Properties of AlN:Er. Journal of Composites Science 6, 110 (2022). https://doi.org/10.3390/jcs6040110

96. T. Ali, S. Mohyuddin, G. Ali, M. Ibrar, F. Summer, S. Iqbal, Y. Xie, and ***M. Maqbool***, Synthesis and characterization of graphite doped TiO_2 nanotubes with enhanced optoelectronic, and photocatalytic properties. Electronic Materials Letters 18, 69-78 (2022). https://link.springer.com/content/pdf/10.1007/s13391-021-00317-5.pdf

95. A. Ullah, N. Mabood, ***M. Maqbool***, L. Khan, and M. Ullah, Cytidine deamination-induced perpetual immunity to SAR-CoV-2 infection is a potential new therapeutic target. International Journal of Medical Sciences 18(16): 3788-3793 (2021). https://www.medsci.org/v18p3788.htm

94. M. Ikram. M. Rashid, ***M. Maqbool*** *et al*. A review of photocatalytic characterization, environmental cleaning, and energy storage capabilities of metal oxide nanostructured materials. Sustainable Materials & Technologies 30, e00343 (2021).https://www.sciencedirect.com/science/article/pii/S2214993721000981
93. ***M. Maqbool***, Optical Spectroscopy and Imaging: An Emerging Method of Cancer Detection. International Journal of Radiology Case Reports 1(1): 10 – 11, 2021. https://researchlakejournals.com/index.php/IJRCR/article/view/101
92. A. Raza, J. Z. Hassan, M. Ikram, S. Ali, U. Farooq, Q. Khan, and ***M. Maqbool***, Advances in Liquid-Phase and Intercalation Exfoliations of Transition Metal Dichalcogenides to produce a 2D framework. Advanced Materials Interfaces 8(14): 2002205 (2021). https://onlinelibrary.wiley.com/doi/10.1002/admi.202002205
91. T. Ali, S. Mohyuddin, G. Ali, M. Khan, S. Iqbal, ***M. Maqbool*** , and S.O. Cho, In-situ tailoring the morphology of In(OH)3 nanostructures via surfactants during anodization and their transformation into In2O3 nanoparticles. Nanotechnology 32 (31), 315602 (2021). DOI: https://doi.org/10.1088/1361-6528/abf967
90. E. Halliwell, C. Couch, R. Begum, and ***M. Maqbool***, Increase in linear attenuation coefficient by changing the crystal structure of materials for radiation shielding and protection. Colloids and Surfaces A: physiochemical and engineering aspects 622, 126646 (2021). https://www.sciencedirect.com/science/article/pii/S092777572100515X
89. A. Ullah, N. Mabood, ***M. Maqbool,*** L. Khan, M. Khan, and M. Ullah, SAR-CoV-2 infection, emerging new variants and the role of activation induced cytidine deaminase (AID) in lasting immunity. **Saudi Pharmaceutical Journal**. 29(10); 1181 – 1184 (2021). . https://www.sciencedirect.com/science/article/pii/S1319016421001845
88. E. Bibb, N. Alajlan, S. Alsuwailem, B. Mitchell, A. Brady, M. Maqbool, and R. George. Internalized nanoceria modify the radiation-sensitivity profile of mda mb231 breast carcinoma cells. Biology 10(11): 1148 (2021). https://www.scopus.com/record/display.uri?eid=2-s2.0-85119012627&origin=resultslist
87. A. Ullah, M. Usman, W. Qingyu, I. Ahmad, and ***M. Maqbool***, Structural, electrical, and optical characterizations of yttrium doped aluminum nitride thin films before and after ions irradiation. Optical Materials 116, 111097 (2021). https://www.sciencedirect.com/science/article/abs/pii/S0925346721002986
86. A. Rafiq, M. Ikram, S. Ali, F. Niaz, M. Khan, Q. Khan, and ***M. Maqbool***, Photocatalytic degradation of dyes using semiconductor photocatalysts to clean industrial water pollution. Journal of Industrial and Engineering Chemistry 97, 111-128 (2021). https://www.sciencedirect.com/science/article/abs/pii/S1226086X21000940
85. N. Khaliq, M. A. Rasheed, M. Khan, S. Karim, A. Nisar, P. Schmuki, S. O. Cho, G. Ali, and ***M. Maqbool***, Highly Sensitive Voltage Switchable Dual Analyte Biosensor Using Au NPs Sputtered CdS QDs Decorated TiO_2 Nanotubes: A Study of Nonenzymatic Detection of Cholesterol and H_2O_2. ACS Applied Materials & Interfaces 13 (3) 3653-3668 (2021). https://pubs.acs.org/doi/abs/10.1021/jp9089497
84. M. Hussain, N. Khaliq, A. A. Khan, M. Khan, G. Ali, and ***M. Maqbool***, Synthesis and characterization of TiO_2 nanostructures and their use as biosensors for L-Cysteine and

hydrogen peroxide detection. Physica-E 128: 114541 (2021). https://www.sciencedirect.com/science/article/pii/S138694772031609X

83. K. T. Thiele, R. Alexander, ***M. Maqbool***, Characterization of $_{83}Bi^{209}$, $_{74}W^{184}$, $_{48}Cd^{112}$, $_{30}Zn^{65}$, $_{28}Ni^{5,9}$ and $_{26}Fe^{56}$ using Modified Klein-Nishina formula, for radiation shielding and dosimetry. Radiation Physics & Chemistry 179, 109264 (2021). https://www.sciencedirect.com/science/article/pii/S0969806X20313463
82. A. Ullah, M. Usman, W. Qingyu, I. Ahmad, R. Y. Khosa, and ***M. Maqbool***, Response of structural and optical properties against proton irradiation in AlN:Tm thin films. Radiation Physics & Chemistry 180, 109234 (2021). https://www.sciencedirect.com/science/article/pii/S0969806X20313165
81. G. Y. Goma and Muhammad Maqbool, Comparison of Methods and Systems in Internal Radiation Dosimetry. Biomed J Sci & Tech Res 33(3) 005413 (2021). https://dx.doi.org/10.26717/BJSTR.2021.33.005413
80. A. Zada, M. Khan, Q. Khan, and ***M. Maqbool***, Hazardous applications and photodegradation mechanisms of chlorophenols over different heterogeneous photocatalysts. Environmental Research 195, 110742 (2021). https://www.sciencedirect.com/science/article/pii/S0013935121000360?via%3Dihub
79. M. Saeed, M. Rani, K. Batool, H. Batool, A. Younus, S. Azam, A. Mehmood, B. Haq, T. Alshahrani, G. Ali, and ***M. Maqbool***, Synthesis and Fabrication of $Co_{1-x}Ni_xCr_2O_4$ Chromate Nanoparticles and the Effect of Ni Concentration on their Bandgap, Structure, and Optical Properties. Journal of Composites Science 5, 247 (2021). https://www.mdpi.com/2504-477X/5/9/247
78. A. Zada, P. Muhammad, W. Ahmad, Z. Hussain, S. Ali, M. Khan, Q. Khan, and ***M. Maqbool***, Surface Plasmonic Assisted Photocatalysis with Metal Nanocrystals: Design, Synthesis, and Applications. Advanced Functional Materials 30 (7). Article # 1906744 (2020). https://onlinelibrary.wiley.com/doi/abs/10.1002/adfm.201906744
77. G. Ali, T. Ali, M. Ibrar, F. Summer, S. Iqbal, Y. Xie and ***M. Maqbool***, TiO_2 nanotube array-modified electrodes for L-cysteine biosensing: experimental and density-functional theory study. Nanotechnology 31, 505501 (2020). https://iopscience.iop.org/article/10.1088/1361-6528/abb431
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Skills and Expertise:

- Plasma Magnetron Sputtering source for Thin Film Deposition.
- Cathodoluminescence.
- Photoluminescence.
- Refractometer.
- LASERs.
  Nd:YAG laser (532 nm), IR laser (783 nm), He-Neon laser, Nitrogen laser, Argon laser (488 nm), UV laser (266 nm).
- XRD (X-rays diffraction).
- X-ray Fluorescence Spectroscopy (XRF)
- Optical Fibers.
- EDX (X-rays Energy Dispersive Spectroscopy).
- SEM (Scanning Electron Microscope).
- Optical Microscopy.
- Thermal Activation / Annealing Furnace.

- Linear Accelerator.
- Densitometer.
- Radiation Detectors.

Computer Skills:

1. Microsoft World.
2. Microsoft Excel.
3. Power Point.
4. Origin 8.
5. Photoshop

Invited Talks and Presentations:

- 04/2024: Physical and optical biomarkers for detecting and measuring radiation damage to blood. UAB School of Health Professions Research Day Talk.
- 03/2024: Physical and optical biomarkers for chronic disease detection and radiation damage measurement. Florida Atlantic University.
- 02/2024: UAB Health Physics Program development and student recruitment talk. Graduate School, The University of Alabama at Birmingham (UAB), USA.
- 01/2024: UAB Health Physics Program development and student recruitment talk. Troy University, Alabama, USA.
- 11/2023: Body tissue coefficients and interaction of radiation with various tissues for radiation dosimetry applications. UAB EXPO presentation Fall 2023. Birmingham, Alabama, USA.
- 07/2023: Enhanced radiation attenuation and shielding ability of materials by changing their crystal structure and electron density. HPS 68th Annual Meeting, Maryland, USA.
- 07/2023: Can Plasma Optical Density or Transmission be used for helping AD Diagnosis? Alzheimer's Association International Conference 2023, Netherlands.
- 04/2023: The Interaction of Radiation with Body Tissues for Dosimetry and Cancer Treatment. UAB EXPO presentation Spring 2023. Birmingham, Alabama.
- 10/2022: Titaniam doped AlN Whispering Gallery Mode Microlaser and its possible Biomedical applications. Department of Physics, the University of Alabama at Huntsville, USA.
- 10/2022: Construction of Whispering Mode Microlaser cavities for optical and Biomedical applications. Department of Biomedical Engineering, the University of Alabama at Birmingham, USA.
- 05/2022: Health Physics as a profession and career. Department of Physics, Samford University, USA.
- 01/2022: Biomedical applications of light emitting and oxide nanoparticles. Department

of Physics, Gomal University Dera Ismail Khan, Pakistan.

- 01/2022: Biomedical and security applications of Infrared lasers. Department of Physics, The University of Malakand, Pakistan.
- 11/2021: Titanium doped AlN infrared whispering gallery mode microlaser on optical fiber, and its biomedical applications. Department of Physics and Astronomy, Florida Atlantic University.
- 06/2021: Strategic Initiatives for Implementing a Research Infrastructure in the Department of Clinical & Diagnostic Sciences in the next 5 years. School of Health Professions, at UAB.
- 06/2021: Mapping a Pathway to Innovative and Diverse Research in the Department of Clinical and Diagnostic Sciences. School of Health Professions, at UAB.
- 04/2021 Students' success in learning, and scholarship, at the Honors College of UAB.
- 10/2020: Buildup factors and mass attenuation coefficient of MCP-69 alloys for radiation shielding and radiation dosimetry applications. Health Physics Society Annual Meeting (Online), 2020.
- 06/2020: No student behind model: the use of American online system to develop education in Pakistan. Online talk organized by Gomal University and Higher Education Commission of Pakistan.
- 05/2019: Biomedical applications of light emission from rare-earth elements doped in wide bandgap semiconductors. Alabama Chapter Health Physics Society and Atlanta Chapter Health Physics Society Spring 2019 Joint Meeting, Birmingham, Alabama, USA.
- 10/2018: Linear attenuation coefficient and Buildup Factors of MCP-96 alloy for radiation shielding & protection. American Physical Society Texas Section and American Association of Physics Teachers, Fall Meeting 2018, Houston, Texas, USA. 10/19/2018 – 10/20/2018.
- 04/2018: Light emission from rare-earth elements and transition metals and their Biophotonics and health physics applications at MS Health Physics program. Invited talk at the University of Northern Alabama, USA.
- 06/2017: Health Physics: Profession and Career. Invited talk at Alabama State University, Montgomery, Alabama. USA.
- 02/2017: Physics and its career. Invited talk at Hamilton Southeastern Junior High School, Fishers, Indiana, USA.
- 11/2016: Super-luminescence in wide bandgap Nitride Semiconductors. 5th International Conference and Exhibition on Lasers, Optics & Photonics November 28-30, 2016 Atlanta, USA.
- 10/2016: Titanium doped semiconductor micro-ring laser on optical fibers 2nd International Conference and Exhibition on Mesoscopic and Condensed Matter Physics October 26-28, 2016, Chicago, USA.
- 07/2016: Research, Curriculum development and Career in Health Physics. Invited Talk at the University of Alabama at Birmingham, USA.

- 06/2015: Visible and Infrared emission from Erbium Oxide nanoparticles, for optical and biomedical applications. 2015 Tech Connect World Innovation Conference. Washington D.C., USA, June 13 – 17, 2015.
- 04/2014: Luminescence from in Rare-Earth elements for high efficiency photonic devices, Invited Talk at the College of Arts & Sciences, Qatar University, Doha, Qatar.
- 03/2014: Ismail Balagoon, Muhammad Maqbool and Omar Al-Jaraod, Surface analysis and luminescence properties of AlN doped with RE elements (Ho, Gd, Tm). Seventh International Conference on Advances in Engineering Materials. American University of Sharjah, UAE.
- 04/2013: Rare-Earth elements and Transition Metals, potential materials for energy saving devices. National Renewable Energy Laboratory (NREL), Golden, Colorado, USA.
- 05/2012: Transition metals and rare-earth elements in laser cavities, 2nd International Workshop on Materials, The University of Malakand, Pakistan, May 21 – 24, 2012.
- 11/2011: Dose non-linearity of Dosimetry system on a medical linear accelerator used for conventional and intensity modulated radiation therapy. European Medical Physics and Engineering Conference 2011, Trinity College, Dublin, Ireland, September 01-05, 2011.
- 10/2011: Light emission from erbium oxide nanoparticles for optical and biomedical applications. Ohio Section American Physical Society (OSAPS) Fall Meeting, Ball State University, October 14-15, 2011.
- 07/2011: Medical Physics Curriculum, Biomaterials and Biophotonics in Medical and Health Physics. Invited talk at Hofstra University, New York, 07/2011.
- 03/2011: Linear Attenuation Coefficient and Buildup Factor of MCP-200 alloy for radiation shielding and protection. Indiana Academy of Science Meeting at Indiana University Purdue University Indianapolis, Indiana, USA.
- 03/2011: Buildup Factor and Linear attenuation coefficient of MCP-200 alloy for tissue compensation and radiation shielding. Indiana Academy of Science 126th Annual Meeting at Indianapolis, March 4-5, 2011.
- 09/2010: Titanium doped sputter deposited AlN infrared whispering gallery mode microlaser on optical fibers. Talk at Ball State University.
- 09/2010: Buildup Factor of MCP-124 alloy for its use as tissue compensator in radiation oncology treatment planning. Ohio Section American Physical Society Fall-2010. Meeting at Delaware Ohio, USA.
- 05/2010: Luminescence Enhancement in Rare-Earth Elements for Optical Devices and Biomedical Applications. Invited talk (Colloquium) at Delaware State University, Delaware, USA.
- 04/2010: Radiological Protection and Biomaterials. Invited talk at the East Carolina University, North Carolina, April 2010.

- 04/2010: Surface characterization and luminescence properties of Titanium doped in amorphous aluminum nitride. Butler Undergraduate Research Conference, Indianapolis, April 15, 2010.
- 03/2009: Luminescence Enhancement in AlN:Ho for optical devices applications. American Physical Society (APS), March Meeting, Pittsburgh, Pennsylvania, USA.
- 10/2009: Linear Attenuation Coefficient and Buildup Factor of MCP-96 tissue compensating alloy. APS Ohio Section Fall Meeting, Ohio Wesleyan University, Delaware, Ohio, Oct. 9 – 10, 2009.
- 04/2009: Energy transfer in Erbium and Ytterbium ions doped in AIN deposited by RF sputtering and luminescence enhancement in Yb^{+3}. Indiana Section of the American Association of Physics Teachers, April 9 – 10, 2009 at Ball State University, USA.
- 04/2009: Buildup factors of MCP-96 alloy for radiation protection and cancer treatment. Indiana Section of the American Association of Physics Teachers, at Ball State University, April 9 – 10, 2009.
- 11/2008: The importance of dose accuracy and buildup factor in radiation therapy and radiation protection. Talk at Ball State University, Nov. 2008.
- 03/2007: The use of Rare-earths' luminescence in cancer studies and health physics Invited Talk at Eastern Illinois University, Charleston, IL, March 2007.
- 04/2006: Electron penetration depth in amorphous AlN for optical and biomedical applications. APS, Spring Meeting, Baltimore Maryland, USA.
- 03/2006: Doppler's effect and its practical applications. Invited Talk at Bloomsburg University of Pennsylvania, PA, March 2006.
- 01/2006: Light emission from rare-earth doped semiconductors. Invited Talk at Canesius College, Buffalo, NY, January 2006.
- 04/2005: Tissue compensators in radiation treatment planning and the use of spectroscopy in cancer detection. Invited Talk at California State University at Fresno, CA, April 2005.
- 11/2004: Surface characterization and luminescence from praseodymium doped in AlN, GaN and turbostratic BN. Materials Research Society (MRS) Fall 2004 Meeting, Boston Massachusetts, USA.
- 10/2004: Surface characterization and luminescence from amorphous AlN:Gd films. Condensed Matter and Surface Sciences Program Annual Conference, Ohio University, USA.
- 12/2003: Luminescence from AlN doped holmium for laser cavities and Waveguide applications. MRS Fall Meeting, Dec. 2003, Boston, Massachusetts, USA.
- 09/2003: New Reconstruction of clean c-GaN(001) studied by Scanning Tunneling Microscopy. 8th Wide Bandgap III-Nitrides Workshop, Sep. 2003, Richmond, Virginia, USA.
- 04/2000: Energy, Mass and Gravitational Field, First College Physics Teachers

Training Program by UNESCO, Department of Physics, University of Peshawar, Pakistan.

- 07/1999: Comparison of Quantum and Classical Distributions in Statistical Mechanics. 24th International Nathiagali Summer College on Physics and Contemporary needs in Pakistan.

References:

1. Dr. Wazir Muhammad, Assistant Professor of Biomedical Physics, Department of Physics, Florida Atlantic University, Boca Raton, Florida, USA.

   Tel: 203-7640325 e-mail: wmuhammad@fau.edu

2. Dr. Wei Li, Associate Professor of Biomedical Sciences, The University of Alabama at Birmingham, USA. Tel: 1-205-441-0542 E-mail: wli@uab.edu

3. Dr. Floyd Josephat, Professor and Director of Clinical and Laboratory Sciences, The University of Alabama at Birmingham, USA. E-mail: josephat@uab.edu

4. Dr. Ghanim Ullah, Associate Professor, Department of Physics, University of South Florida, USA. Tel: 814-3217120, e-mail: gullah@usf.edu

5. Dr. Ghafar Ali, Principal Scientist, Pakistan Atomic Energy Commission, Islamabad. Pakistan. E-mail: ghafarali@kaist.ac.kr

6. Professor Dr. Iftikhar Ahmad, Vice Chancellor (President), Gomal University, Pakistan. Tel: (+92)3329067866. E-mail: vc@gomal.edu.pk

7. Dr. Qasim Khan, Senior Research Scientist, University of Waterloo, Canada. E-mail: qasim.khan1@ucalgary.ca

UNIVERSITY of WEST FLORIDA

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Date: July 31, 2025

To: Dr. Jaromy Kuhl
Provost and Senior Vice President

From: Dr. Mohamed Khabou
Dean, Hal Marcus College of Science & Engineering

Subject: Tenure for Dr. Jeremy Straub

Dr. Jeremy Straub was offered employment at UWF's Center for Cybersecurity with tenure in the Department of Cybersecurity & Information Technology as a condition to hire. Dr. Straub is currently at North Dakota State University (NDSU) where he was awarded tenure and promoted to associate professor in 2023.

Dr. Straub is an internationally renowned leader in cybersecurity. He has been the Director of the NDSU Institute for Cyber Security Education and Research since 2020 and has an impressive list of publications and grant awards. His teaching and service activities are equally impressive. This far exceeds the requirements for tenure and promotion in the Department of Cybersecurity & Information Technology.

Tenured faculty members in the Department of Cybersecurity & Information Technology were asked to review his curriculum vitae and vote for or against him receiving tenure upon assuming the position at UWF. The faculty members voted **3 for and 0 against** awarding him tenure in the department.

Based on the affirmative response stated above, and my examination of Dr. Straub's curriculum vitae, I support granting him tenure in the UWF Department of Cybersecurity & Information Technology.

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JEREMY STRAUB

Curriculum Vitae

PROFESSIONAL BACKGROUND

ACADEMIC POSITIONS

Associate Professor, North Dakota State University, August 2023 to Present.
Director, NDSU Institute for Cyber Security Education and Research, August 2020 to Present.
Associate Director, NDSU Institute for Cyber Security Education and Research, March 2017 to August 2020.
Assistant Professor, North Dakota State University, August 2016 to July 2023.
Research Associate, University of North Dakota, January 2016 to August 2016.

EDUCATION

Degrees:
Ph.D., University of North Dakota, May 2016, Scientific Computing
M.S., Jacksonville State University, May 2011, Computer Systems and Software Design (4.0 GPA)
M.B.A., Mississippi State University, December 2010, Business Administration, minor in Marketing (3.9 GPA)
B.S., Excelsior College, September 2010, Business (Magna cum Laude)
B.S., Excelsior College, August 2009, Information Technology (Cum Laude)

Certificates/Courses:
Graduate Certificate in Space Studies, American Military University, December 2011 (4.0 GPA)
Graduate Certificate in Business, Mississippi State University, August 2010 (4.0 GPA)

Other Selected Accreditations:
Microsoft Certified Solution Developer, Microsoft Certified System Engineer, Microsoft Certified Database Administrator, Microsoft Certified IT Professional, Microsoft Certified Professional Developer, Cisco Certified Network Associate (lapsed), A+ Certification, Palo Alto Networks Accredited Configuration Engineer

HONORS, AWARDS, AND ACHIEVEMENTS

Upsilon Pi Epsilon, honors society member, Jacksonville State University
Delta Epsilon Tau, honors society member, American Public University System
Golden Key International Honour Society, honors society member, American Public University System
Presidents List (1st Quarter, 2012), American Military University
Dean's List, Columbus State Community College
Highest Aggregate Average, Artificial Intelligence CPSC 5185 (Spring 2010), Columbus State University
Vice President, Association for Computing Machinery Student Chapter, Case Western Reserve University, Spring 2000 Semester
Above and Beyond Award, John D. Odegard School of Aerospace Sciences, March 2012.
Above and Beyond Award, John D. Odegard School of Aerospace Sciences, May 2012.
Above and Beyond Award, John D. Odegard School of Aerospace Sciences, October 2014.
Co-Founder, North Dakota Space Robotics Program – NASA / North Dakota Space Grant Consortium / UND Faculty Research Seed Money Committee Funded Research Program
Founder & Director, OpenOrbiter Small Spacecraft Development Initiative, 2012-present.
Included in Marquis Who's Who in the World (2015, 2016, 2017).
Included in Marquis Who's Who in America (2016).
National Aeronautics and Space Administration Certificate of Appreciation, October 2016.
Certificate of Appreciation, Society of Manufacturing Engineers (SME), May 2016.
Certificate of Appreciation, Autotestcon 2016, September 2016.
Top Reviewers for Sentinels of Science: Engineering (all) (Oct. 2015 – Sept. 2016), Publons, October 2016.
Top cited papers (#1 and tied for #4) Machines Journal – 2016.
Certificate of Appreciation, North Dakota EPSCoR NATURE Program, June 16, 2017.

Fellow, Inter-University Seminar on Armed Forces and Society, 2017.
Recipient, Albert Nelson Marquis Lifetime Achievement Award, 2017.
Best Technical Paper, International Aerial Robotics Competition, 2017.
40 Under 40 Award, Prairie Business Magazine, 2017.
Top Reviewers for Sentinels of Science: Multidisciplinary (Oct. 2016 – Sept. 2017), Publons, October 2017.
Top Reviewer in Assorted (Oct. 2017 – Sept. 2018), Publons, October 2018.
Challey Institute Faculty Fellow, 2019-2020 & 2020-2021.

RESEARCH EXPERIENCE

University of North Dakota, 2011-Present: Research in robotic control, space mission development, multi-tier exploration mission architecture and control, and autonomous link budget reduction technologies; Principal investigator on three IRB-approved (human subject) projects
Jacksonville State University, 2010-2011: Research in super vision techniques, computationally simplified approach and applications related to barcode correction.
Columbus State University, 2010: Research regarding using machine vision techniques in object/pattern recognition (extended course project).

RESEARCH INTERESTS

Multi-tier mission architecture & control, autonomous data link reduction, autonomous vehicle control, machine vision, super resolution

PUBLICATIONS, PRESENTATIONS AND PUBLIC APPEARANCES

Books:

2. Straub, J. 2025. Ethical Hacking: Theory and Application. MDPI, under revision for publication.
1. Straub, J., R. Marsh, D. Whalen. 2017. Small Spacecraft Development Project-Based Learning: Implementation and Assessment of an Academic Program. Springer.

Articles in Refereed Journals:

91. Straub, J. 2024 Development of a Crisis Event Classification System for Cybersecurity Incidents. Accepted for publication in the Journal of Emergency Management.
90. Spradling, M., J. Straub. 2022. Evaluation of the Factors That Impact the Perception of Online Content Trustworthiness by Income, Political Affiliation and Online Usage Time. Future Internet, Vol. 14, No. 11.
89. Maul, J., J. Straub. 2022. Assessment of the Use of Patient Vital Sign Data for Preventing Misidentification and Medical Errors. Healthcare, Vol. 10, No. 12.
88. Spradling, M. J. Straub. 2022. Analysis of the Impact of Age, Education and Gender on Individuals' Perception of Label Efficacy for Online Content. Information, Vol. 13, No. 11.
87. Ahmed, F., J. Straub. 2022. Initial Work on the Development of a Hardware-Based Gradient Descent Trained Expert System. Systems, Vol. 10, No. 5.
86. Straub, J. 2022. Automating the design and development of gradient descent trained expert system networks. Knowledge-Based Systems, Vol. 254.
85. Straub, J., M. Spradling, B. Fedor. 2022. Assessment of Consumer Perception of Online Content Label Efficacy by Income Level, Party Affiliation and Online Use Levels. Information, Vol. 13, No. 5.
84. Fedor, B., J. Straub. 2022. A Particle Swarm Optimization Backtracking Technique Inspired by Science-Fiction Time Travel. AI, Vol. 3, No. 2.
83. Straub, J., M. Spradling, B. Fedor. 2022. Assessment of Factors Impacting the Perception of Online Content Trustworthiness by Age, Education and Gender. Societies, Vol. 12, No. 2.
82. Straub, J., M. Spradling. 2022. Americans' Perspectives on Online Media Warning Labels. Behavioral Sciences, Vol. 12, No. 3.
81. Hance, J., J. Milbrath, N. Ross, J. Straub. 2022. Distributed Attack Deployment Capability for Modern Automated Penetration Testing. Computers, Vol. 11, No. 3.

80. Rolle, B., R. Kiran, J. Straub. 2022. A Pathfinding Algorithm for Lowering Infection Exposure of Health Care Personnel working in Makeshift Hospitals. Healthcare, Vol. 10, No. 2.
79. Kianersi, D., S. Uppalapati, A. Bansal, J. Straub. 2022. Evaluation of a Reputation Management Technique for Autonomous Vehicles. Future Internet, Vol. 14, No. 2.
78. Rosch-Grace, D., J. Straub. 2022. Analysis of the Likelihood of Quantum Computing Proliferation. Technology in Society, Vol. 68.
77. Suttle, R., S. Hogan, R. Aumaugher, M. Spradling, Z. Merrigan, J. Straub. 2021. Deceptive Content Labeling Survey Data from Two U.S. Midwestern Universities. Data, Vol. 7, No. 3.
76. Ritter, N., J. Straub. 2021. Implementation of Hardware-Based Expert Systems and Comparison of their Performance to Software-Based Expert Systems. Machines, Vol. 9, No. 12.
75. Straub, J. 2021. A Modern Blackboard Architecture Implementation with External Command Execution Capability. Software Impacts, Vol. 11.
74. Straub, J. 2021. Assessment of the comparative efficiency of software-based Boolean, electronic, software-based fractional value and simplified quantum principal expert systems. Expert Systems, Vol 39, No. 4.
73. Suttle, R., S. Hogan, R. Aumaugher, M. Spradling, Z. Merrigan, J. Straub. 2021. University Community Members' Perceptions of Labels for Online Media. Future Internet, Vol. 13, No. 11.
72. Liang, X., J. Straub. 2021. Deceptive Online Content Detection Using Only Message Characteristics and a Machine Learning Trained Expert System. Sensors, Vol. 21, No. 21.
71. Straub, J. 2021. Impact of Techniques to Reduce Error in High Error Expert System Gradient Descent Networks. Journal of Intelligent Information Systems. Initial online publication, September 25, 2021.
70. Straub, J. 2021. Gradient Descent Training Expert System. Software Impacts, Vol. 10.
69. Straub, J. 2021. Assessment of Gradient Descent Trained Rule-Fact Network Expert System Multi-Path Training Technique Performance. Computers, Vol. 10, No. 8.
68. Straub, J. 2021. Machine Learning Performance Validation and Training Using a 'Perfect' Expert System. MethodsX, Vol 8.
67. Straub, J. 2021. Expert System Gradient Descent Style Training: Development of a Defensible Artificial Intelligence Technique. Knowledge-Based Systems, Vol. 228.
66. Spradling, M., J. Straub, J. Strong. 2021. Protection From 'Fake News': The Need for 'Nutrition Facts' for Online Content. Future Internet, Vol. 13, No. 6.
65. Straub, J. 2021. Defining, Evaluating, Preparing for and Responding to a Cyber Pearl Harbor. Technology in Society, Vol. 65.
64. Straub, J. 2021. Analysis of the Changing Demographics of Computing Doctoral Degree Recipients at U.S. Universities and the Implications of Change. ACM INROADS, Vol. 12, No. 1.
63. Jones, A., J. Straub. 2021. Simulation and Analysis of Self-Replicating Robot Decision Making Systems. Computers, Vol. 10, No. 9.
62. Straub, J. 2020. Cyber-Mitigation: Cybersecurity Emergency Management. Journal of Emergency Management, Vol. 18, No. 6.
61. Straub, J., J. Vacek. 2020. A Privacy Law Invasion from the West Coast or Nothing to Worry About? The Impact of the California Consumer Privacy Act in North Dakota. North Dakota Law Review, Vol. 95, No. 3.
60. Straub, J. J. Vacek. 2020. Can I Get Your Name Please? Not Unless You Want to Go to Jail. North Dakota Law Review, Vol. 95, No. 3.
59. Straub, J., M. Swartwout, M. Nunes, V. Lappas. 2019. CubeSats and Small Satellites. International Journal of Aerospace Engineering.
58. Straub, J. 2019. The Inadequacy of Domestic and International Law for Cyberspace Regulation. International Journal of Computers and Their Applications, Vol. 26, No. 4.
57. Gros,C., J. Straub. 2019. Video recordings of male face and neck movements for facial recognition and other purposes. Data, Vol. 4, No. 3.
56. Straub, J. 2019. Assessment of Correlations Between Computer Science Department Performance and College Type. ACM Inroads, Vol. 10, No. 4.
55. Straub, J. 2019. Mutual Assured Destruction in Information, Influence and Cyber Warfare: Comparing, Contrasting and Combining Relevant Scenarios. Technology in Society, Vol. 59.
54. Gros, C., J. Straub. 2019. A Dataset for Comparing Mirrored and Non-Mirrored Male Bust Images for Facial Recognition. Data, Vol. 4, No. 1.
53. Alanazi, A., J. Straub. 2019. Engineering Methodology for Student-driven CubeSats. Aerospace, Vol. 6, No. 5.
52. Clemons, W., J. Straub. 2018. Human Male Body Images from Multiple Perspectives with Multiple Lighting Settings. Data, Vol. 4, No. 3.

51. Gros, C., J. Straub. 2018. Human Face Images from Multiple Perspectives with Lighting from Multiple Directions with no Occlusion, Glasses and Hat. Data in Brief, Vol. 22.
50. Colasito, M., J. Straub, P. Kotala. 2018. Correlated Lip Motion and Voice Audio Data. Data in Brief, Vol. 21.
49. Trappe, W., J. Straub. 2018. Journal of Cybersecurity and Privacy: A New Open Access Journal. Journal of Cybersecurity and Privacy, Vol. 1, No 1.
48. Jackson, S., J. Straub, S. Kerlin. 2018. Exploring a Novel Cryptographic Solution for Securing Small Satellite Communications. International Journal of Network Security, Vol. 20, No 5.
47. Russell, M., J. Straub. 2017. Characterization of Command Software for an Autonomous Attitude Determination and Control System for Spacecraft. International Journal of Computers and Applications, Vol. 39, No 4.
46. Jones, A., J. Straub. 2017. Concepts for 3D Printing-Based Self-Replicating Robot Command and Coordination Techniques. Machines, Vol. 5, No 2.
45. Straub, J. 2017. Towards Operating Standards for Small and CubeSat Spacecraft: Operating Standards Elements and Why Standards are Necessary. Astropolitics, Vol. 15, No. 1.
44. Straub, J. 2017. Effects of ITAR Changes on the US Software Industry, the Computer Science Discipline and the Scientific Enterprise. Communications of the ACM, Vol. 60, No. 1.
43. Hamlet, C., J. Straub, M. Russell, S. Kerlin. 2017. An Incremental and Approximate Local Outlier Probably Algorithm for Intrusion Detection and its Evaluation. Journal of Cyber Security Technology, Vol. 1, No 2.
42. Straub, J. 2016. Automating maintenance for a one-way transmitting blackboard system used for autonomous multi-tier control. Expert Systems, Vol. 33, No. 6.
41. Nervold, A.K., J. Berk, J. Straub, D. Whalen. 2016. A Pathway to Small Satellite Market Growth. Aerospace Science and Technology, Vol. 1, No. 1.
40. Straub, J., J. Vacek. 2016. A Liability Model for the Operation of Unmanned Aerial Vehicles. Issues in Aviation Law and Policy, Vol. 15, No. 2.
39. Straub, J. 2016. Consideration of the Use of Autonomous, Non-recallable Unmanned Vehicles and Programs as a Deterrent or Threat by State Actors and Others. Technology in Society, Vol. 44.
38. Straub, J., J. Vacek. 2016. Reforming Regulation of Basic and Small Business Research and Education in Space Technologies under the International Traffic in Arms Regulations and the Export Administration Regulations. Journal of Space Law, Vol. 39, No. 4.
37. Straub, J. 2016. A Distributed Blackboard Approach Based Upon a Boundary Rule Concept. Journal of Intelligent & Robotic Systems, Vol. 82, No. 3-4.
36. Straub, J., J. Vacek. 2015. Consideration of Changes to the Licensing of Remote Sensing Satellites in the United States. Journal of Space Law, Vol. 39, No. 4.
35. Straub, J., T. Plante, B. Kading, A. Holland, L. Klein, J. Forbord. 2015. A Martian Test Mission to Enable Space Solar Power on Earth. Online Journal of Space Communication, No. 18.
34. Straub, J. 2015. In Search of Technology Readiness Level (TRL) 10. Aerospace Science and Technology, Vol. 46.
33. Straub, J. 2015. Comparing the Effect of Pruning on a Best-Path and Naïve-Approach Blackboard Solver. International Journal of Automation and Computing, Vol. 12, No. 5.
32. Straub, J., H. Reza. 2015. A Blackboard-Style Decision Making System for Multi-Tier Craft Control and its Evaluation. Journal of Experimental & Theoretical Artificial Intelligence, Vol. 27, No. 6.
31. Straub, J. 2015. Evaluation of High-Altitude Balloons as a Learning Technology. International Journal of Learning Technology, Vol. 10, No. 1.
30. Straub, J. 2015. Initial Work on the Characterization of Additive Manufacturing (3D Printing) Using Software Image Analysis. Machines, Vol. 3, No. 2.
29. Straub, J. 2015. Strengthening the Argument of the Application of a Maritime Framework to Space through Consideration of Deep Space Warfare. Astropolitics, Vol. 13, No. 1.
28. Straub, J. 2015. Analysis of the Acceptance of Autonomous Planetary Science Data Collection by Field of Inquiry. Advances in Space Research, Vol. 55, No. 11.
27. Straub, J., B. Kading, A. Mohammad, S. Kerlin. 2015. Characterization of a Large, Low-Cost 3D Scanner. Technologies, Vol. 3, No 1.
26. Straub, J., R. Marsh & D. Whalen. 2015. The Impact of an Interdisciplinary Space Program on Computer Science Student Learning. Journal of Computers in Mathematics and Science Teaching (JCMST), Vol. 34, No. 1.
25. Bergsrud, B., R. Bernaciak, B. Kading, J. McClure, J. Straub, S. Shahukhal, K. Williams, E. Becker, J. Casler, J. Neubert, S. Noghanian , H. Salehfar, D. Whalen. 2014. Nano SSP Satellite. Online Journal of Space Communication, No. 18.
24. Kading, B., J. Straub. 2014. Design of a Manned Mars Mission Utilizing In-Situ Resources for Structure Fabrication. Acta Astronautica, Vol. 107.

23. Straub, J. 2015. Does the Use of Space Solar Power for In-Space Activities Really Make Sense: An Updated Economic Assessment. Space Policy, Vol. 31.
22. Straub, J. 2014. Evaluation of a Multi-Goal Solver for Use in a Blackboard Architecture. International Journal of Decision Support System Technology, Vol. 6, No. 1.
21. Straub, J. 2014. Extending the Student Qualitative Undertaking Involvement Risk Model. Journal of Aerospace Technology and Management, Vol. 6, No. 3.
20. Straub, J., D. Whalen, R. Marsh. 2014. Assessing the Value of the OpenOrbiter Program's Research Experience for Undergraduates. Sage OPEN, Vol. 2014, No. 4.
19. Straub, J. 2014. A Comparison of Learning Technologies for Teaching Spacecraft Software Development. Educational Technology Systems, Vol. 42, No. 4.
18. Straub, J., J. Vacek, J. Nordlie. 2014. Considering Regulation of Small Unmanned Aerial Systems in the United States. Air & Space Law, Vol. 39, No. 4&5.
17. Straub, J. 2014. Command of a Multi-Tier Robotic Network with Local Decision Making Capabilities. International Journal of Space Science and Engineering, Vol. 2, No. 3.
16. Bergsrud, C., J. Straub. 2014. A Space-to-Space Microwave Wireless Power Transmission Experiential Mission Using Small Satellites. Acta Astronautica, Vol. 103.
15. Straub, J., S. Kerlin. 2014. Development of a Large, Low-Cost, Instant 3D Scanner. Technologies, Vol. 2, No. 2.
14. Straub, J., D. Whalen. 2014. Evaluation of the Educational Impact of Participation Time in a Small Spacecraft Development Program. Education Sciences, Vol. 4, No. 1.
13. Straub, J. 2014. Assessment of Examinations in Computer Science Doctoral Education. Computer Science Education, Vol. 24, No. 1.
12. Straub, J. 2014. Unmanned Aerial Systems: Consideration of the Use of Force for Law Enforcement Applications. Technology in Society, Vol. 39.
11. Straub, J. 2013. Increasing National Space Engineering Productivity and Educational Opportunities via Intrepreneurship, Entrepreneurship and Innovation. Technology and Innovation, Vol. 15, No. 3.
10. Straub, J., D. Whalen. 2013. Student Expectations from Participating in a Small Spacecraft Development Program. Aerospace, Vol. 1, No. 1.
9. Straub, J., G. Ingwalson and R. Fevig. 2013. A Design for Inspiring Students with Near-Space Exploration. Journal of Aviation/Aerospace Education and Research, Vol. 23, No. 1.
8. Straub, J. 2013. Application of Model-Based Data Transmission Techniques to Gravitational Model Data. Journal of Data Analysis and Information Processing, Vol. 1, No. 3.
7. Straub, J. and D. Whalen. 2013. An Assessment of Educational Benefits from the OpenOrbiter Space Program. Education Sciences, Vol. 3, No. 3.
6. Straub, J. 2013. Attitudes Towards Autonomous Data Collection and Analysis in the Planetary Science Community. Galaxies, Vol. 1, No. 1.
5. Straub, J., J. Huber. 2013. The Use of Artificial Intelligence to Test Artificial Intelligence Systems. Computers, Vol. 2, No. 2.
4. Straub, J., J. Nordlie, E. Anderson. 2013. A Need for Operating Standards in the Academic and Research High Altitude Balloon Community. Issues in Aviation Law & Policy, Vol. 12, No. 3.
3. Straub, J., J. Berk, A. Nervold and D. Whalen. 2013. OpenOrbiter: An Interdisciplinary, Student Run Space Program. Advances in Education, Vol. 2, No. 1.
2. Straub, J., C. Korvald, A. Nervold, A. Mohammad, N. Root, N. Long, D. Torgerson. 2013. OpenOrbiter: A Low-Cost, Educational Prototype CubeSat Mission Architecture. Machines, Vol. 1, No. 1.
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Book Chapters:

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111. Straub, J. 2015. A Martian Technology Demonstration Mission and Subsequent Human Mission Support Use for a Space Solar Power Wireless Power Transfer System. Accepted for publication in the Proceedings of the AIAA 2015 Propulsion and Energy Forum and Exposition.
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103. Straub, J. 2015. The Use of a Low-Cost, Visible Light 3D scanner to create Virtual Reality Environment Models of Actors and Objects. Proceedings of the 2015 SPIE Defense + Sensing Conference 2015.
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101. Straub, J. 2015. Integrating Visible Light 3D Scanning into the Everyday World. Proceedings of the 2015 SPIE Sensing Technology + Applications Conference.
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89. Mohammad, A., J. Straub. 2015. Open Space Box: Communication to Support Big Data in Orbit. Proceedings of the 2015 SPIE Defense + Sensing Conference
88. Mohammad, A., J. Straub. 2015. Economic Analysis of Open Space Box Model Utilization in Space Craft. Proceedings of the 2015 SPIE Defense + Sensing Conference.
87. Mohammad, A., J. Straub. 2015. Use of Open Space Box: Supporting Tele-Medicine in Space Through Efficient Data Transmission. Proceedings of the 2015 SPIE Defense + Sensing Conference.
86. Mohammad, A., J. Straub. 2015. Pragmatic Open Space Box Utilization: Asteroid Survey Model using Distributed Objects Management Based Articulation (DOMBA). Proceedings of the 2015 SPIE Sensing Technology + Applications Conference.
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84. Castro, M., J. Straub. 2015. Nanosatellite Scheduling Using a Dictionary Module and a Useful Trick with Integers. Proceedings of the 2015 IEEE Aerospace Conference.
83. Kerlin, S., J. Straub, J. Huhn, A. Lewis. 2015. Small Satellite Communications Security and a Student Ground Station. Proceedings of the 2015 IEEE Aerospace Conference.
82. Straub, J. 2015. Using Swarm Intelligence, a Blackboard Architecture and Local Decision Making for Spacecraft Command. Proceedings of the 2015 IEEE Aerospace Conference.
81. Straub, J. 2015. Analysis of a 'Turn-Key' No Hardware Space Mission Using the Orbital Services Model. Proceedings of the 2015 IEEE Aerospace Conference.
80. Straub, J. 2015. Using a Constellation of CubeSats for In-Space Optical 3D Scanning. Proceedings of the 2015 IEEE Aerospace Conference.

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78. Straub, J. 2015. Intelligent Water Drops Algorithm for Coordinating Activities Between Cluster Spacecraft in a Communications-Denied Environment. Proceedings of the 2015 AIAA SciTech Conference.
77. Straub, J. 2015. In Search of Standards for the Operation of Small Satellites. Proceedings of the 2015 AIAA SciTech Conference.
76. Straub, J., R. Marsh. 2014. Assessment of Educational Expectations, Outcomes and Benefits from Small Satellite Program Participation. Proceedings of the 2014 AIAA/USU Conference on Small Satellites.
75. Straub, J. 2014. Comparing the Blackboard Architecture and Intelligent Water Drops for Spacecraft Cluster Control. Proceedings of the AIAA Space 2014 Conference.
74. Kading, B., J. Straub, D. Whalen. 2014. A Novel Deployable Array Architecture for Micro to Full Sized Satellites. Proceedings of the AIAA Space 2014 Conference.
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72. Straub, J. 2014. A Variety of Configurations for Incorporating Actuation Components into the Structural Members of a CubeSat. Proceedings of the AIAA Space 2014 Conference.
71. Straub, J., R. Marsh. 2014. The Differences are Not So Great: High Altitude Balloon and Small Spacecraft Software Development. Proceedings of the 2014 Academic High Altitude Conference.
70. Nordlie, J., R. Marsh, J. Straub. 2014. Evaluation of Materials for Suitability in the Construction of Solar-Powered Unmanned Hot-Air Balloons. Proceedings of the 2014 Academic High Altitude Conference.
69. Straub, J. 2014. Building Space Operations Resiliency with a Multi-Tier Mission Architecture. Proceedings of the SPIE Defense + Security Conference.
68. Straub, J. 2014. A Model-Based Multi-Sensor Data Fusion Knowledge Management Approach. Proceedings of the SPIE Sensing Technology + Applications Conference.
67. Straub, J. 2014. Detection of Small Targets and their Characterization Based on their Formation using an Image Feature Network-Based Object Recognition Algorithm. Proceedings of the SPIE Defense + Security Conference.
66. Straub, J. 2014. Evaluation and Prioritization of Scientific Data Based on Its Level of Support or Refutation of an Experimental Thesis. Proceedings of the SPIE Sensing Technology + Applications Conference.
65. Straub, J. 2014. Application of an Image Feature Network-Based Object Recognition Algorithm to Aircraft Detection and Classification. Proceedings of the SPIE Defense + Security Conference.
64. Straub, J. 2014. Detection of Obscured and Partially Covered Objects using Partial Network Matching and an Image Feature Network-Based Object Recognition Algorithm. Proceedings of the SPIE Defense + Security Conference.
63. Straub, J. 2014. Intelligent Water Drops for Aerospace and Defense Applications. Proceedings of the SPIE Sensing Technology + Applications Conference.
62. Straub, J. 2014. Portability Scenarios for Intelligent Robotic Control Agent Software. Proceedings of the SPIE Sensing Technology + Applications Conference.
61. Straub, J. 2014. Using Artificial Intelligence for Automating Testing of a Resident Space Object Collision Avoidance System on an Orbital Spacecraft. Proceedings of the SPIE Sensing Technology + Applications Conference.
60. Straub, J. 2014. Automating Software Design & Configuration for a Small Spacecraft. Proceedings of the SPIE Sensing Technology + Applications Conference.
59. Straub, J. 2014. Data Storage Management in a Distributed Database with Deterministic Limited Communications Windows Between Data Storage Nodes. Proceedings of the SPIE Defense + Security Conference.
58. Straub, J. 2014. Above the Cloud Computing Orbital Services Distributed Data Model. Proceedings of the SPIE Sensing Technology + Applications Conference.
57. Straub, J. 2014. Profile-Based Autonomous Data Feeding: an Approach to the Information Retrieval Problem in a High Communications Latency Environment. Proceedings of the SPIE Sensing Technology + Applications Conference.
56. Kerlin, S., J. Straub. 2014. Impact of a Revised Standard for Best Practices for Academic, Governmental and Industrial Ground Station Scheduling and Communications Design. Proceedings of the SPIE Sensing Technology + Applications Conference.
55. Straub, J., H. Reza. 2014. The Use of the Blackboard Architecture for a Decision Making System for the Control of Craft with Various Actuator and Movement Capabilities. Proceedings of the International Conference on Information Technology: New Generations.
54. Straub, J. 2014. The Use of 3D Printing to Enable High Altitude Balloon Missions. Proceedings of the 2104 IEEE Aerospace Conference.
53. Straub, J. 2014. Extending the Orbital Services Model beyond Computing, Communications and Sensing. Proceedings of the 2104 IEEE Aerospace Conference.

52. Straub, J., E. Kim. 2013. Characterization of a Simplified Intelligent Water Drop (SIWD) Approach and its Comparison to the Intelligent Water Drop (IWD) Approach. Proceedings of the 25th International Conference on Tools with Artificial Intelligence.
51. Straub, J., C. Bergsrud. 2013. Orbital Position, Transmission Path and Spacecraft Attitude Determination for a Solar Power Spacecraft. Proceedings of the 64th International Astronautical Congress.
50. Bergsrud, C., J. Straub, S. Noghanian. 2013. Constructing a Constellation of 6U CubeSat Solar Power Satellites. Proceedings of the 64th International Astronautical Congress.
49. Bergsrud, C., J. Straub, S. Noghanian, J. Casler. 2013. The Business Case for a Solar Powered Satellite Constellation. Proceedings of the 64th International Astronautical Congress.
48. Straub, J., J. Berk, A. Nervold, C. Korvald. 2013. Application of Collaborative Autonomous Control and the Open Prototype for Educational NanoSats Framework to Enable Orbital Capabilities for Developing Nations. Proceedings of the 64th International Astronautical Congress.
47. Straub, J., J. Berk, A. Nervold, C. Korvald. 2013. OpenOrbiter: Analysis of a Student-Run Space Program. Proceedings of the 64th International Astronautical Congress.
46. Berk, J., J. Straub, A. Nervold. 2013. An Affordable Model for Enduring ISS Mission Operations with Increased Scientific Productivity. Proceedings of the 64th International Astronautical Congress.
45. Torgerson, D., Nervold, A., J. Straub and J. Berk. 2013. Interplanetary Hitchhiking to Support Small Spacecraft Missions Beyond Earth Orbit. Proceedings of the 64th International Astronautical Congress.
44. Berk, J., J. Straub and A. Nervold. 2013. Space Station 2.0: A Public-Private Model for International Space Exploration. Proceedings of the 64th International Astronautical Congress.
43. Bergsrud, C., S. Noghanian, J. Straub. 2013. Space Solar Power as an Enabler for a Human Mission to Mars. The Proceedings of the AIAA Space 2013 Conference.
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41. Straub, J., A. Nervold and J. Berk. 2013. A Curriculum-Integrated Small Spacecraft Program for Interdisciplinary Education. The Proceedings of the AIAA Space 2013 Conference.
40. Straub, J., J. Nordlie, E. Anderson. 2013. Operating Standards for the High Altitude Ballooning Community. Proceedings of the 2013 Academic High Altitude Conference.
39. Straub, J., C. Korvald. 2013. A Review of Online Collaboration Tools Used by the UND OpenOrbiter Program. Proceedings of the Collaborative Online Organizations Workshop at the Autonomous Agents and Multi-Agent Systems (AAMAS) 2013 Conference.
38. Straub, J. 2013. Desktop Warfare: Robotic Collaboration for Persistent Surveillance, Situational Awareness and Combat Operations. Proceedings of the Collaborative Online Organizations Workshop at the Autonomous Agents and Multi-Agent Systems (AAMAS) 2013 Conference.
37. Straub, J. 2013. Spatial Computing in an Orbital Environment: An Exploration of the Unique Constraints of this Special Case to other Spatial Computing Environments. Proceedings of the 2013 Spatial Computing Workshop at the Autonomous Agents and Multi-Agent Systems (AAMAS) 2013 Conference.
36. Straub, J. 2013. Difference Modeling Enhancement of Topographic Super Resolution. Proceedings of the SPIE Defense, Security + Sensing Conference.
35. Huber, J. and J. Straub. 2013. Validating an Artificial Intelligence Human Proximity Operations System with Test Cases. Proceedings of the SPIE Defense, Security + Sensing Conference.
34. Straub, J. 2013. An Onboard Computing System Design for a Remote Sensing CubeSat. Proceedings of the SPIE Defense, Security + Sensing Conference.
33. Straub, J., A. Mohammad, J. Berk, A. Nervold. 2013 Above the Cloud Computing: Creating an Orbital Service Model Using Cloud Computing Techniques. Proceedings of the SPIE Defense, Security + Sensing Conference.
32. Straub, J., R. Marsh, A. Mohammad. 2013. Robotic Disaster Recovery Efforts with Ad-Hoc Deployable Cloud Computing. Proceedings of the SPIE Defense, Security + Sensing Conference.
31. Straub, J. 2013. A Data Collection Decision-Making Framework for a Multi-Tier Collaboration of Heterogeneous Orbital, Aerial and Ground Craft. Proceedings of the SPIE Defense, Security + Sensing Conference.
30. Straub, J., J. Hubber. 2013. Validating a UAV Artificial Intelligence Control System Using an Autonomous Test Case Generator. Proceedings of the SPIE Defense, Security + Sensing Conference.
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28. Torgerson, D., J. Straub, A. Mohammad, C. Korvald, D. Limesand. 2013. An Open-Source Scheduler for Small Satellites. Proceedings of the SPIE Defense, Security + Sensing Conference.

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26. Bhatia, A., K. Goehner, J. Sand, J. Straub, A. Mohammad and C. Korvald. 2013. Sensor and Computing Resource Management for a Small Satellite. Proceedings of the 2013 IEEE Aerospace Conference.
25. Berk, J., J. Straub and D. Whalen. 2013. The Open Prototype for Educational NanoSats: Fixing the Other Side of the Small Satellite Cost Equation. Proceedings of the 2013 IEEE Aerospace Conference.
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23. Mohammad, A., E. Grant, J. Straub, R. Marsh and S. Kerlin. 2013. Exposing Multiple User-Specific Data Denominated Products from a Single Small Satellite Data Stream. Proceedings of the 2013 IEEE Aerospace Conference.
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19. Straub, J., R. Fevig, J. Casler and O. Yadav. 2013. Risk Analysis & Management in Student-Centered Spacecraft Development Projects. Proceedings of the 2013 Reliability and Maintainability Symposium.
18. Straub, J. and R. Fevig. 2012. Multi-Tier Planetary Exploration: A New Autonomous Control Paradigm. Proceedings of the AIAA Space 2012 Conference.
17. Straub, J. 2012. Multi-Tier Exploration: An Architecture for Dramatically Increasing Mission ROI. Proceedings of the AIAA Space 2012 Conference.
16. Straub, J. 2012. Reducing Link Budget Requirements with Model-Based Transmission Reduction Techniques. Proceedings of the 26th AIAA/USU Conference on Small Satellites.
15. Straub, J. 2012. Multi-Tier Exploration Concept Demonstration Mission. Proceedings of the 2012 Global Space Exploration Conference.
14. Straub, J. and R. Fevig. 2012. The North Dakota Space Robotics Program: Teaching Spacecraft Development Skills to Students Statewide with High Altitude Ballooning. The Proceedings of the 2012 Academic High Altitude Conference.
13. Straub, J. and R. Fevig. 2012. Formalizing Mission Analysis and Design Techniques for High Altitude Ballooning. The Proceedings of the 2012 Academic High Altitude Conference.
12. Venkataramanasastry, A., J. Straub and R. Fevig. 2012. Delta-V Calculations for Rendezvous with Near-Earth Asteroids. The Proceedings of the CASI ASTRO 2012 Conference.
11. Straub, J. 2012. A Feedback-Trained Autonomous Control System for Heterogeneous Search and Rescue Applications. Proceedings of the SPIE Defense, Security + Sensing 2012 Conference.
10. Straub, J. and R. Fevig. 2012. Earth Impactors: Threat Analysis and Multi-Stage Intervention Mission Architecture. Proceedings of the SPIE Defense, Security + Sensing 2012 Conference.
9. Straub, J. 2012. Cubesats: A Low-Cost, Very High-Return Space Technology. The proceedings of the 2012 Reinventing Space Conference.
8. Straub, J. 2012. Superresolution terrain map enhancement for navigation based on satellite imagery. *P*roceedings of the IS&T/SPIE Electronic Imaging Conference.
7. Trifas, M. and J. Straub. 2012. A comparison of techniques for superresolution evaluation. Proceedings of the IS&T/SPIE Electronic Imaging Conference.
6. Straub, J. and Kim, E. 2012. A Feedback-Trained Robot Task Assignment System. Proceedings of the 17th International Symposium on Artificial Life and Robotics.
5. Straub, J. 2012. Robotic Applications of a Defensible Error-Aware Super-Resolution Technique. Proceedings of the 17th International Symposium on Artificial Life and Robotics.
4. Straub, J. 2011. Evaluation and Comparison of Dempster-Shafer, Weighted Dempster-Shafer and Probability Techniques in Decision Making. Proceedings of the 2011 International Conference on Fuzzy Information and Engineering.
3. Straub, Jeremy. 2011. Collegiate Degree Value: A Global Perspective. In the Proceedings of the 4th International Symposium on Academic Globalization.
2. Straub, Jeremy. 2011. A Review of Spacecraft AI Control Systems. In the Proceedings of the 15th World Multi-Conference on Systemics, Cybernetics and Informatics.
1. Trifas, Monica and Jeremy Straub. 2011. Super Resolution: A Database Driven Inference Approach. In the Proceedings of the 15th World Multi-Conference on Systemics, Cybernetics and Informatics.

Keynote Presentations:

1. Jeremy Straub. Robots in Space. Keynote presentation at the 2016 First Lego League North Dakota Championship Tournament. February 6, 2016.

Presentations at National / International Conferences:

80. Straub, J. 2024. Unlocking Autonomous Attack and Defense Using the Cyber Kill Chain and Explainable AI. EC-Council Hacker Halted Cybersecurity Conference.
79. Straub, J. 2024. AI, Economics, Regulation and Human Flourishing. Mercatus Center at George Mason University Markets and Society Conference: 3rd Annual Conference.
78. Straub, J. 2023. Lightning Talk: Automating testing by implementing ATT&CK using the Blackboard Architecture. MITRE ATT&CK Con 4.0.
77. Straub, J. 2023. Issues with AI Regulation Related to Human Advancement, Prosperity, Trade, and Free Speech. Mercatus Center at George Mason University Markets and Society Conference: 2nd Annual Conference.
76. Straub, J. 2022. Online content labeling: preventing the spread of misinformation without government censorship. Mercatus Center at George Mason University Markets and Society Conference.
75. Straub, J. 2018. Involving Students in Cybersecurity for CI. National Science Foundation Cybersecurity Conference.
74. Straub, J. 2017. Cyber-Security for Autonomous Vehicles: Problems & Solutions. Autonomous Vehicle Test & Development Symposium USA.
73. Straub, J. 2016. Quality Assurance and Multiple Types of 3D Printing. Presented at the 2016 RAPID Conference.
72. Wegerson, M., J. Straub. 2016. The use of a System of Systems design methodology, novel attitude determination and control system, and low-cost fabrication techniques to enable CubeSat development. Presented at the 2016 CalPoly CubeSat Workshop.
71. Kuehn, M., J. Estad, J. Straub, T. Stokke, S. Kerlin. 2016. An Expert System for the Prediction of Student Performance in an Initial Computer Science Course. Abstract Published in the Proceedings of the 47th ACM Technical Symposium on Computer Science Education.
70. Straub, J. 2015. Secure Search for Data in an Orbital Service Model Environment. Presented at the 10th International Workshop on Information Search, Integration, and Personalization.
69. Straub, J. 2015. CyberSecurity for Federated and Fractionated Satellite Systems. Presented at the 2015 Federated Satellite Services Workshop.
68. Russell, M., J. Straub. 2015. Software Design for an Intelligent Attitude Determination and Control System. 2015. Presented at the Small Spacecraft Communications Workshop at the 29th Annual AIAA/USU Conference on Small Satellites.
67. Jackson, S., S. Kerlin, J. Straub. 2015. Research into a Novel Cryptographic Algorithm for Securing Communications. Presented at the Small Spacecraft Communications Workshop at the 29th Annual AIAA/USU Conference on Small Satellites.
66. Straub, J. 2015. Above the Cloud Computing: An Orbital Services Approach to Space Missions. Presented at the Small Spacecraft Communications Workshop at the 29th Annual AIAA/USU Conference on Small Satellites.
65. Straub, J. 2015. A Brief Discussion of the Open Prototype for Educational NanoSats (OPEN). Presented at the Open Small Satellite Hardware and Open-Source Software Workshop at the 29th Annual AIAA/USU Conference on Small Satellites.
64. Jackson, S., S. Kerlin, J. Straub. 2015. Testing a Novel Cryptosystem for Use in Securing Small Satellite Communications. Presented at the Research Experience for Undergraduates Poster Session at the AIAA/USU Conference on Small Satellites.
63. Russell, M., J. Straub. 2015. Software Design for an Intelligent Attitude Determination and Control System. Presented at the Research Experience for Undergraduates Poster Session at the AIAA/USU Conference on Small Satellites.
62. Hamlet, C., M. Russell, J. Straub, S. Kerlin. 2015. Improving Satellite Security Through Incremental Anomaly Detection on Large, Static Datasets. Presented at the Research Experience for Undergraduates Poster Session at the AIAA/USU Conference on Small Satellites.
61. Vacek, J., J. Straub. 2014. Legal Implications of Remote Sensing by Drones for Government, Commercial, and Private Operators. Accepted for presentation at the Next Generation Drones Conference.
60. Straub, J. 2014. Technical and Policy Considerations of Autonomous UAVs. Accepted for presentation at the Next Generation Drones Conference.
59. Straub, J. 2015. First Look at Results from a Nation-Wide Survey Regarding Student CubeSat Project Participation Benefits. Presented at the 2015 CalPoly Spring CubeSat Workshop.

58. Straub, J. 2014. The Critical Role of CubeSat Spacecraft in A Multi-Tier Mission for Mars Exploration. Presented at the Mars CubeSat/NanoSat Workshop.
57. Wegerson, M., J. Straub, S. Noghanian, R. Marsh. 2014. Development of an Open Source Software Defined Radio. Presented at the 6th European CubeSat Symposium.
56. Straub, J. 2014. An Overview of the Orbital Services Model. Presented at the Second Federated Satellite Systems Workshop.
55. Straub, J. 2013. Revisiting CubeSat Super-Resolution: Analysis of the Use of Aerial and High-Altitude Balloon Data to Assess Orbital Performance. Presented at the Software Workshop at the 28th Annual AIAA/USU Conference on Small Satellites.
54. Kading, B., J. Straub. 2013. Consideration of Deployable Structures and their Utility for Increasing Spacecraft Communications Capabilities and Versatility. Presented at the Communications Workshop at the 28th Annual AIAA/USU Conference on Small Satellites.
53. Straub, J. 2013. Consideration of the Impact of Space Solar Power Testing on Small Satellite Missions. Presented at the Communications Workshop at the 28th Annual AIAA/USU Conference on Small Satellites.
52. Bergsrud, C., J. Straub. 2014. A Lunar Mission to Create a Constellation of Space Solar Power Satellites as a Precursor to Industrial Establishment, Resource Extraction, and Colonization. Presented at the 11th International Planetary Probe Workshop.
51. Bergsrud, C., J. Straub. 2014. A Mission to Create a Constellation of Space Solar Power Satellites as an Enabler for Martian Exploration Activities. Presented at the 11th International Planetary Probe Workshop.
50. Straub, J. 2014. Towards Autonomy for Planetary Science: Scientist Characteristics and Autonomy Acceptance. Presented at the 11th International Planetary Probe Workshop.
49. Straub, J. 2014. Deep Space Orbital Service Model for Virtual Planetary Science Missions. Presented at the 11th International Planetary Probe Workshop.
48. Straub, J. 2014. Autonomous Control for Space Solar Power for a Planetary Science Mission. Presented at the 11th International Planetary Probe Workshop.
47. Straub, J., S. Haque, C.K. Dinelli 2014. Considering the Educational Benefits of a CubeSat Program. Presented at the Spring 2014 CubeSat Developers' Workshop.
46. Nordlie, J., J. Straub, C. Theisen, R. Marsh. 2014. Solar Ballooning: A Low-Cost Alternative to Helium Balloons for Small Spacecraft Testing. Presented at the AIAA Science and Technology Forum and Exposition (SciTech 2014).
45. Straub, J. 2014. The Design of the Open Prototype for Educational NanoSats. Presented at the AIAA Science and Technology Forum and Exposition (SciTech 2014).
44. Straub, J. 2014. OpenOrbiter Small Spacecraft Development Program Educational Benefits. Presented at the AIAA Science and Technology Forum and Exposition (SciTech 2014).
43. Straub, J. 2013. A Control System for Space Solar Power. Presented at the Space Solar Power Workshop 2013.
42. Bergsrud, C., J. Straub and S. Noghanian. 2013. The Road to a Space Solar Power CubeSat in North Dakota. Presented at the International Student Zone at the 2013 International Astronautical Congress.
41. Straub, J. 2013. Advancements in Data Optimization Based on Model Comparisons. Presented at the Communications Workshop at the 27th Annual AIAA/USU Conference on Small Satellites.
40. Straub, J., J. Berk, J. Nordlie, R. Marsh. 2013. Creating Low-Cost 'BalloonSats' for STEM Education with 3D Printing. Presented at the 2013 Academic High Altitude Conference.
39. Straub, J. 2013. Acceptance of the Autonomy Required for Interplanetary Small Spacecraft Missions by the Scientists who will use the Data. Presented at the 2013 Interplanetary Small Satellite Conference.
38. Straub, J., J. Berk. 2013. OPEN Beyond Orbit: Using the Designs from the Open Prototype for Educational NanoSats Outside of Earth Orbit. Presented at the 2013 Interplanetary Small Satellite Conference.
37. Straub, J. 2013. Enabling Interplanetary Small Spacecraft Science Missions with Model Based Data Analysis. Presented at the 2013 Interplanetary Small Satellite Conference.
36. Straub, J., J. Berk, N. Long, T. Hill. 2013. Investigating Uranus with GEORGE: The Gap-Based Expanding Outer Region Geophysical Explorer Mission. Presented at the International Planetary Probe Workshop.
35. Straub, J., T. Hill, J. Berk, N. Long. 2013. Uranian Moon Investigation with "Hitchhiker" Small Spacecraft. Presented at the International Planetary Probe Workshop.
34. Straub, J. 2013. The Multi-Tier Mission Architecture and a Different Approach to Entry, Descent and Landing. Presented at the International Planetary Probe Workshop.
33. Straub, J., J. Vacek. 2013. Escaping Earth's Orbit but not Earthly Regulations: A Discussion of the Implications of ITAR, EAR, FCC Regulations and Title VII on Interplanetary CubeSats and CubeSat Programs. Presented at the 2nd Annual Interplanetary CubeSat Workshop.

32. Nervold, A., J. Berk, J. Straub. 2013. STEMSat: An ISS CubeSat Program Based on Spare Parts. Presented at the Spring 2013 CubeSat Workshop.
31. Bergsrud, C., J. Straub. 2013. A 6-U Commercial Constellation for Space Solar Power Supply to Other Spacecraft. Presented at the Spring 2013 CubeSat Workshop.
30. Straub, J., J. Vacek. 2013. Do we have an ITAR Problem: A Review of the Implications of ITAR and Title VII on Small Satellite Programs. Presented at the Spring 2013 CubeSat Workshop.
29. Straub, J., C. Korvald. 2013. A Report on Small Spacecraft Development Work at the University of North Dakota. Presented at the Spring 2013 CubeSat Workshop.
28. Straub, J. A. Mohammad. 2013. OPEN and OpenOrbiter: a Needs-Responsive Solution for the Small Satellite Community. Presented at the Spring 2013 CubeSat Workshop.
27. Sand, J., K. Goehner, C. Korvald, J. Berk, J. Straub. 2013. Payload Processing Aboard an Open Source Software CubeSat. Presented at the Spring 2013 CubeSat Workshop.
26. Brewer, J., B. Badders, J. Berk, J. Straub. 2013. Work To-Date on Mechanical Design for an Open Hardware Spacecraft. Presented at the Spring 2013 CubeSat Workshop.
25. Straub, J., A. Venkataramanasastry. 2013. A Space Debris-Enhanced Intervention Mission to a Near-Earth Asteroid. Presented at the 44th Lunar and Planetary Science Conference.
24. Berk, J., J. Straub, A. Nervold, D. Whalen. 2013. Space Station 2.0: A Transformational Architecture for Space Development. Presented at the 44th Lunar and Planetary Science Conference.
23. Badders, B., T. Hill, J. Straub, J. Berk, N. Long, J. Schiralli. 2013. Small Spacecraft Exploration of Uranian Moons. Presented at the 44th Lunar and Planetary Science Conference.
22. Hill, T., J. Berk, J. Straub, J. Schiralli, B. Badders, N. Long. 2013. Deep Space Planetary Exploration Using Commercially Available Solar Electric Propulsion. Presented at the 44th Lunar and Planetary Science Conference.
21. Straub, J., J. Berk, A. Nervold, A. Mohammad, C. Korvald, D. Torgerson. 2013. Open Orbiter: A Platform for Enabling Planetary Science. Presented at the 44th Lunar and Planetary Science Conference.
16. Straub, J. 2012. Autonomy Considerations for Ultra-Long Duration Voyages. Presented at the 2012 100YSS Public Symposium.
15. Straub, J. and R. Fevig. 2012. Interstellar Distance Education. Presented at the 2012 100YSS Public Symposium.
14. Whalen, D., M. Hynes, J. Straub and R. Fevig. 2012. Advancing Small Satellite Mission Capabilities Through the Establishment of a Robust NanoSat Communications Network. Presented at the 2012 Summer CubeSat Workshop.
13. Straub, J., R. Fevig, T. Borzych, C. Church, C. Holmer, M. Hynes, A. Komus, P. Wren. 2012. From SmallSat to CubeSat: Reducing Mass, Size and Cost. Presented at the 2012 Summer CubeSat Workshop.
12. Straub, J., R. Fevig, T. Borzych, C. Church, C. Holmer, M. Hynes, A. Komus. 2012. From SmallSat to 6U CubeSat: A Case Study in Size and Mass Reduction. Presented at the ACSER 6U CubeSat Low Cost Space Missions Workshop.
11. Fevig, R., J. Casler and J. Straub. 2012. Blending Research and Teaching Through Near-Earth Asteroid Resource Assessment. Presented at the Space Resources Roundtable and Planetary & Terrestrial Mining Sciences Symposium.
10. Straub, J. 2012. Increasing Interplanetary CubeSat Science Return with Model Based Transmission Reduction. Presented at the 1st Interplanetary CubeSat Workshop.
9. Straub, J., R. Fevig, T. Borzych, C. Church, C. Holmer, A. Komus, R. Lilko and T. Perrin. 2012. NEOSat: An Architecture for Small Interplanetary Craft Development. Presented at the 43rd Lunar and Planetary Science Conference.
8. Straub, J. and R. Fevig. 2012. Achieving Educational Outcomes Through Cubesat Curriculum Incorporation. Presented at the 9th Annual Cubesat Workshop.
7. Straub, J. 2012. A High-Resolution Cubesat Earth Remote Sensing Satellite Design. Presented at the 9th Annual Cubesat Workshop.
6. Straub, J. 2012. A Role for Cubesats in a Multi-Tier Exploration / Reconnaissance Architecture. Presented at the 9th Annual Cubesat Workshop.
5. Fevig, R., J. Casler, J. Straub, R. Lilko, C. Church. 2012. Blending Research and Teaching Through Small Spacecraft Development Projects. The 2012 European Cubesat Symposium.
4. Straub, J. 2012. Cubesat Integration into a Multi-Tier Exploration Framework. The 2012 European Cubesat Symposium.
3. Straub, J. 2012. Cubesat Swarms: a Control Architecture for Cubesat Operations. The 2012 European Cubesat Symposium.
2. Straub, J. and R. Fevig. 2012. A NEO Assessor Mission Cubesat Precursor. The 2012 European Cubesat Symposium.
1. Straub, J. and M. Trifas. 2012. Super-Resolution and its Evaluation in Entertainment Applications. In the 2012 IEEE International Conference on Emerging Signal Processing Applications.

Papers in the Proceedings of Local/Regional Conferences:

5. Jones, A., J. Straub. 2018. Student Benefits from Participation in a NASA-mentored 3D Printing Research Project. Proceedings of the 2018 Midwest Instructional Computing Symposium.
4. Straub, J. 2015. Involvement of Undergraduate Students in Research: A Comparison of Course Research Components, Paid Research Activities, Student-Led Projects and Independent / Directed Study Courses. Proceedings of the 2015 Midwest Instructional Computing Symposium.
3. Straub, J., S. Kerlin, T. Stokke. 2014. How We're Changing Computer Science Education and How You Can Help. Proceedings of the 2014 Midwest Instructional Computing Symposium.
2. Straub, J., S. Kerlin. 2014. An Experiential Education Approach to Teaching Software Project Management. Proceedings of the 2014 Midwest Instructional Computing Symposium.
1. Straub, J., J. Berk, C. Korvald. 2013. OpenOrbiter: a Student Space Program. Proceedings of the 2013 Midwest Instructional Computing Symposium.

Presentations at Local/Regional Conferences:

167. Straub, J. 2024. "AI Policy: A National and Regional Objective." Sheila and Robert Challey Institute for Global Innovation and Growth's Human Progress and Flourishing Workshop.
166. Straub, J. 2024. "Overview of AI Development Efforts and the Opportunities They Provide." ND EPSCoR Annual Conference.
165. Straub, J. 2024. "Artificial Intelligence, Cybersecurity & Biomedical Computation." ND EPSCoR Bio & Biomedical Computation Networking Seminar
164. Straub, J. 2024. "AI Threats and Promise in Cybersecurity: The Next Five Years" at BSides Fargo 2024
163. Straub, J. 2024. "Generative AI's Role in Workforce Training and Formal Education." ITEN WIRED | TechNet CyberCoast Conference.
162. Straub, J. 2024. "NDCAE School Lightening Talk." CyberCon at Bismarck State College.
161. Straub, J. 2024. "Artificial Intelligence: The Cybersecurity Professional's Friend or Foe?" CyberCon at Bismarck State College.
160. Straub, J. 2024. "Cybersecurity in emergency management and managing cybersecurity emergencies." North Dakota Emergency Management Association.
159. Straub, J. 2024. "Hybrid AI May Hold the Key to the Next Generation of AI Capabilities." Midwest Machine Learning Symposium.
158. Straub, J. 2023. Presentation on Generative AI to the North Dakota Courts judges and judicial staff.
157. Straub, J. 2023. AI, Quantum Computing and Their Impacts on Security and Society. Bismarck State College CyberCon Conference.
156. Straub, J. 2023. AI and cybersecurity presentation at the North Dakota Fall 2023 ND General Education Summit.
155. Straub, J. 2020. Lemons to Lemonade: Refining an Active Learning Course for Delivery During a Pandemic. ASEE North Midwest Section Annual Conference.
154. Bernard, B., J. Straub. 2020. Integrating Hybrid-Flexible Course Delivery with General Education Computer Science Courses. ASEE North Midwest Section Annual Conference.
153. Ajjimaporn, P., J. Straub. 2020. Development and Assessment of Courses in Defensive Security and Ethical Hacking. ASEE North Midwest Section Annual Conference.
152. Straub, J. 2020. The Impact of Foreign Influence and CyberAttacks on Main Street and State and Local Governments. BSC CyberCon.
151. Straub, J. 2019. Alphabet Soup - Sorting Through the Cybersecurity Credentials to Find Value. BSC CyberCon.
150. Straub, J. 2018. Cybersecurity. Drone Focus Conference.
148. Straub, J. 2016. Spring 2016 Update on the OpenOrbiter CubeSat Project. Presented at the 4th Annual Space Robotics Forum.
148. Wegerson, M., M. Partridge, N. Crocker, D. Schindele, B. Friend, L. Lewis, B. Johnson, J. Straub, R. Marsh. 2016. Work on Developing an Intelligent Attitude Determination and Control System (ADCS). Presented at the 4th Annual Space Robotics Forum.
147. Wegerson, M., J. Straub, R. Marsh. 2016. Design and Development of a Low-Cost Radio for an OPEN CubeSat. Presented at the 4th Annual Space Robotics Forum.
146. Leake, S., T. McGuire, M. Hirsch, M. Parsons, J. Straub, S. Kerlin. 2016. Developing a Large Solar Collector for Solar Light Energy. Presented at the 4th Annual Space Robotics Forum.
145. McGuire, T., M. Hirsch, M. Parsons, S. Leake, J. Straub, S. Kerlin. 2016. Ongoing Work on an In-Space 3D Printer. Presented at the 4th Annual Space Robotics Forum.

144. Hlas, M., J. Straub. 2016. An Autonomous System for Satellite Debris Avoidance. Presented at the UND Department of Computer Science Capstone Poster Session.
143. Straub, J. 2016. Policy & Ethics Questions Posed by 'Big Data' Use. 'Lightning Talk' Presented at the UND Early Career Big Data Summit.
142. McGuire, T., M. Hirsch, M. Parsons, S. Leake, J. Straub, E. Kim. 2016. Design for an In-Space 3D Printer. Presented at the University of North Dakota Graduate School Scholarly Forum.
141. Parsons, M., T. McGuire, M. Hirsch, S. Leake, J. Straub, S. Kerlin. 2016. National Defense 3D Space Printing. Presented at the University of North Dakota Graduate School Scholarly Forum.
140. Hirsch, M., T. McGuire, S. Leake, M. Parsons, J. Straub, S. Kerlin. 2016. In-Space 3D Printing Scientific Remote Sensing Missions. Presented at the University of North Dakota Graduate School Scholarly Forum.
139. Leake, S., T. McGuire, M. Hirsch, M. Parsons, J. Straub, S. Kerlin. 2016. Implementation of a Large Solar Collector for Solar Light Energy. Presented at the University of North Dakota Graduate School Scholarly Forum.
138. Cao, G., C. Soderstrom, J. Straub, E. Kim. 2016. Automatic Scheduling for Unmanned Aerial System. Presented at the University of North Dakota Graduate School Scholarly Forum.
137. Vovk, B., D. Yang, S. Bakke, J. Straub, E. Kim. 2016. Artificial Intelligence in Sentry Robotics. Presented at the University of North Dakota Graduate School Scholarly Forum.
136. Tomlin, L., B. Lureen, J. Straub, E. Kim. 2016. Pattern Recognition in a Video Game Battle Simulation. Presented at the University of North Dakota Graduate School Scholarly Forum.
135. Lawman, A., J. Straub, E. Kim. 2016. A Predictive YouTube Data Miner. Presented at the University of North Dakota Graduate School Scholarly Forum.
134. Kasprick, R., J. Hoffman, J. Straub, E. Kim. 2016. Cyber Security Artificial Intelligence Expert System. Presented at the University of North Dakota Graduate School Scholarly Forum.
133. Schnabel, D., J. Wang, J. Straub, E. Kim. 2016. Artificial Intelligence in an Automated Vehicle Starter. Presented at the University of North Dakota Graduate School Scholarly Forum.
132. Holland, A., W. Lyford, J. Pearson, J. Straub, S. Kerlin. 2016. Use of Power Transmission to UAV. Presented at the University of North Dakota Graduate School Scholarly Forum.
131. Holland, A., W. Lysford, J. Pearson, J. Straub, S. Kerlin. 2016. Origami Style Solar Panels with Development of Dual Purpose Integrated Phased Array Communications System. Presented at the University of North Dakota Graduate School Scholarly Forum.
130. Straub, J. 2016. An Update on UND's OpenOrbiter CubeSat. Presented at the University of North Dakota Graduate School Scholarly Forum.
129. Hlas, M., J. Straub. 2016. Autonomous Navigation and Control of Unmanned Aircraft in the National Airspace. Presented at the University of North Dakota Graduate School Scholarly Forum.
128. Hlas, M., J. Straub. 2016. Spacecraft Autonomous Debris Avoidance System. Presented at the University of North Dakota Graduate School Scholarly Forum.
127. Klein, L., T. Plante, B. Kading, J. Straub, D. Whalen. 2015. Consideration of the Use of an Origami Style Solar Panel Array for a Space Solar Power Generation Satellite. Presented at the North Dakota EPSCoR State Conference.
126. Cao, X., B. Zhang, J. Straub, E. Kim. 2015. A Behavior-Reactive Autonomous System to Identify Pokemon Characters. Presented at the North Dakota EPSCoR State Conference.
125. Johnson, G., R. Killbride, J. Straub, E. Kim. 2015. Supervisory Control and Data Acquisition (SCADA) Control Optimization. Presented at the North Dakota EPSCoR State Conference.
124. Bina, C., J. Straub, R. Marsh. 2015. Scheduling Algorithm Development for an Open Source Software Spacecraft. Presented at the North Dakota EPSCoR State Conference.
123. Ajjimaporn, P., J. Straub, S. Kerlin. 2015. Assessment of the Impact of Clothing and Environmental Conditions on Visible Light 3D Scanning. Presented at the North Dakota EPSCoR State Conference.
122. Estad, J., M. Kuehn, J. Straub, E. Kim. 2015. Pre and Post Survey-Based Prediction of Results from Student Characteristics. Presented at the North Dakota EPSCoR State Conference.
121. Chaieb, S., J. Straub, D. Whalen. 2015. An Electrical Power System for an OPEN Hardware CubeSat. Presented at the North Dakota EPSCoR State Conference.
120. Kading, B., J. Straub, T. Plante, A. Holland, J. Forbord, L. Klein, D. Whalen. 2015. Consideration of the Use of a Space Solar Power Satellite System for a Manned Mars Mission. Presented at the North Dakota EPSCoR State Conference.
119. Kilbride, R., J. Straub, E. Kim. 2015. SCADA System Security: Accounting for Operator Error and Malicious Intent. Presented at the North Dakota EPSCoR State Conference.
118. Hollman, S., D. Limesand, J. Straub, S. Kerlin. 2015. Web-Based Job Management System for Three-Dimensional Printing and Scanning. Presented at the North Dakota EPSCoR State Conference.

117. Hlas, M., J. Straub, E. Kim. 2015. Autonomous Navigation and Control of Unmanned Aerial Systems in the National Airspace. Presented at the North Dakota EPSCoR State Conference.
116. McGuire, T., S. Leake, M. Parsons, M. Hirsch, B. Kading, J. Straub, D. Whalen. 2015. CubeSat Deployable Solar Panel System. Presented at the North Dakota EPSCoR State Conference.
115. Holland, A., T. Plante, J. Forbord, L. Klein, B. Kading, J. Straub, D. Whalen. 2015. Design Concept for a Power Generating Satellite for a Manned Mars Mission. Presented at the North Dakota EPSCoR State Conference.
114. Plante, T., B. Kading, A. Holland, J. Forbord, J. Straub, L. Klein, D. Whalen. 2015. Design and Analysis of a Mars Supply Spacecraft. Presented at the North Dakota EPSCoR State Conference.
113. Kerbaugh, C., A. McDermott, J. Straub, E. Kim. 2015. Pattern Recognition and Expert Systems for Microwave Wireless Power Transmission Failure Prevention. Presented at the North Dakota EPSCoR State Conference.
112. McDermott, A., C. Kerbaugh, J. Straub, E. Kim. 2015. Pattern Recognition for Detecting Failures in Space Solar Power Systems. Presented at the North Dakota EPSCoR State Conference.
111. Whitney, T., J. Straub, E. Kim. 2015. Medical Diagnosis Expert System. Presented at the North Dakota EPSCoR State Conference.
110. Zhang, B., X. Cao, J. Straub, E. Kim. 2015. Artificial Intelligence Animal Recognition System. Presented at the North Dakota EPSCoR State Conference.
109. Kuehn, M., J. Estad, J. Straub, E. Kim. 2015. Course Outcome Prediction Using an Expert System. Presented at the North Dakota EPSCoR State Conference.
108. McDermott, A., C. Kerbaugh, J. Straub. 2015. Detecting Failures in Space Solar Power Systems with Pattern Recognition. Presented at the Third Annual North Dakota Space Robotics Forum.
107. Kading, B., J. Straub, R. Marsh. 2015. Design of a 1-U CubeSat Structure for the Open Prototype for Educational NanoSats. Presented at the Third Annual North Dakota Space Robotics Forum.
106. Bina, C., J. Straub, R. Marsh. 2015. Considering Scheduling Algorithms for an Open Source Software Spacecraft. Presented at the Third Annual North Dakota Space Robotics Forum.
105. Kerbaugh, C., A. McDermott, J. Straub. 2015. An Expert System for Microwave Wireless Power Transmission Failure Prevention. Presented at the Third Annual North Dakota Space Robotics Forum.
104. Limesand, D., T. Whitney, J. Straub, R. Marsh. 2015. Work Done on the Operating Software for OpenOrbiter. Presented at the Third Annual North Dakota Space Robotics Forum.
103. Straub, J., R. Marsh, S. Kerlin. 2015. The Use of Additive Manufacturing for CubeSat Design and Testing. Presented at the Third Annual North Dakota Space Robotics Forum.
102. Straub, J., J. Berk, J. Nordlie, R. Marsh. 2015. The Use of Low-Cost 'BalloonSats ' for STEM Education with 3D Printing. Presented at the Third Annual North Dakota Space Robotics Forum.
101. Straub, J., R. Marsh. 2015. Update on the Progress of the 1-U OPEN CubeSat Development. Presented at the Third Annual North Dakota Space Robotics Forum.
100. Wegerson, M., M. Partridge, N. Crocker, D. Schindele, B. Friend, L. Lewis, B. Johnson, J. Straub, R. Marsh. 2015. Designing an Intelligent Attitude Determination and Control System (ADCS). Presented at the Third Annual North Dakota Space Robotics Forum.
99. Wegerson, M., J. Straub, R. Marsh. 2015. An Onboard Distributed Multiprocessing System for a CubeSat Spacecraft Created from GumStix Computer-on-Module Units. Presented at the Third Annual North Dakota Space Robotics Forum.
98. Wegerson, M., J. Straub, R. Marsh. 2015. Creating a Low-Cost Radio for an OPEN CubeSat. Presented at the Third Annual North Dakota Space Robotics Forum.
97. Hlas, M., J. Straub, R. Marsh. 2015. A Software Defined Radio Communications System for a Small Spacecraft. Presented at the Third Annual North Dakota Space Robotics Forum.
96. Hlas, M., J. Straub, R. Marsh. 2015. Development of a Communication System for an Open-Source Software / Open Hardware Small Satellite. Presented at the 2015 Midwest Instructional Computing Symposium.
95. Limesand, D., J. Straub, S. Kerlin. 2015. Three-Dimensional Printing and Scanning Web-Based Job Management System. Presented at the 2015 Midwest Instructional Computing Symposium.
94. Bina, C., J. Straub, R. Marsh. 2015. Selection of a Scheduling Algorithm for Control of a CubeSat-Class Open Source Spacecraft. Presented at the 2015 Midwest Instructional Computing Symposium.
93. Straub, J., R. Marsh. 2015. Update on the Development of a 1-U CubeSat at the University of North Dakota. Presented at the University of North Dakota Graduate School Scholarly Forum.
92. McGuire, T., S. Leake, M. Parsons, M. Hirsch, B. Kading, J. Straub, D. Whalen. 2015. Deployable Solar Panels for an Open Hardware CubeSat. Presented at the University of North Dakota Graduate School Scholarly Forum.
91. Limesand, D., S. Hollman, J. Straub, S. Kerlin. 2015. Three-Dimensional Printing and Scanning Web-Based Job Management System. Presented at the University of North Dakota Graduate School Scholarly Forum.

90. Hlas, M., J. Straub, R. Marsh. 2015. The Creation of a Communication System for a Small Satellite at the University of North Dakota. Presented at the University of North Dakota Graduate School Scholarly Forum.
89. Bina, C., J. Straub, R. Marsh. 2015. Scheduling Algorithm Development for an Open Source Software Spacecraft. Presented at the University of North Dakota Graduate School Scholarly Forum.
88. Plante, T., J. Forbord, A. Holland, L. Klein, B. Kading, J. Straub. 2015. Design and Development of a Payload Area Sub-Structure for a 1-U CubeSat. Presented at the University of North Dakota Graduate School Scholarly Forum.
87. Chaieb, S., M. Wegerson, J.Straub, R. Marsh, D. Whalen. 2015. Electrical Power System for an OPEN Hardware CubeSat. Presented at the University of North Dakota Graduate School Scholarly Forum.
86. Ydstie, B., T. Novacek, B. Kading, J. Straub, S. Kerlin. 2015. Development of a Low-Cost Portable 3D Scanner Unit Using Visible Light Cameras. Presented at the University of North Dakota Graduate School Scholarly Forum.
85. Kading, B., J. Straub, R. Marsh. 2015. Open Prototype for Educational NanoSats CubeSat Structural Design. Presented at the University of North Dakota Graduate School Scholarly Forum.
84. Kading, B., M. Kegley, T. Delzer, J. Straub, S. Kerlin. 2015. Development of a Metal-Printing 3D Printer at the University of North Dakota. Presented at the University of North Dakota Graduate School Scholarly Forum.
83. Wegerson, M., J. Straub, R. Marsh. 2015. Design of an Onboard Distributed Multiprocessing System for a CubeSat Spacecraft Using GumStix Computer-on-Module Units. Presented at the University of North Dakota Graduate School Scholarly Forum.
82. Wegerson, M., J. Straub, R. Marsh. 2015. Hardware Design for an Intelligent Attitude Determination and Control System. Presented at the University of North Dakota Graduate School Scholarly Forum.
81. Wegerson, M., J. Straub, R. Marsh. 2015. A Low-Cost Radio for an OPEN CubeSat. Presented at the University of North Dakota Graduate School Scholarly Forum.
80. Kading, B., J. Straub, R. Marsh. 2014. Mechanical Design and Analysis of a 1-U CubeSat. Presented at the North Dakota EPSCoR State Conference.
79. Shahukhal, S., B. Kading, J. McClure, J. Straub, C. Bergsrud, J. Neubert. 2014. Mechanical and Thermal Contributions Towards the Micro-Sized SunSat Spacecraft. Presented at the North Dakota EPSCoR State Conference.
78. Lovin, J., C. Bina, J. Straub, E. Kim. 2014. Task Scheduling Problem: Using the Most Constrained Variable Algorithm to Maximize the Value of Tasks Run in the Schedule. Presented at the North Dakota EPSCoR State Conference.
77. Carpenter, B., B. Weichel, K. Clarke, J. Straub, E. Kim. 2014. Constraint Satisfaction Problem: A Generic Scheduler. Presented at the North Dakota EPSCoR State Conference.
76. Sandtveit, C, D. Winger, J. Straub, E. Kim. 2014. Dynamic Task Scheduling Problem: Greedy Knapsack Solution. Presented at the North Dakota EPSCoR State Conference.
75. Limesand, D., C. Korvald, J. Straub, R. Marsh. 2014. Update on the Operating Software for OpenOrbiter. Presented at the North Dakota EPSCoR State Conference.
74. Bergsrud, C., J. Straub, J. McClure, S. Noghanian. 2014. Microwave Wireless Power Transmission System for a Small Spacecraft. Presented at the North Dakota EPSCoR State Conference.
73. Renford, N., I. Andres, J. Straub, S. Kerlin. 2014. Classroom Polling Software for Use with Mobile and Web-Based Devices. Presented at the North Dakota EPSCoR State Conference.
72. Wegerson, M., J. Straub, S. Noghanian, R. Marsh. 2014. Advancement of the Software Defined Radio (SDR) for the OpenOrbiter Project. Presented at the North Dakota EPSCoR State Conference.
71. Straub, J., T. Stokke, S. Kerlin. 2014. Towards an Analytical Framework for Evaluating Student Learning in Computer Science Courses. Presented at the North Dakota EPSCoR State Conference.
70. Winger, D., C. Sandtveit, J. Straub, E. Kim. 2014. Medical Rate Setting: Multi-Curve Approximation and Projection. Presented at the North Dakota EPSCoR State Conference.
69. Bina, C., J. Lovin, J. Straub, E. Kim. 2014. Medical Rate Setting Problem: Using the Hill-Climbing Search to Maximize Health Care Provider Profit. Presented at the North Dakota EPSCoR State Conference.
68. Huhn, J., A. Lewis, C. Korvald, J. Straub, S. Kerlin. 2014. Development of a Ground Station for the OpenOrbiter Spacecraft. Presented at the North Dakota EPSCoR State Conference.
67. Bergsrud, C., J. Straub, R. Bernaciak, S. Shahukhal, B. Kading, K. Williams, H. Salehfar, J. McClure, J. Casler, D. Whalen, E. Becker, S. Noghanian. 2014. The Development of a Nanosatellite-class SunSat at the University of North Dakota. Presented at the University of North Dakota Graduate School Scholarly Forum.
66. Straub, J. 2014. An Overview of Current Progress on the OpenOrbiter Project. Presented at the University of North Dakota Graduate School Scholarly Forum.
65. Wegerson, M., J. Straub. 2014. Evolution of the Software Defined Radio for the OpenOrbiter Project. Presented at the University of North Dakota Graduate School Scholarly Forum.

64. Hlas, M., C. Littlebina, D. Limesand, C. Korvald, J. Straub. 2014. OpenOrbiter Operating System Components: Development of Software for Communications and Power Management. Presented at the University of North Dakota Graduate School Scholarly Forum.
63. Straub, J. 2014. An Overview of the Hardware Designs of the OpenOrbiter Program. Presented at the University of North Dakota Graduate School Scholarly Forum.
62. Straub, J. 2014. Educational Benefits to Student Participants in Small Spacecraft Development. Presented at the University of North Dakota Graduate School Scholarly Forum.
61. Straub, J., J. Vacek. 2014. The Path to Regulation of Small Unmanned Aerial Vehicles in the United States. Presented at the University of North Dakota Graduate School Scholarly Forum.
60. Huhn, J., A. Lewis. 2014. OpenOrbiter Ground Station. Presented at the University of North Dakota Graduate School Scholarly Forum.
59. Korvald, C., J. Straub. 2014. Software Group of the OpenOrbiter Project. Presented at the University of North Dakota Graduate School Scholarly Forum.
58. Renford, N., J. Straub, S. Kerlin. 2014. Phone and Web Based Clicker Project. Presented at the University of North Dakota Graduate School Scholarly Forum.
57. Peterson, C., J. Wang, P. Ajjimaporn, J. Straub, S. Kerlin. 2014. A Raspberry Pi-Based 3D Scanner. Presented at the University of North Dakota Graduate School Scholarly Forum.
56. Nordlie, J., J. Straub, C. Theisen, R. Marsh. 2014. The Use of Solar Balloons at UND as a Low-Cost Alternative to Helium Balloons for Small Spacecraft Testing and STEM Education. Presented at the University of North Dakota Graduate School Scholarly Forum.
55. Limesand, D., C. Korvald, J. Straub, R. Marsh. 2014. OpenOrbiter Operating Software. Presented at the University of North Dakota Graduate School Scholarly Forum.
54. Leben, T., J. Straub, R. Marsh. 2014. A Low-Cost GPS/Inertial Position Determination System for High Altitude Balloons, Spacecraft and Unmanned Aerial Systems. Presented at the University of North Dakota Graduate School Scholarly Forum.
53. Straub, J., R. Marsh. 2014. The Use of the ROOFSAT for Computer Science and Engineering Education. Presented at the University of North Dakota Graduate School Scholarly Forum.
52. Karboviak, K., D. Limesand, M. Hlas, E. Berg, C. Korvald, J. Straub, R. Marsh, S. Kerlin. 2013. Project Management for the OpenOrbiter Operating Software Team. Presented at the 2nd Annual North Dakota Space Robotics Forum.
51. Maguire, Z., M. Mattingly, C. Korvald, J. Straub, S. Kerlin. 2013. Ground Station Software Team Project Management. Presented at the 2nd Annual North Dakota Space Robotics Forum.
50. Straub, J. 2013. Educational Outcomes from the OpenOrbiter Small Spacecraft Development Program. Presented at the 2nd Annual North Dakota Space Robotics Forum.
49. Straub, J. T. Whitney, T. Leben, K. Karboviak, Z. Maguire, C. Korvald, S. Kerlin. 2013. OpenOrbiter Combined Software Work Breakdown Structure. Presented at the 2nd Annual North Dakota Space Robotics Forum.
48. Whitney, T., K. Goehner, J. Straub, S. Kerlin. 2013. OpenOrbiter Payload Software. Presented at the 2nd Annual North Dakota Space Robotics Forum.
47. Leben, T., J. Straub, S. Kerlin. 2013. Testing and Integration Team Project Management. Presented at the 2nd Annual North Dakota Space Robotics Forum.
46. Korvald, C., J. Straub, S. Kerlin, R. Marsh. 2013. Software for OpenOrbiter. Presented at the 2nd Annual North Dakota Space Robotics Forum.
45. Lewis, A., J. Huhn, J. Straub, T. Desell, S. Kerlin. 2013. OpenOrbiter Ground Station Software. Presented at the 2nd Annual North Dakota Space Robotics Forum.
44. Wegerson, M., J. Straub, S. Noghanian. 2013. Work on a Software Defined Radio (SDR) for a CubeSat-Class Spacecraft. Presented at the 2nd Annual North Dakota Space Robotics Forum.
43. Straub, J. 2013. Educational Outcomes from the OpenOrbiter Small Spacecraft Development Program. Presented at the 2nd Annual North Dakota Space Robotics Forum.
42. Goehner, K., C. Korvald, J. Straub, R. Marsh. 2013. Payload Software Design and Development for a Remote Sensing Small Spacecraft. Presented at the 2nd Annual North Dakota Space Robotics Forum.
41. Torgerson, D., C. Korvald, J. Straub, S. Kerlin, R. Marsh. 2013. Scheduling for a Small Satellite for Remote Sensed Data Collection. Presented at the 2nd Annual North Dakota Space Robotics Forum.
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19. Apostal, D., A. Mohammad, J. Straub, J. Berk. 2012. Ground Station Software Model. North Dakota Space Robotics Forum.
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15. Islam, Z., E. Workman, N. Schmitz, N. Root, J. Berk, J. Straub. 2012. Open Orbiter CubeSat Communication Protocol. North Dakota Space Robotics Forum.
14. Mohammad, A., J. Straub, J. Berk, N. Long, D. Apostal, A. Nervold, B. Badders, T. Hill, P. Galegher, D. Torgerson. 2012. Open Orbiter Mission Architecture. North Dakota Space Robotics Forum.
13. Torgerson, D., M. Arangala, M. Hlas, D. Bullock, D. Limesand, C. Kerbaugh, D. Schuler, M. Fossen, E. Carlson, A. Mohammad, J. Berk, J. Straub. Operating Software. North Dakota Space Robotics Forum.
12. Edsey, D., N. Root, J. Pawlik, J. Berk, J. Straub. 2012. Operations Team. North Dakota Space Robotics Forum.
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10. Korvald, C., J. Straub, A. Mohammad, J. Berk. 2012. Payload Software. North Dakota Space Robotics Forum.

9. Mayers, R., M. Olson, Z. Bryant, A. Haider, S. Holmes, P. Johnson, N. Root, J. Berk, J. Straub. Power Supply Electrical Design. North Dakota Space Robotics Forum.
8. Przybylski, T., P. Victor, C. McDonald, Y. Li, N. Root, J. Berk and J. Straub. Sensor and Bus Electrical Design. North Dakota Space Robotics Forum.
7. Root, N., P. Johnson, J. Straub, R. Fazel-Rezai and R. Fevig. 2012. Bus and Communications Design and Fabrication for a Near-Space Mission. Presented at the ND EPSCoR 2012 State Conference.
6. Venkataramanasastry, A., J. Straub and R. Fevig. 2012. Comparison of Perigee and Apogee Rendezvous for Near-Earth Asteroids. Presented at the ND EPSCoR 2012 State Conference.
5. Straub, J. and R. Fevig. 2012. Utilizing Dependable Multiprocessor Technology to Support Scientific Analysis and Autonomy. Presented at the ND EPSCoR 2012 State Conference.
4. Venkataramanasastry, A., J. Straub and R. Fevig. 2012. Delta-V Calculations for Rendezvous with Near-Earth Asteroids. The University of North Dakota Graduate School Scholarly Forum.
3. Trifas, Monica and Jeremy Straub. 2011. An Inference-Based Super-Resolution Approach. In ACM Mid-Southeast Conference.
2. Straub, Jeremy. 2011. Super resolution via single source inference: a revised methodology. In the proceedings of the meeting of the Alabama Academy of Science.
1. Straub, Jeremy. 2011. A new single source inference super resolution approach. In the Jacksonville State University 2011 Arts and Sciences Symposium.

National / International Conference Panels:

1. Panel participant (2013), Panel on Software Architecture (Session 10.10). 2013 IEEE Aerospace Conference.
2. Panel organizer & moderator (2014), Panel on Artificial Intelligence Systems for Aerospace Applications (Session 10.05 Panel). 2014 IEEE Aerospace Conference.
3. Panel participant (2014), Software Architecture Panel (Session 10.08). 2014 IEEE Aerospace Conference.
4. Panel organizer (2014), Integration Tier Panel, AIAA SciTech Conference.
5. Panel organizer (2015), Panel on Artificial Intelligence Systems for Aerospace Applications (Session 10.05 Panel). 2015 IEEE Aerospace Conference.
6. Panel moderator & organizer (2015), Small Satellite Fusion Panel, 2015 AIAA SciTech Conference.
7. Panel participant (2015), Software Architecture Panel (Session 10.08). 2015 IEEE Aerospace Conference.

Local / Regional Conference Panels:

1. Panel participant, Industry and Education in North Dakota Panel. BSC CyberCon. 2018.
2. Panel participant, Grand Challenges Information Symposium Panel: Information Gathering Using Drones, Social Media, and Artificial Intelligence, UND Writers Conference. 2018.
3. Panel participant, Chipp con panel about AI in education. 2024.

Publication and Presentation Awards:

1. Session's Best Paper: Trifas, Monica and Jeremy Straub. 2011. Super Resolution: A Database Driven Inference Approach. Presented at / Proceedings of the 15th World Multi-Conference on Systemics, Cybernetics and Informatics.
2. Second Place, Conference Posters: Straub, J., J. Berk, J. Nordlie, R. Marsh. 2013. Creating Low-Cost 'BalloonSats' for STEM Education with 3D Printing. Presented at the 2013 Academic High Altitude Conference.
3. Best Poster, Category E: Straub, J., J. Berk, A. Nervold, C. Korvald. 2013. OpenOrbiter: Analysis of a Student-Run Space Program. Presented at / Proceedings of the 64th International Astronautical Congress.
4. Best Technical Paper: Almosalami, A., T Blanchard, B Goenner, A Jones, J Straub. 2017. Proceedings of the Symposium on Indoor Flight Issues.

Invited Presentations:

1. Work on Small Satellites. Grand Forks Library / Science Center STEM Café. March 24, 2015.
2. It's OK to Talk to the [Insert Major Here] Students. UND 2015 Spring Leadership Conference. February, 2015.
3. 3D Printing and Scanning. Grand Forks Library / Science Center STEM Café. September 23, 2014.
4. Research Overview. Louisiana Tech University. November 9, 2015.
5. Artificial Intelligence and the Control of Spacecraft, UAVs and Other Robots. Saint Mary's College. November 16, 2015.

6. Research Overview. North Dakota State University. December 18, 2015.
7. Research Overview. Indiana University Kokomo. January 26, 2016.
8. Research Overview. North Central College. January 28, 2016.

Articles in the Popular Press:

Stokke, T., J. Straub, R. Marsh. April 13, 2016. Computer science can complement, not replace, math. 'Viewpoint' Op-Ed in the Grand Forks Herald. Available: http://www.grandforksherald.com/opinion/op-ed-columns/4008310-column-computer-science-can-complement-not-replace-math

Nygard, K., J. Straub. May 11, 2017. Professors: North Dakota State University advances cybersecurity education, research. Op-Ed in the Grand Forks Herald. Available: http://www.grandforksherald.com/opinion/op-ed-columns/4265228-professors-north-dakota-state-university-advances-cybersecurity
Additional coverage in News4Security. Available: http://news4security.com/posts/2017/05/professors-north-dakota-state-university-advances-cybersecurity-education-research/

Nygard, K., J. Straub. May 24, 2017. Column: NDSU poised to become leader in cybersecurity. Op-Ed in the Fargo Forum. Available: http://www.inforum.com/opinion/columnists/4272401-column-ndsu-poised-become-leader-cybersecurity
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Nygard, K., J. Straub. August 13, 2017. Cyber Security activities inspired by a 'relentless pursuit of excellence'. Op-Ed in the Minot Daily News. Available: http://www.minotdailynews.com/opinion/community-columnists/2017/08/cyber-security-activities-inspired-by-a-relentless-pursuit-of-excellence/

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Straub, J. NJ's proposed minimalist AI rules are problematic, Asbury Park Pres, July 30, 2023, page A1.

Straub, J. Podcaster wrong to discourage kids from studying coding. Coverage in:
- The Times, October 8, 2023.
- The Times, November 5, 2023 (title: Do not put kids off of coding).
- The Frederick News-Post, October 4, 2023.
- The Telegraph, October 3, 2023.

Straub, J. AI regulations in New York City set a bad example, The Buffalo News, October 9, 2024, Page 6.

Muhammad Z. and J. Straub, Telling Small Businesses to Buy Cyber Insurance Isn't Enough, Dark Reading, October 23, 2023. Available: https://www.darkreading.com/cyber-risk/telling-small-businesses-to-buy-cyber-insurance-isnt-enough

Straub, J. Looking Beyond AI Hype, Dakota Digital Review, November 8, 2023. Available: https://dda.ndus.edu/ddreview/looking-beyond-ai-hype/

Mohammad, Z. and J. Straub. How Cyber Insurance Prevents Post-Cyberattack Disaster: A Business Guide to Essentials & Compliance, Dakota Digital Review, April 16, 2024. Available: https://dda.ndus.edu/ddreview/how-cyber-insurance-prevents-post-cyberattack-disaster-a-business-guide-to-essentials-compliance/

Straub, J. The overreaching TikTok ban could also harm US industry, The Hill, April 29, 2024. Available: https://thehill.com/opinion/technology/4628898-the-overreaching-tiktok-ban-could-also-harm-us-industry/

Straub, J. States should follow California's lead in AI regulation. December 10, 2024. Coverage in:
- DC Journal – Available: https://dcjournal.com/states-should-follow-californias-lead-in-ai-regulation/
- Grand Forks Herald – Available: https://www.grandforksherald.com/opinion/columns/commentary-states-should-follow-californias-lead-in-ai-regulation
- Santa Maria Times – Available: https://santamariatimes.com/opinion/columnists/states-should-follow-california-s-lead-in-ai-regulation-guest-commentary/article_aea67bc4-b72b-11ef-b4bd-23c84a5c67a0.html
- Antigo Daily Journal – Available: https://www.antigojournal.com/opinion/opinion-states-should-follow-california-s-lead-in-ai-regulation/article_3a6b3264-b716-11ef-b18c-f701cf7b1133.html
- Santa Ynez Valley News – Available: https://syvnews.com/opinion/columnists/states-should-follow-california-s-lead-in-ai-regulation-guest-commentary/article_68d5cf1b-dbac-5ade-81d8-8c9048f93f80.html

Hanford Sentinel – Available: https://hanfordsentinel.com/opinion/columnists/states-should-follow-california-s-lead-in-ai-regulation-guest-commentary/article_e933f108-b72c-11ef-88be-27488c28890e.html
Nashua Telegraph – Available: https://www.nashuatelegraph.com/archive/2024/12/11/states-should-follow-californias-lead-in-ai-regulation/
Lompoc Record – Available: https://lompocrecord.com/opinion/columnists/states-should-follow-california-s-lead-in-ai-regulation-guest-commentary/article_8bbb70cc-8bc2-5f77-9c5b-c333b20b7fc6.html
Davis Enterprise (title: States should follow California's lead on AI).

Straub, J. AI regulation has to be done right, Coverage in:
Charleston Gazette-Mail, December 12, 2024.
Grand Forks Herand, December 12, 2024.
The Telegraph, December 11, 2024.

PATENTS

Straub, J., B. Clark, A. Defoe, J. Hance, D. Hanson, J. Heeren, G. Kestner, C. Kolodjski, J. Milbrath, J. Rivard, D. Rosch-grace, C. Schmandt, M. Tassava. 2024. Advanced Cybersecurity Systems for Infrastructure and Network Vulnerability Analysis. U.S. Patent Application 18/735,155.

Straub, J., J. Hance, N. Ross, J. Milbrath, N. Ritter, R. Fedor. 2023. Autonomous distributed cybersecurity testing. U.S. Patent Application 13/582,039.

Straub, J. 2022. Gradient Descent Training for Defensible Artificial Intelligence. U.S. Patent Application 17/688,659.

Straub, J., B. Kading, S. Kerlin. 2015. Systems and Methods for Characterizing Performance of 3-D Printing. U.S. Provisional Patent Application Serial No. 62/106,155.

Straub, J., B. Kading, S. Kerlin. 2015. Systems and Methods for Characterizing 3-D Printed Objects and Objects for of 3-D Printing. U.S. Provisional Patent Application Serial No. 62/111,196.

Straub, J., B. Kading, S. Kerlin. 2015. Characterizing 3-D Printed Objects for 3-D Printing. WIPO Patent Application WO/2016/118782.

Straub, J., B. Kading, S. Kerlin. 2015. Characterizing 3-D Printed Objects for 3-D Printing. U.S. Patent Application 15/003,619.

Straub, J., B. Kading, S. Kerlin. 2017. Characterizing 3-D Printed Objects for 3-D Printing. U.S. Patent 9,846,427.

Kading, B., J. Straub. 2015. Systems and Methods for Enhancing Displayed or Projected Image Fidelity. U.S. Provisional Patent Application Serial No. 62/106,610.

Kading, B., J. Straub. 2016. Systems and Methods for Enhancing Displayed or Projected Image Fidelity. U.S. Patent Application Serial No. 15/004,884.

Straub, J., M. Wegerson, R. Marsh. 2015. Systems and Methods for Intelligent Attitude Determination and Control. U.S. Provisional Patent Application No. 62/171,752.

Straub, J., M. Wegerson, R. Marsh. 2016. Systems and Methods for Intelligent Attitude Determination and Control. U.S. Patent Application 15/173,305.

Straub, J., M. Wegerson, R. Marsh. 2018. Systems and Methods for Intelligent Attitude Determination and Control. U.S. Patent 10,023,300.

Straub, J., T. McGuire, M. Parsons, M. Hirsch, S. Leake. 2015. A System, Method and Apparatus for 3D Printing in Space. U.S. Provisional Patent Application 62/284,153.

Straub, J., T. McGuire, M. Parsons, M. Hirsch, S. Leake. 2015. A System, Method and Apparatus for 3D Printing in Space. U.S. Patent Application 15/271,243.

Straub, J., B. Kading. 2015. A Simplified System, Method and Apparatus for Computer Controlled Milling. U.S. Provisional Patent Application, 62/176,012.

Straub, J. 2015. A System, Method and Apparatus for Securing Microwave Wireless Power Transfer. U.S. Provisional Patent Application 62/178,649.

Straub, J., S. Leake. 2016. A System, Method and Apparatus for Spherical 3D Printing. U.S. Provisional Patent Application 62/388,613.

Straub, J., T. McGuire, M. Hirsch. 2016. A System, Method and Apparatus for Extending the Printing Area of a 3D Printer. U.S. Provisional Patent Application 62/388,718.

FUNDING

Awards received prior to NDSU:

Fevig, Ronald and Jeremy Straub. 2011. North Dakota Inter-Institutional Space Robotics Program. ND NASA SpaceGrant. $20,333.

Fevig, Ronald and Jeremy Straub. 2012. A Proposal in Response to the Announcement of CubeSat Launch Initiative. National Aeronautics and Space Administration CubeSat Launch Initiative. Provides a launch for a CubeSat-class satellite into LEO, approximate value $50,000.

Straub, Jeremy. 2012. Doctoral Student Conference Travel Support. University of North Dakota Graduate School. $500.

Straub, Jeremy. 2012. Intercollegiate Academic Funding Award #67 (FY 2011-2012). Intercollegiate Academic Fund, administered by the Office of the Provost. $400.

Straub, Jeremy. 2012. Intercollegiate Academic Funding Award #3 (FY 2012-2013). Intercollegiate Academic Fund, administered by the Office of the Provost. $400.

Straub, Jeremy. 2012. Student Travel Funding to Attend the 3rd Annual Academic High-Altitude Conference. Academic High-Altitude Conference. $500.

Straub, Jeremy. 2012. Funds for Travel to Pasadena, CA. North Dakota EPSCoR Program (NSF Grant #EPS-0814442). $500.

Straub, Jeremy. 2012. Doctoral Student Conference Travel Support. University of North Dakota Graduate School. $425.

Straub, Jeremy. 2013. Funds for Travel to the IEEE Aerospace Conference in Big Sky, MT. John D. Odegard School of Aerospace Sciences Student Travel Funding. $500.

Straub, Jeremy. 2013. Funds for Travel to the IEEE Aerospace Conference in Big Sky, MT. Department of Computer Science Student Travel Funding. $500.

Straub, Jeremy. 2013. Summer Doctoral Fellowship. University of North Dakota Graduate School. $5,000.

Straub, Jeremy. 2013. Funds for Travel to SPIE Defense, Security and Sensing. SPIE Student Travel Grant. $300.

Straub, Jeremy. 2013. Sigma Xi Grant in Aid of Research. The Sigma Xi Scientific Research Society, $500.

Straub, Jeremy. 2013. International Planetary Probe Workshop Travel Scholarship. IPPW Conference / Georgia Technical University. $1,900.

Straub, Jeremy. 2013. Student Travel Funding to Attend the 4th Annual Academic High-Altitude Conference. Academic High-Altitude Conference. $500.

Straub, Jeremy. 2013. Doctoral Student Conference Travel Support. University of North Dakota Graduate School. $425.

Straub, Jeremy. 2013. Intercollegiate Academic Funding Award #30 (FY 2013-2014). Intercollegiate Academic Fund, administered by the Office of the Provost. $400.

Straub, Jeremy. 2014. Funds for Travel to the SPIE Defense Sensing + Security Conference in Baltimore, MD. Department of Computer Science Student Travel Funding. $500.

Straub, Jeremy. 2014. Funds for Travel to SPIE Defense, Security and Sensing. SPIE Student Travel Grant. $300.

Straub, Jeremy. 2014. International Planetary Probe Workshop Travel Scholarship. IPPW Conference / Georgia Technical University. $2,250.

Straub, Jeremy. 2014. Funds for Travel to San Diego, CA. North Dakota EPSCoR Program (NSF Grant #). $500.

Straub, Jeremy. 2014. Intercollegiate Academic Funding Award #1 (FY 2014-2015). Intercollegiate Academic Fund, administered by the Office of the Provost. $400.

Straub, Jeremy. 2014-15. Doctoral Student Conference Travel Support. University of North Dakota Graduate School. $500.

Straub, Jeremy & Tom Stokke. 2015. Computationally Enhancing Your Collegiate Education Seminar. $2,500.

Marsh, Ronald (PI), David Whalen (Co-PI), Jeremy Straub (Co-PI) and Andrew Dahlen (Co-PI). 2015. TRL-Raising Demonstration Mission for a Game-Changing Small Satellite Technology. National Aeronautics and Space Administration CubeSat Launch Initiative. Provides a launch for a CubeSat-class satellite into LEO, approximate value $50,000.

Straub, Jeremy. 2015. ACM CCS 2015 Student Travel Award. ACM Conference on Computer and Communications Security. $1,000.

Wegerson, Michael, Michael Hlas, Benjamin Kading, Calvin Bina, Jeremy Straub, Ronald Marsh. 2015. Very Low-Cost CubeSat Electronic System & Software Development. UND AMPLIFY Program. $2,145.

McGuire, Thomas, Michael Hirsch, Skye Leake, Michael Parsons, Matthew Evans, Jeremy Straub, Scott Kerlin. 2015. Development of a Metal 3D Printer for Space. UND AMPLIFY Program. $2,489.

Marsh, Ronald, Jeremy Straub. Commercialization for an Autonomous Attitude Determination and Control Technology. 2015. National Science Foundation. $50,000.

Awards received at NDSU:

Straub, Jeremy. 2016. 3D Printing-Based Repair and Self-Replicating Robot Autonomy Request for 'Seed' Funding. NDSU Research and Creative Activity Seed Awards. $4,996.

Straub, Jeremy. 2017. Enhancement of Student Robotics Education on Campus. NDSU Foundation and Alumni Association Impact Fund. $40,712.

Straub, Jeremy, Kendall Nygard, 2017. REU Site: Research Experience in Cyber-Security for Cyber-Physical Systems. National Science Foundation. $359,999.

Ham, M., K. Cronin, S. Ludwig, P. Kotala, J. Straub. 2018. DSU and NDSU GenCyber Partner Camp, National Security Agency, $116,617.50.

Straub, J., J. Boyer. 2018. Enhancement and Assessment of a Novel Educational Approach for Cybersecurity Education, North Dakota EPSCoR, $9,695.

Straub, J. 2018. RCA Research Development Travel Award to attend the SPIE Defense + Commercial Sensing Conference. NDSU Vice President for Research and Creative Activity office. $1,000.

Straub, J., S. Ludwig, P. Kotala, M. Ham, K. Cronin. 2019. A Residential GenCyber Camp for the Upper Great Plains. National Security Agency, $108,814.75.

Straub, J., 2019. Research Development Travel Award (Award Reference RD20-17). NDSU Vice President for Research and Creative Activity office. $1,000.

Straub, J. 2019. Supplement to NSF Award Number 1757659. National Science Foundation. $10,000.

Straub, J. 2019. Challey Institute Faculty Fellowship. NDSU Sheila and Robert Challey Institute for Global Innovation & Growth. $8,000.

Straub, J. 2019. Support for research on the impact of fake news on public trust in media, the economy, and innovation, and automated phishing and detection, and its impact on individuals and firm. NDSU Sheila and Robert Challey Institute for Global Innovation & Growth. $6,592.

Straub, J. 2019. Marketing Funding for Graduate Certificate in Cybersecurity & Options in Cybersecurity in CS/SE MS/Ph.D. NDSU Graduate School. $2,430.

Straub, J. 2019. Gateways-ND Participant Support. National Science Foundation / ND Gateways Program. $3,000.

Nygard, K. & J. Straub. 2019. Challey Institute Scholar Faculty Position Funding in Cybersecurity Innovation and Policy. $860,000 (approximate).

Straub, J. 2020. Challey Institute Faculty Fellowship. NDSU Sheila and Robert Challey Institute for Global Innovation & Growth. $8,000.

Straub, J. 2020. Remote Delivery Course Development Award. North Dakota University System Dakota Digital Academy. $5,000.

Simsek, S., A. Vegi, J. Straub. 2020. Funding Support for Graduate / Undergraduate Assistants. NDSU Office of the Provost. $6,400.

Straub, J. 2021. Challey Institute Faculty Fellowship. NDSU Sheila and Robert Challey Institute for Global Innovation & Growth. $8,000.

Straub, J. 2021. National Data Collection to Support 'Nutrition Facts' Viability at Combatting 'Fake News'. NDSU Sheila and Robert Challey Institute for Global Innovation & Growth. $3,618.

Straub, J. 2021. RCA Internal Funding – Research Support Services Award # RSS22-07. $1,000.

Straub, J. 2021. Further Development of Machine Learning Techniques Combining Neural Network and Expert System Benefits. North Dakota EPSCoR. $5,768.

Straub, J. 2021. Publication Fee Support – Hayek Fund. George Mason University Hayek Fund for Scholars. $2,800.

Straub, J. 2021. Industry Collaboration for Autonomous Medication Misuse. OpREMS LLC. $55,000.

Zantua, M., et al. 2021. NCAE-C-001 Program. National Security Agency (award to City University of Seattle). $1,090,573.64. ($60,030.53 NDSU Portion, J. Straub, institutional PI).

Straub, J. 2022. Funding for virtual module development. North Dakota EPSCoR. $6,000.

Straub, J. 2022. Funding to Support Bison Cyber Camp in 2022. ND Department of Public Instruction. $20,000.

Straub, J. 2022. Upper Midwest Native American Outreach Program. National Security Agency. $437,493 ($298,838 award processing, $138,655 yet unexercised option).

Straub, J. 2022. Biomedical Summer Undergraduate Student Position Funding. NDSU INBRE Program. $6,000 (approximate value – funded a summer position for a student to work on a Medical/AI project).

Straub, J. 2022. Undergraduate Research Funding – Academic Year. NDSU INBRE Program. $8,171.
Straub, J. 2022. Funding for Article Publication Charge. NDSU Sheila and Robert Challey Institute for Global Innovation & Growth. $1,339.
Straub, J., 2022. Research Development Travel Award. NDSU Vice President for Research and Creative Activity office. $1,000.
Straub, J. 2022. NDSU Challey Faculty Fellowship (2022-2023). NDSU Sheila and Robert Challey Institute for Global Innovation & Growth. $8,000.
Straub, J. 2022. Study of Advanced Cybersecurity Techniques to Advance the Security of Power Generation SCADA Systems Supporting MDA Capabilities. U.S. Missile Defense Agency. $1,436,000.
Dupuis, M., et al. 2022. CAE Regional Hubs Collaboration with States Department of Education for the NW Region. National Security Agency (award to University of Washington). ($6,516 NDSU Portion, J. Straub, institutional PI)

Straub, J. 2023. NDSU Challey Faculty Senior Fellowship (2023-2024). NDSU Sheila and Robert Challey Institute for Global Innovation & Growth. $15,000.
Straub, J., et al. 2023. Support for Qualtrics data collection. NDSU Sheila and Robert Challey Institute for Global Innovation & Growth. $6,000.
Straub, J. 2023. Additional Support for Open Access Publishing Charges. North Dakota University System Dakota Digital Academy. $3,000.
Straub, J. 2023. Support for Open Courseware Creation for Ethical Hacking. North Dakota University System Dakota Digital Academy. $3,000.
Straub, J. 2023. EDRF: TAP: iCorps. NDSU Economic Diversification Research Fund. $10,000.
Straub, J., et al. 2023. An Upper Midwest Virtual Institute for Cyber and Electromagnetic Spectrum Research and Employ (UM-VICEROY). Griffiss Institute. $1,499,725.
Straub, J. 2023. Research regarding cybersecurity assessment for small firms and startups and outreach activities. Montana State University MilTech. $39,875.
Straub, J. 2023. Artificial Intelligence-Based Patient Identity Verification Using Common Medical Sensors. ND INBRE Summer Undergraduate Biomedical Research Program.
Straub, J. 2023. Support for travel to the DEPSCoR Day at Montana State University. $2,000. NDSU Research & Creative Activity. $2,000.

Straub, J. 2024. NDSU Challey Faculty Senior Fellowship (2024-2025). NDSU Challey Institute. $15,000.
Straub, J. 2024. Bison Cyber Camps. North Dakota EPSCoR. $23,000.
Straub, J. 2024. iCORPS MVP Funding. NDSU Economic Diversification Research Fund. $10,000.
Straub, J. 2024. TDPP: SBIR-STTR Phase 0. NDSU Economic Diversification Research Fund. $10,000.
Straub, J. 2024. Support for Middle School Cyber Madness Event. NDIT EduTech. $913.
Ferrarese, N. 2024. Feasibility of Electronic Screening to Identify Risk of Opioid Misuse and Overdose. National Institutes of Health (award to OpREMS, LLC). $295,876 (NDSU CSCI portion $79,863, J. Straub institutional Co-PI & CSCI lead).
Burke, D. 2024. GenCyber Consortium award. National Security Agency (awarded to the University of Montana – Missoula College) $577,637.12 (NDSU portion $63,002, J. Straub institutional PI).
Straub, J. 2024. Support for Student Involvement in Undergraduate Cybersecurity Student Research. NDSU EXPLORE 2024 Summer Undergraduate Research Program. $2,470
Straub, J. 2024. Support for Student to Pursue New Topics in Cybersecurity Research. NDSU EXPLORE 2024 Summer Undergraduate Research Program. $2,470
Straub, J. 2024. Support for Student Research Regarding Cybersecurity Mutual Assured Destruction. NDSU Sheila and Robert Challey Institute for Global Innovation & Growth. $2,000 (approximate).

<u>Awards administered, with student named applicants:</u>
North Dakota Space Grant Consortium funding to participate in the 2017-2018 MATE International ROV Competition, North Dakota Space Grant Consortium, $2,000.
North Dakota Space Grant Consortium funding to participate in the 2017-2018 Association for Unmanned Vehicle Systems International Student Unmanned Aerial Systems Competition, North Dakota Space Grant Consortium, $2,000.
North Dakota Space Grant Consortium funding to participate in the 2018-2019 Association for Unmanned Vehicle Systems International Student Unmanned Aerial Systems Competition, North Dakota Space Grant Consortium, $2,000.

SERVICE

Journal Service – Editor:

Editor-in-Chief, Cybersecurity and Privacy (MDPI), 2018

Journal Service – Editorial Board:

Editorial Board Member, Computers (MDPI)
Editorial Board Member, Machines (MDPI)
Editorial Board Member, International Journal of Aerospace Engineering (Hindawi)
Editorial Review Board Member, International Journal of Decision Support System Technology (IGI Global)
Advisory Board Member, Sci (MDPI)

Journal Service – Guest Editor:

Guest Editor, Special Issue on Cyber-Physical System Cybersecurity (Machines, MDPI)
Guest Editor, Special Issue on Three-Dimensional Printing and Imaging (Journal of Imaging, MDPI)
Lead Guest Editor, Special Issue on CubeSats and Small Satellites (International Journal of Aerospace Engineering, Hindawi)
Guest Editor, Special Issue on Autonomous Vehicle Cybersecurity (Journal of Cybersecurity and Privacy, MDPI)
Guest Editor, Special Issue on Intelligent Sensors Applications in Aerospace (Sensors, MDPI)

Journal Service – Reviewer:

Article Reviewer, Acta Astronautica Journal (Elsevier)
Article Reviewer, Additive Manufacturing (Elsevier)
Article Reviewer, Advances in Space Research (Elsevier)
Article Reviewer, Applied Sciences (MDPI)
Article Reviewer, Biotechniques (FSG)
Article Reviewer, British Journal of Applied Science & Technology
Article Reviewer, British Journal of Economics, Management & Trade
Article Reviewer, British Journal of Education, Society & Behavioural Science
Article Reviewer, British Journal of Mathematics and Computer Science
Article Reviewer, Composites Part B: Engineering (Elsevier)
Article Reviewer, Computers (MDPI)
Article Reviewer, Computers in Biology and Medicine (Elsevier)
Article Reviewer, Control Engineering Practice (Elsevier)
Article Reviewer, Education and Information Technologies (Springer)
Article Reviewer, Electronics (MDPI)
Article Reviewer, Energies (MDPI)
Article Reviewer, ETRI Journal (Wiley)
Article Reviewer, European Journal of Control (Elsevier)
Article Reviewer, IBM Journal of Research and Development (IBM)
Article Reviewer, IEEE Access (IEEE)
Article Reviewer, IEEE Aerospace & Electronics Systems Magazine (IEEE)
Article Reviewer, IEEE Magnetics Letters (IEEE)
Article Reviewer, IEEE Transactions on Aerospace and Electronic Systems (IEEE)
Article Reviewer, IEEE Transactions on Education Journal (IEEE)
Article Reviewer, IEEE Transactions on Industrial Electronics (IEEE)
Article Reviewer, Innovations in Systems and Software Engineering (Springer)
Article Reviewer, International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering
Article Reviewer, International Journal of Decision Support System Technology (IGI-Global)
Article Reviewer, International Journal of Distributed Sensor Networks (Sage)
Article Reviewer, International Journal of Innovative Research in Computer and Communication Engineering
Article Reviewer, International Journal of Modelling and Simulation (Taylor & Francis)
Article Reviewer, International Journal of Network Security
Article Reviewer, International Journal of Sociotechnology and Knowledge Development (IGI Global)
Article Reviewer, Journal of Advances in Mathematics and Computer Science

Article Reviewer, Journal of Aerospace Information Systems (AIAA)
Article Reviewer, Journal of Basic and Applied Research international
Article Reviewer, Journal of Cyber Security Technology (Taylor & Francis)
Article Reviewer, Journal of Educational Computing Research (Baywood)
Article Reviewer, Journal of Experimental Agriculture International
Article Reviewer, Journal of Experimental & Theoretical Artificial Intelligence (Taylor & Francis)
Article Reviewer, Journal of Manufacturing Processes (Elsevier)
Article Reviewer, Journal of Marine Science and Engineering (MDPI)
Article Reviewer, Journal of Science Education and Technology (Springer)
Article Reviewer, Journal of Sensor and Actuator Networks (MDPI)
Article Reviewer, Materials and Design (Elsevier)
Article Reviewer, Pattern Recognition (Elsevier)
Article Reviewer, Polymer Testing (Elsevier)
Article Reviewer, Robotics (MDPI)
Article Reviewer, Robotics and Autonomous Systems (Elsevier)
Article Reviewer, Sensors (MDPI)
Article Reviewer, Sustainability (MDPI)
Article Reviewer, Symmetry (MDPI)
Article Reviewer, Technology Analysis and Strategic Management (Taylor & Francis)
Article Reviewer, Technology in Society (Elsevier)
Article Reviewer, Toxicology in Vitro (Elsevier)

Journal Service – Other:

Information Director, ACM Computing Surveys Journal (ACM)

Conference/Workshop Leadership:

Member, program committee. The 16th World Multi-Conference on Systemics, Cybernetics and Informatics (2012).
Member, program committee. The 17th World Multi-Conference on Systemics, Cybernetics and Informatics (2013).
Member, program committee. The 18th World Multi-Conference on Systemics, Cybernetics and Informatics (2014).
Member, AIAA Space 2014 Forum Technical Program Committee (2014).
Track co-chair, Space Systems Track & Session co-chair, Space Systems Poster Session, AIAA Space 2014 Conference.
Program Committee Chair / Organizer, Small Satellite Communications Workshop at the 2014 AIAA/USU Small Satellite Conference.
Program Committee Chair / Organizer, Small Satellite Software Workshop at the 2014 AIAA/USU Small Satellite Conference.
Organizer, Small Satellite Technology and its Role in Education and Professional Development Panel Discussion and Poster Session at AIAA SciTech 2014.
Member, Technical Program Committee & Technical Discipline Chair, AIAA SciTech 2015 Conference.
Member, program committee, The 19th World Multi-Conference on Systemics, Cybernetics and Informatics (2015).
AIAA Space 2015 Forum: Session Organizer / Chair for SATS-03 (Small Satellites - Missions & Policy), SATS-04 (Small Satellites - Fusion I), SATS-05 (Small Satellites - Fusion II) and GEPC-01 (Space Solar Power) sessions. Organizer for SATS-01 (Small Satellites - Technologies I) and SATS-02 (Small Satellites - Technologies II) sessions.
Member, Technical Program Committee & Technical Discipline Chair, AIAA SciTech 2016 Conference.
Program Committee Chair / Organizer, Small Satellite Communications Workshop at the 2015 AIAA/USU Small Satellite Conference.
Program Committee Chair / Organizer, Small Satellite Software Workshop at the 2015 AIAA/USU Small Satellite Conference.
Program Committee Chair / Organizer, Open Hardware & Open-Source Software Workshop at the 2015 AIAA/USU Small Satellite Conference.
Member, AIAA Space 2015 Forum Technical Program Committee & Small Satellite Track Chair (2015).
Member, AIAA Space 2016 Forum Technical Program Committee & Small Satellite Track Chair (2016).
Member, Technical Program Committee & Technical Discipline Chair, AIAA 2016 Propulsion & Energy Conference.
Member, Program Committee, UND-SCIEI International Conference on Cyber-Security in Aviation, Computer Science, and Electrical Engineering, 2017.
Organizer, BSides Fargo, 2024.
Organizer, North Dakota Cyber Security Conference, 2024.

North Dakota State University Sheila and Robert Challey Institute for Global Innovation and Growth AI Conference, 2024.
Organizer, BSides Fargo, 2023.
North Dakota State University Sheila and Robert Challey Institute for Global Innovation and Growth AI Conference, 2023.
Organizer, BSides Fargo, 2022.
North Dakota State University Sheila and Robert Challey Institute for Global Innovation and Growth AI Conference, 2022.

Session Chairing:

Session chair, Applications of Informatics and Cybernetics in Science and Engineering / Human Information Systems Session. The 15th World Multi-Conference on Systemics, Cybernetics and Informatics (2011).
Session co-chair, Computational Modeling Session (10.01). 2013 IEEE Aerospace Conference.
Session co-chair, Model-based Systems and Software Engineering (10.04). 2013 IEEE Aerospace Conference.
Session co-organizer, Implementing Intelligence in Aerospace (10.05). 2014 IEEE Aerospace Conference.
Program Committee Chair and Organizer, Small Satellite Communications Workshop at the 2013 AIAA/USU Small Satellite Conference.
AIAA SciTech 2015 Conference – Chair, SATS-3 Session & Co-Chair, Sats-1 and SATS-2 Sessions.
Session co-organizer, Implementing Intelligence in Aerospace. 2015 IEEE Aerospace Conference.
Session Chair, Session II.D (Software Testing / Security), Midwest Instruction and Computing Symposium, April, 2015.
AIAA SciTech 2016 Conference – Chair, SATS-1, SATS-2 and SATS-3 Sessions.
Session Co-organizer, Implementing Intelligence in Aerospace. 2016 IEEE Aerospace Conference.
Session Chair, SPIE Defense + Commercial Sensing Conference, 2017.
Session Chair, IEEE Conference on Systems of Systems, 2017.

Conference Review Committee / Reviewer Service:

Review Committee Member, The 26th Annual IEEE Software Technology Conference
Reviewer, The 19th World Multi-Conference on Systemics, Cybernetics and Informatics (2015)
Reviewer, IEEE Aerospace Conference
Reviewer, International Conference on Design and Concurrent Engineering
Reviewer, IEEE International Conference on Dependable, Autonomic and Secure Computing
Reviewer, IEEE Software Technology Conference
Reviewer, International Conference on Unmanned Aircraft Systems
Reviewer, International Conference on Interactive Collaborative Learning
Reviewer, UND-SCIEI International Conference on Cyber-Security in Aviation, Computer Science and Electrical Engineering

Proposal Review Service:

Proposal Reviewer, Ministry of Science, Technology and Space, State of Israel and Japan Science and Technology Agency for the Japan-Israel Scientific Research Cooperation Program.
Reviewer, UTSA, DoD HBCU/MI Limited Submission Proposal Review. June 2019.
Panel participant / reviewer, National Science Foundation, 2019.

Other National / International Service:

Mentor, American Public University System Global Mentor Network
Participated in formation of AIAA SmallSat Technical Committee
Member, AIAA SmallSat Technical Committee
Chair, Conferences Sub-committee, AIAA SmallSat Technical Committee
Member, AIAA Aerospace CyberSecurity Working Group
Member, AIAA Green Energy Program Committee
Judge, Sigma Xi Student Research Showcase, 2017.

Institutional / Local / Regional Service:

<u>Service to the NDSU Computer Science Department:</u>

Chair, Department Chair Position Description Creation Committee, NDSU Department of Computer Science, Spring 2017.
Committee Member, Department Chair Search Committee, NDSU Department of Computer Science, Spring 2017.
Committee Member, Lecturer in Computer Science Search Committee, NDSU Department of Computer Science, Summer 2017.
Committee Member, Software Engineering / Security Position Search Committee, Spring 2018.
NDSU Department of Computer Science Curriculum Committee, Fall 2016 to present.
Assisted in running the local site of the ACM International Collegiate Programming Contest, October 28, 2017.
Coordinator, cybersecurity programs and options, 2017 to present
Associate Director, NDSU Institute for Cyber Security Education and Research, 2017 to present
Director, Outreach and Student Experience Enhancement
Presenter, NDSU Scholars Day, 2017
Presenter, Liberty Middle School Visit – Cybersecurity Topic, 2019

Service to the NDSU College of Science and Math:
College of Science and Math Curriculum Committee Alternate - Fall 2018 to present
Presenter, Science Café, March 6, 2018: "The Growth of Artificial Intelligence and its Benefits and Pitfalls"

Service to the NDSU College of Engineering:
Robotics Minor Development Committee – Fall 2018 to present

Other NDSU service:
Faculty Advisor, Cybersecurity Student Organization, 2017 – present.
Remote Sensing event lead / facilitator, Science Olympiad, April, 2017.
Remote Sensing & Mousetrap Vehicle event lead / facilitator, Science Olympiad, April, 2018.
Presentation as part of NATURE Summer Camp Research Tours, June 7, 2017.
Co-Director, Science Olympiad, 2018-2019 Academic Year.
Faculty Advisor, E-Lympics computer gaming event, Spring, 2018.

Service to the UND Computer Science Department:
Presenter/Organizer, Grand Forks YMCA seniors' visit to UND Computer Science to learn about 3D Printing, November 5, 2014.

Other UND service:
Presenter, 3D Scanning and Printing, Osher Lifelong Learning Institute (OLLI@UND), Office of Extended Learning, University of North Dakota, February 11, 2015.
Proposed & launched AMPLIFY: Augmentative Micro-funding Program for enhancing Learning and research Innovation for Future Yield. Funded by $25,000 from UND Foundation.

Service to the State of North Dakota:
Served on the North Dakota Department of Transportation Autonomous Vehicle Study Committee and several sub-committees thereof, 2017-2018.
Served as part of the K-20W Initiative to bring computing and cyber sciences to all educational levels throughout North Dakota.

Service to External Institutions:

Provided requested review of / advice regarding a B.Sc. in Space Engineering degree being developed at the Department of Physics at the Universitat Politecnica de Catalunya – Barcelona Tech (in Barcelona, Spain).
Presenter, STEM Café. Grand Forks Public Library / North Dakota Science Center. September 23, 2014: "3D Printing and Scanning"
Presentation to INCITS Executive Council on Artificial Intelligence, September 6, 2018.

PROFESSIONAL AFFILIATIONS

Member, British Computer Society (MBCS)
Association for Computing Machinery

IEEE: IEEE Student Member, IEEE Aerospace and Electronic Systems Society, IEEE Robotics & Automation Society, IEEE Computer Society, IEEE Signals Processing Society, IEEE Professional Communication Society, IEEE Education Society, IEEE Communications Society, IEEE Sensors Council, IEEE Nanotechnology Council, IEEE Systems Council, IEEE Technology Management Council, IEEE Council on Electronic Design Automation
Alabama Academy of Science
Society of Satellite Professionals International (SSPI)
Lifetime Member, SPIE
Senior Member, American Institute of Aeronautics and Astronautics (AIAA)
Project Management Institute (PMI)
Pi Sigma Epsilon
Space Generation Advisory Council in Support of the United Nations Programme on Space Applications
Sigma Xi – The Scientific Research Society, Full Member
American Association for the Advancement of Science (AAAS)
Stratospheric Ballooning Association
Council on Undergraduate Research
American Mensa

ACADEMIC CONTESTS

Member of 3rd place winning team, International Journal of Space Communications / Ohio University Space Solar Power Competition. May, 2014.
Team Lead, 3rd place winning team, International Journal of Space Communications / Ohio University Space Solar Power Competition. May 2015. (top USA team; top university team)
Participant, 2015 Giants Business Plan Competition.
Participant, NASA 2015 SpaceApps Challenge.
Team Lead, 3rd place winning team, Icehouse Design Competition.
Top 100 Entries (out of about 800), Tech Briefs Create the Future Design Contest 2016. "Creating a Spacefaring Future for Humanity by Exploring the Final Frontier with Low-Cost, Open-Source Nanosatellites."

PRESS MENTIONS

Emily Aasand, "Exploring the Final Frontier", *The Dakota Student*, March 2, 2012.
David Livingston, "Reinventing Space Session", *The Space Show*, May 8, 2012.
Prairie Public Radio, "'The Fargo Tell' ~ OpenOrbiter Satellite Program", *Hear it Now*, October 18, 2012.
Jaye Millspaugh, "UND to Launch into Orbit", *The Dakota Student*, October 19, 2012.
Larry Friesen, Wes Kelly and Shen Ge, "The 44th Lunar & Planetary Science Conference", *Horizons: The Newsletter of AIAA Houston Section*, March/April, 2013.
Paul Glister, "Time and Distance in Houston", *Centauri Dreams*, September 15, 2012.
Juan Pedraza, "UND Computer Science researchers win NSF grant to teach mission critical skills," July 1, 2014, coverage in:
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Prairie Public Radio, "3D Scanning ~ Pipeline Infrastructure Demands Part 1 ~ Unmanned Aircraft in Agriculture", *Mainstreet*, July 14, 2014.
Amy Halvorson, "UND sits on the cutting-edge of 3D printing technology", *University of North Dakota Website Feature*, July 25, 2014. Available: http://und.edu/features/2014/07/3d-printing.cfm
Juan Pedraza, "UND researchers publish attention-getting article about UAS regulation," August 8, 2014. Available:
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Area Voices – University of North Dakota – Available: http://undnews.areavoices.com/2014/08/14/und-researchers-publish-attention-getting-article-about-uas-regulation/
Juan Pedraza, "Computer Science Offers Innovative 3D Printing Workshop", *University of North Dakota John D. Odegard School of Aerospace Sciences Aerocom Magazine*, 2014.

David Livingston, “NSF Grant to UND Computer Science for undergraduate satellite mission critical development software” (Broadcast 2298), *The Space Show*, August 18, 2014.
David Livingston, “Impact of rules & regulations on small businesses, academics from a smallsat perspective” (Broadcast 2338), *The Space Show*, October 17, 2014.
Prairie Public Radio, “Tax Commissioner Candidate Jason Astrup ~ Ron Smith Garden Questions ~ Remote Sensing Satellites”, *Mainstreet*, October 21, 2014.
Will Biernat, “Turning 3-D Into Reality”, UND Studio One, November 6, 2014.
UND College of Engineering and Mines, “Team Places Second in International Competition”, UND Engineering Magazine, Fall 2014.
Juan Pedraza, “The rise and fall of a technological “Camelot”, UND Discovery, Autumn 2014.
UND Osher Lifelong Learning Institute, “Q&A with one of UND’s 3D printing professionals”, In The Know, Vol. 2, No. 3 (December 2014).
Cade Metz, “Google is Testing its Internet Balloons in a Huge Freezer”, Wired (June 15, 2015).
Sean Farlow, “Google’s Project Loon Now Testing at a Base”, Gazette Review (June 17, 2015).
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Juan Pedraza, “UND Blog: Tiny satellite from UND awarded space launch”, Grand Forks Herald Website, July 7, 2015. Available: http://www.grandforksherald.com/news/education/3781153-und-blog-tiny-satellite-und-awarded-space-launch
Juan Pedraza, “UND’s homegrown miniature satellite ranked atop the list of all NASA proposals”, *University of North Dakota Website Feature*, July 10, 2015. Available: http://und.edu/features/2015/07/cubesat.cfm
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"NDSU's Jeremy Straub on Artificial Intelligence ~ Tourism Director Sarah Otte Coleman ~ Essayist Jessie Veeder", Prairie Public News – Main Street. Available: https://news.prairiepublic.org/podcast/main-street/2023-05-25/ndsus-jeremy-straub-on-artificial-intelligence-tourism-director-sarah-otte-coleman-essayist-jessie-veeder

Bailey Hurley, "Security experts talk concerns, pros to new Snapchat AI chatbot," Valley News Live. April, 24, 2023. Available: https://www.valleynewslive.com/2023/04/24/security-experts-talk-concerns-pros-new-snapchat-ai-chatbot/

Steven Bowcut. "An Interview with Jeremy Straub," Cybersecurity Guide, October 17, 2023.

Dakota Digital Discussion with Scott Meyer (Patrick J. McCloskey, host & Jeremy Straub, discussion leader). Dakota Digital Discussions.

"NDSU team finishes second at cybersecurity competition," NDSU News. October 10, 2022. Available: https://www.ndsu.edu/news/view/detail/70213

"NDSU team wins National Cyber Summit Cyber Cup competition," NDSU News. September 28, 2022. Available: https://www.ndsu.edu/news/view/detail/70008

"NDSU listed among Cyber Skyline Cyber power rankings," NDSU News. March 24, 2022. Available: https://www.ndsu.edu/news/view/detail/67928

"Challey Institute names faculty fellows," NDSU News. August 20, 2021. Available: https://www.ndsu.edu/news/view/detail/63355

Local experts weigh in on the importance of cybersecurity, Cyber Security Monitor, February 22, 2024.

MENTIONS IN PUBLISHED OFFICIAL REPORTS

UND Summer Programs & Events. 2015. University of North Dakota Summer Programs and Events.

Sheila and Robert Challey Institute for Global Innovation and Growth Annual report, 2019 – 2020. Sheila and Robert Challey Institute for Global Innovation and Growth.

Sheila and Robert Challey Institute for Global Innovation and Growth 2020 – 2021 Annual Report. Sheila and Robert Challey Institute for Global Innovation and Growth.

2021 – 2022 Annual Report Sheila and Robert Challey Institute for Global Innovation and Growth at North Dakota State University. Sheila and Robert Challey Institute for Global Innovation and Growth.

2022 – 2023 Annual Report Sheila and Robert Challey Institute for Global Innovation and Growth at North Dakota State University. Sheila and Robert Challey Institute for Global Innovation and Growth.

2023 – 2024 Annual Report Sheila and Robert Challey Institute for Global Innovation and Growth. Sheila and Robert Challey Institute for Global Innovation and Growth.

INDUSTRY EXPERIENCE (SELECTED)

From 1999 – 2011, Jeremy held progressively responsible positions in industry including: IT Manager (Responsible for daily IT operations and project manager for business systems redesign), Technical Manager (Responsible for all technical aspects of software consulting firm), Sr. Technical Solutions Engineer (Consulted to local businesses, taught courses for local university), Business Proprietor (Responsible for all aspects of operations), Executive Vice President: Sales & Marketing (Developed partnerships, conceptualized and co-managed creation of North America's first traffic-adaptive navigation system), Manager of DAS Technology (Responsible for development of company's core product) and Software Developer (Consulted on projects for (among others) Microsoft, Eaton, Ford & Lear).

INDUSTRY PUBLICATIONS & PRESENTATIONS (SELECTED)

"Using a Mobile GIS in Your Business", *Planet PDA Magazine*
"Police Use GPS", *Pocket PC Magazine*

"The Truth About WAAS", *Handheld Computing Magazine*
"Panel on future of telematics and location-based services", Telematics Update Conference
"GPS Technologies", CeBIT America
"Mobile Services", Planet PDA Conference
"Panel on Navigation Technologies", Planet PDA Conference
"Positioning Technologies", Silicon Valley Palm Users Group
"Search Engine Optimization", Greater Cleveland PC Users Group – Web SIG
"Positioning Technologies ", Greater Cleveland PC Users Group Pocket Computing SIG
"IIS 7 Extensibility", Christchurch Dot-Net Users Group Code Camp (November, 2008)

INDUSTRY PRESS MENTIONS (SELECTED)

Chris Seper, "Face time is the name of the game: The focus is on deals at frequent and well-attended technology shows", Cleveland Plain Dealer, November 30, 2003.
"What's in it for him?", Cleveland Plain Dealer, November 30, 2003.
Adelle Waldman, "'Things work out the way you plan,' software designer says", Cleveland Plain Dealer, September 1, 2003.
Jeff Stacklin, "Deal puts software developer on the map", Crain's Cleveland Business, July 2, 2001.
Jeff Stacklin, "Mapopolis.com will help give palm users better directions", Crain's Cleveland Business, August 25, 2003.
Chris Seper, "Finding their place in the world GPS devices are homing in on consumers", Cleveland Plain Dealer, March 31, 2003.
Kim Paterson & Brier Dudley, "Toys and tools have lightened up," Seattle Times, November 23, 2002.
Mike Hogan, "A Little Lost? Get directions at your findertips", Entrepreneur.com, September 30, 2003 (online, October 2003 printed issue). Available: http://www.entrepreneur.com/article/64498
Arik Hesseldahl, "Live Traffic Reports By PDA," Forbes, April 11, 2003. Available: http://www.forbes.com/2003/04/11/cx_ah_0411tentech.html
Kristin Yarbrough, "TechKnow Awards", Inside Business Magazine, April 2003. Available: http://ibmag.com/Main/Archive/TechKnow_Awards_8307.aspx
"Gridlock-evading software launched", Silicon Valley Business Journal, April 16, 2003. Available: http://www.bizjournals.com/sanjose/stories/2003/04/14/daily44.html
"Mapopolis Provides Nationwide Routing on PDA", Heavy Duty Trucking, December 17, 2002. Available: http://www.truckinginfo.com/news/story/2002/12/mapopolis-provides-nationwide-routing-on-pda.aspx

STUDENTS MENTORED (SELECTED)

Noah Root & Paul Johnson – Electrical Engineering Undergraduate Senior Design Project, 2012-2013 Academic Year (co-mentors Ronald Fevig, Reza Fazel-Rezai)
Donovan Torgerson – Computer Science AURA Awardee, Summer and Fall 2013 (co-mentor Ronald Marsh)
Donovan Torgerson – Computer Science CSCI 491 Independent Study, Spring 2013 (co-mentor Scott Kerlin)
Zachary Bryant & Matt Olson – Electrical Engineering Junior Design Project, Spring 2013 (co-mentor ??)
Tyler Leben, Timothy Witney, Zachary Maguire, Kelton Karboviak – OpenOrbiter Project Management Experiential Component, Fall 2013 (co-mentor Scott Kerlin)
Jacob Huhn & Alexander Lewis – Computer Science Senior Design Project, Fall-Spring 2013 (co-mentor Scott Kerlin)
Nick Renford – CSCI 297 (Spring 2014) SmartPhone/Web-based clicker project (co-mentor Scott Kerlin)
C. Peterson, J. Wang, P. Ajjimaporn – CSCI 297 (Spring 2014) – Raspberry Pi-based 3D Scanner project (co-mentor Scott Kerlin)
Tyler Leben, Michael Hlas, Michael Wegerson, Timothy Witney, Benjamin Kading, Jason Bjorgaard – OpenOrbiter Funded Participants (Spring 2014; co-mentors Ronald Marsh, Sima Noghanian)
Benjamin Kading – OpenOrbiter Funded Participant (Summer 2014; co-mentor Ronald Marsh)
Benjamin Kading – CSCI 297 (Fall 2014) – Work on completion of 3D scanner over summer and into fall (co-mentor Scott Kerlin)
Benjamin Kading – SPST 480 (Summer/Fall 2014)
P. Ajjimaporn, K. Friel – Computer Science Senior Design Project, Fall-Spring 2014-2015 (co-mentor Scott Kerlin)
C. Bina – Computer Science Senior Design Project, Fall-Spring 2014-2015 (co-mentor Ronald Marsh)
Michael Hlas, Michael Wegerson, Timothy Witney, Benjamin Kading – OpenOrbiter Funded Participants (Fall 2014; co-mentor Ronald Marsh).
Dakota Feist – CSCI 297 (Fall 2014) 3D Scanner Lighting & User Interface project (co-mentor Scott Kerlin)

Adam Lawman – CSCI 297 (Fall 2014) OpenOrbiter IMU project (co-mentor Scott Kerlin)
Sofiane Chaieb – SPST 480/391 (Fall 2015) Electrical Design work for OpenOrbiter Spacecraft (co-mentor David Whalen)
Stephanie Hollman, Dayln Limesand – CSCI 297 (Spring 2015) Web Interface for 3D Scanner / Printer project (co-mentor Scott Kerlin)
Matthew Russell, Samuel Jackson (co-mentored with Scott Kerlin), Connor Hamlet (co-mentored with Scott Kerlin), Wentong Zhang (co-mentored with Travis Desell) and eight other participants (as secondary mentor) – 2015 Research Experience for Undergraduates program participants.
Jacob Clouse, Joseph Jordan, Ryan Kilbride, Dakota Krout, Caleb Meyer, Robert Olmsted, Sadie Sorenson, Daisy Hensrud, John Roberts – CSCI 297 (Fall 2015) Kickstarter-like website development for the Jet Propulsion Laboratory (co-mentor Scott Kerlin).
Michael Hlas – Computer Science Senior Design Project, Fall-Spring 2015-2016 (co-mentor Travis Desell).

TEACHING EXPERIENCE

At NDSU - *Didactic*

	Spring	**Summer**	**Fall**
2016	N/A	N/A	CSCI 778 – Computer Networks (3 cr) CSCI 790 – Graduate Seminar: Computational Sciences (1 cr)
2017	CSCI 491/783 – Topics in Software Systems: Autonomous Command and Artificial Intelligence for Robots and Other Cyber-Physical Systems CSCI 790 – Graduate Seminar: Scientific Research Experience (1 cr)	CSCI 491/783 – Topics in Software Systems: UAV (Drone) Software / Autonomy (3 cr)	CSCI 345/783 - Cyber-Physical Sys/Cyber-Security (3 cr, 2 undergrad sections) CSCI 477/677 – Object-Oriented Systems
2018	CSCI 345 – UAV/Drone Software CSCI 345/783 – Certified Ethical Hacker* CSCI 415 – Networking / Parallel Computation CSCI 462/662 – Mobile and Wireless Networks		CSCI 410/610 – Computer Crime and Forensics (3 cr) CSCI 485/685 – Cyber-Physical System Autonomy (3 cr) CSCI 790 – Graduate Seminar: Computational Sciences (1 cr)
2019	CSCI 404/604 – Ethical Hacking (2 undergrad and grad sections)* CSCI 491 – Applications of Artificial Intelligence		CSCI 783 – Topics In Software Systems: Methods in Cybersecurity (3 cr)
2020	CSCI 345/783 – Software Entrepreneurship (3 cr) CSCI 783 – Topics In Software Systems: Database Security (3 cr) CSCI 790 – Graduate Seminar: Computational Sciences (2 cr)		CSCI 403/603 – Defensive Network Security CSCI 783 – Topics In Software Systems: Database Security (3 cr)
2021	CSCI 404/604 – Ethical Hacking (2 undergrad & grad sections, 3 cr) CSCI 790 – Graduate Seminar: Cybersecurity and AI (1 cr)		CSCI 403/603 – Defensive Network Security CSCI 410/610 – Computer Crime and Forensics
2022	CSCI 404/604 – Ethical Hacking (3 cr) CSCI 790 – Graduate Seminar: Quantum Computing AI/Security (1 cr)		
2023	CSCI 404/604 – Ethical Hacking (2 undergrad & grad sections, 3 cr) CSCI 790 – Graduate Seminar (1 cr)	CSCI 702 – Survey of Cybersecurity CSCI 790 – Graduate Seminar: Cybersecurity (1 cr)	CSCI 403/603 – Defensive Network Security (2 undergrad & grad sections, 3 cr) CSCI 790 – Graduate Seminar: Cybersecurity (1 cr)

2024	CSCI 404/604 – Ethical Hacking (2 undergrad & grad sections, 3 cr) CSCI 410/610 – Computer Crime and Forensics CSCI 702 – Survey of Cybersecurity (3 cr) CSCI 790 – Graduate Seminar: Explainable Artificial Intelligence (1 cr)	CSCI 702 – Survey of Cybersecurity (3 cr) CSCI 790 – Graduate Seminar: Explainable AI (1 cr) CSCI 790 – Graduate Seminar: Writing & Analysis for Computing (1 cr) CSCI 834 – Knowledge Based Systems	CSCI 359 – Networking (3 cr) CSCI 403/603 – Defensive Network Security (3 cr) CSCI 790 – Graduate Seminar: Cybersecurity (1 cr)

* Course taught with collaborator from DoD

At NDSU - *Non-Didactic*

	Spring	**Summer**	**Fall**
2016	N/A	N/A	CSCI 493 – Undergraduate Research (variable credit)
2017	CSCI 493 – Undergraduate Research (2 sections, variable credit) CSCI 778 – Computer Networks (independent study, 3 cr) CSCI 793 – Individual Study/Tutorial: Scientific Research Experience	CSCI 493 – Undergraduate Research (variable credit)	CSCI 493 – Undergraduate Research (2 sections, variable credit) CSCI 787 - Topics in Operations Research CSCI 793 – Individual Study/Tutorial
2018	CSCI 476/676 – Computer Forensics (independent study, 3 cr) CSCI 493 – Undergraduate Research (2 sections, variable credit) CSCI 494 – Individual Study (3 sections) CSCI 783 – Topics in Software Systems: Underwater robotics (independent study, 3 credits) CSCI 790 – Graduate Seminar: Cyber Security (1 cr)	CSCI 345 – Topics on Personal Computers: Windows Security Essentials (independent study, 3 cr) CSCI 493 – Undergraduate Research (2 sections, variable credit) CSCI 793 – Individual Study/Tutorial: Windows Security	CSCI 394 – Individual Study: Networking and Parallel Computing (3 cr) CSCI 493 – Undergraduate Research (3 sections, variable credit) CSCI 793 – Individual Study/Tutorial: Malware Analysis
2019	CSCI 394 - 01 Individual Study: Palo Alto Firewall Basics (1 cr) CSCI 493 – Undergraduate Research (2 sections, variable credit) CSCI 609 – Cybersecurity Law and Policy (independent study, 3 credits) CSCI 610 – Computer Crime and Forensics (independent study, 3 credits) CSCI 677 – Object-Oriented Systems (independent study, 3 credits) CSCI 790 – Graduate Seminar: Software for Robotics (1 cr) CSCI 793 – Individual Study/Tutorial: Intrusion Detection Systems (3 cr) CSCI 793 – Individual Study/Tutorial: Palo Alto Firewall Basics (1 cr) CSCI 793 – Individual Study/Tutorial: Malware Analysis (3 cr)	CSCI 404 – Ethical Hacking (independent study, 3 credits) CSCI 603 – Defensive Network Security (independent study, 3 credits) CSCI 783 – Topics in Software Systems: Malware Analysis (3 cr) CSCI 795 – Field Experience	CSCI 404 – Ethical Hacking (independent study, 3 credits) CSCI 603 – Defensive Network Security (independent study, 3 credits) CSCI 793 – Individual Study/Tutorial: Exploit Development
2020	CSCI 783 – Topics In Software Systems: Methods in Cybersecurity (independent study, 3 credits) CSCI 783 – Topics In Software Systems: Malware Analysis (independent study, 3 credits)	CSCI 893 – Individual Study/Tutorial: Advanced CPS Autonomy	CSCI 493 – Undergraduate Research (variable credit)
2021			CSCI 493 – Undergraduate Research (variable credit)

2022	CSCI 493 – Undergraduate Research (variable credit)	CSCI 793 – Individual Study/Tutorial: Hardware Artificial Intelligence	HON 489 – Senior Thesis
2023	CSCI 493 – Undergraduate Research (variable credit) HON 489 – Senior Thesis	CSCI 493 – Undergraduate Research (variable credit)	CSCI 493 – Undergraduate Research (variable credit) CSCI 893 – Individual Study/Tutorial: AI & Cybersecurity
2024	CSCI 493 – Undergraduate Research (variable credit)	CSCI 493 – Undergraduate Research (variable credit)	CSCI 409/609 – Cybersecurity Law and Policy (independent study, 3 credits)

Older:

UND CSCI 297 (Fall 2013, Spring 2014, Fall 2014, Spring 2015, Fall 2015) – Software Project Management through Experiential Learning (role: instruction, mentoring of experiential learning component).

UND CSCI 384 (Spring 2014, Spring 2015, Spring 2016) – Weekly SCALE-UP session with practical AI implementation projects (2014), co-taught course with SCALE-UP content incorporated as one-half of course contact time (2015).

UND CSCI 101T (Spring 2015, Fall 2015, Spring 2016) – Course on using STK software.

COURSE DESIGN EXPERIENCE

At NDSU - *New Development*

- CSCI 345/783 – Software Entrepreneurship
- CSCI 359 – Networking
- CSCI 403/603 – Defensive Network Security
- CSCI 404/604 – Ethical Hacking
- CSCI 409/609 – Cybersecurity Law and Policy
- CSCI 408/608 – Malware Detection, Analysis and Threat Mechanisms
- CSCI 410/610 – Computer Crime and Forensics
- CSCI 485/685 – Cyber-Physical System Autonomy
- CSCI 491/783 – Topics in Software Systems: UAV (Drone) Software / Autonomy
- CSCI 702 – Survey of Cybersecurity
- CSCI 783 – Topics In Software Systems: Methods in Cybersecurity
- CSCI 783 – Topics In Software Systems: Database Security
- CSCI 790 – Graduate Seminar – multiple (3+) seminar topics developed
- CSCI 834 – Knowledge Based Systems

At NDSU - *Development of Course Version (i.e., my version of existing course)*

- CSCI 415 – Networking / Parallel Computation
- CSCI 462/662 – Mobile and Wireless Networks
- CSCI 477/677 – Object-Oriented Systems
- CSCI 778 – Computer Networks

Older:

UND CSCI 297 (Fall 2013) – Software Project Management through Experiential Learning.

UND CSCI 384 (Spring 2014) – Augmentation of existing undergraduate AI class to incorporate SCALE-UP techniques.

UND CSCI 384 (Spring 2015) – Additional revision of course to bring SCALE-UP portion of course to 50% of contact time.

UND CSCI 101T (Spring 2015) – Course on using STK software for air and space mission design.

PROGRAM DESIGN EXPERIENCE

Led redevelopment of Graduate Certificate in Cybersecurity, NDSU.

Led development of B.S. in Cybersecurity, NDSU.

Led redevelopment of M.S. & Ph.D. program in Software Engineering to Software and Security Engineering (program with two tracks, focusing on software engineering and cybersecurity, NDSU.

GUEST LECTURES & PRESENTATIONS

International Trafficking in Arms (ITAR) & Export Administration Regulations (EAR). SPST 565 – Space Law, University of North Dakota. April 28, 2014.
Aviation Cybersecurity. AVIT 501 – General Issues in Aviation/Aerospace, University of North Dakota. October 20, 2014.
Divide & Conquer: Breaking Down Development & Work. Louisiana Tech University. November 10, 2015.
Divide & Conquer: Breaking Down Development & Work. Truman State University. December 4, 2015.
Cybersecurity for Emergency Management, North Dakota State University, 2018.

ACADEMIC TRAINING

Certificate of Completion, National Science Foundation I-CORPS. New York City, January to February 2016.
Palo Alto Networks Authorized Cybersecurity Academy Instructor – Cybersecurity Foundation, Fall 2018.
Dare to Lead Leadership Training, North Dakota State University, January to February 2020.
Searching for Excellence – Search Committee Leadership Training, North Dakota State University, August 21, 2019.
Community of Respect, Modules 1 to 4 – January and February, 2021.
Safe Zone Training, Modules 1 to 3 – February, 2021.

ARTICLE 16
TENURE

16.1 Eligibility.

(a) Faculty with the rank of Assistant Professor, Associate Professor, Professor, and other Faculty the Board may designate, will be eligible for tenure, unless appointed pursuant to Section 9.4(f) (Fixed Multi-Year Appointments).

(b) The University may, by rule, make Assistant Professors ineligible for tenure. If the University explores this option, it will work through the system of shared governance. The UFF will be notified of any proposed rule and offered an opportunity to discuss such rule in consultation with the President or representative, as provided under Article 2 (Consultation). If the University promulgates a rule that makes Assistant Professors ineligible for tenure, such rule will only apply to Faculty hired after the effective date of this Agreement.

(c) The Board may designate other positions as tenure-earning and will notify the Faculty Member of such status at the time of initial appointment.

(d) Tenure will be in a Department/Unit.

(e) Tenure will not extend to administrative appointments.

16.2 Tenure Decision.

(a) A Faculty Member will normally be considered for tenure during the sixth (6th) Year of Continuous Service in a tenure-earning position, including any prior service credit granted at the time of initial employment.

(b) A Faculty Member may seek to be considered for tenure earlier than the sixth (6th) Year of Continuous Service if University policy permits, and as long as the Faculty Member complies with University policy.

(c) By the end of six (6) Years of Continuous Service at the University, a Faculty Member eligible for tenure will either be awarded tenure by the Board or given notice that further employment will not be offered.

(d) Decision by the Board. The Board will award tenure. This decision will normally be made at the first Board meeting following the end of the Spring Semester, but no later than the following meeting.

(e) A Faculty Member being considered for tenure prior to the sixth (6th) Year may withdraw from consideration on or before March 15 without prejudice.

16.3 Criteria for Tenure.

(a) The decision to award tenure to a Faculty Member will be a result of meritorious performance and will be based on established criteria specified in writing by the Board and the University. The decision will take into account the following:

(1) annual performance evaluations;

(2) the needs of the Department/Unit, College/division, and University;

(3) the contributions of the Faculty Member to the Faculty Member's academic Unit (program, Department/Unit, College/division); and

(4) the contributions the Faculty Member is expected to make to the institution.

(b) The University will give a copy of the criteria for tenure to Faculty eligible for tenure, and each such Faculty Member will be apprised in writing once each Year of the Faculty

Member's progress toward tenure. The appraisal will be included as a separate section of the annual evaluation and is intended to provide assistance and counseling to candidates to help them qualify themselves for tenure.

(c) The tenure appraisals are not binding upon the University.

(d) The Faculty Member may request, in writing, a meeting with an administrator at the next higher level to discuss concerns regarding the tenure appraisal which were not resolved in previous discussions with the evaluator.

(e) Tenure criteria will be available in the Department/Unit office and/or at the College/division level.

16.4 Modification of Criteria.

(a) Modifying criteria. The Board and the University may modify the criteria for tenure so long as the UFF has been notified of the proposed changes and offered an opportunity to discuss such changes in consultation with the University President or representative.

(b) Changes in criteria will not become effective until one (1) Year following adoption of the changes, unless mutually agreed to in writing by the UFF and the University.

(c) The date of adoption will be the date on which the changes are approved by the Chief Academic Officer.

(d) Any proposal to develop or modify tenure criteria will be available for discussion by members of the affected Departments/Units before adoption.

(e) Effect on Faculty. The provisions of Section 10.3(f) (Equitable Opportunity) are applicable to the modified criteria. Further, if a Faculty Member has at least three (3) Years of tenure-earning credit as of the date on which the tenure criteria are adopted under Section 16.4(a) through (d) (Modification of Criteria), above, the Faculty Member will be evaluated for tenure under the criteria as they existed prior to modification unless the Faculty Member has notified the University at least thirty (30) Days prior to commencement of the tenure consideration that he or she has chosen to be evaluated under the newly-adopted criteria.

16.5 Recommendations and Procedures.

(a) Recommendations for awarding tenure will be made by the Faculty Member's Supervisor and will include a poll by secret ballot of the tenured members of the Faculty Member's Department/Unit.

(b) The performance of a Faculty Member during the entire term of employment at the University will be considered in determining whether to grant tenure.

(c) Recommendations regarding tenure will include a copy of the applicable tenure criteria, the Faculty Member's annual work assignments, annual evaluations, student evaluations, and, if the Faculty Member chooses, the Faculty Member's tenure appraisals. The reviewers at any stage in the review process may request to view any tenure appraisals.

(d) Prior to the consideration of the Faculty Member's candidacy, the Faculty Member will have the right to review the contents of the tenure file and may attach a brief response to any materials therein.

(e) Evaluative materials or summaries thereof prepared by peer committees may be placed in the tenure file when signed by a representative of the committee.

(f) It is the responsibility of the Faculty Member to see that the file is complete.

(g) The provisions of Sections 12.2 (Access) through 12.7 (Removal of Contents) of this Agreement will apply to the contents of the tenure file.

(h) If any material is added to the file after the commencement of consideration, a copy will be sent to the Faculty Member within five (5) Days (by personal delivery or by mail, return receipt requested).

(i) The Faculty Member may attach a brief response within five (5) Days of his or her receipt of the added material. The file will not be forwarded until either the Faculty Member submits a response or until the second five- (5) Day period expires, whichever occurs first.

(j) The only documents which may be considered in making a tenure recommendation are those contained or referenced in the tenure file or those required to verify or clarify statements in the tenure file.

16.6 Notice of Decision.

(a) The Faculty Member will be notified in writing by the University within ten (10) Days or as soon as possible thereafter of the decision with regard to tenure.

(b) If the application for tenure is denied, the Faculty Member may request, in writing and within twenty (20) Days of the receipt of the denial, a written statement by the University of the reasons for the denial.

(c) The written response will be provided by the University within thirty (30) Days after the request.

16.7 Other Considerations.

(a) During the period of tenure-earning service, the Faculty Member's employment will be governed by the provisions of Article 13 (Non-Reappointment).

(b) Part-time service of a Faculty Member employed at least one (1) Semester in any twelve (12) month period will be accumulated. For example, two (2) Semesters of half-time service will be considered one-half (1/2) Year of service toward the period of tenure-earning service.

(c) Where Faculty Members are credited with tenure-earning service at the time of initial appointment, all or a portion of such credit may be withdrawn once by the Faculty Member prior to formal application for tenure.

16.8 Transfer of Tenure.

If transfer of tenure across State universities becomes possible, the University and the UFF will review options for such transfer during regular consultation as discussed in Article 2 (Consultation).

16.9 Tenure upon Appointment.

Tenure may be granted to a Faculty Member by the Board at the time of initial appointment, upon recommendation of the appropriate administrator. The administrator will consider the recommendation of the Department or equivalent Unit prior to making his or her final tenure recommendation.

16.10 Leave.

Authorized leaves of absence may, under the provisions of Article 19 (Leaves), be credited toward the period of tenure-earning service.

16.11 Termination/Layoff.
Tenure guarantees annual reappointment for the Academic Year until voluntary resignation, retirement, removal for just cause in accordance with the provisions of Article 17 (Disciplinary Action) or Article 18 (Job Abandonment), or layoff in accordance with the provisions of Article 14 (Layoff and Recall), but does not extend to administrative appointments.

ARTICLE 17
DISCIPLINARY ACTION

17.1 Policy.
The purpose of this Article is to provide a prompt and Equitable procedure for disciplinary action taken with just cause.

(a) Just cause is defined as
  (1) incompetence, or
  (2) misconduct.

(b) A Faculty Member's activities which fall outside the scope of employment will constitute misconduct only if such activities adversely affect the legitimate interests of the University.

17.2 Progressive Discipline.
Both parties endorse the principle of progressive discipline as applied to professionals. When administering discipline, the University will consider the Faculty Member's disciplinary history, along with facts and circumstances of the Faculty Member's misconduct and/or job performance.

17.3 Notice of Intent to Suspend or Terminate.
When the President or representative has reason to believe that a suspension or termination should be imposed, the President or representative will provide the Faculty Member with a written notice of intent to suspend or terminate ("Notice of Intent") and the reasons therefor.

(a) The Notice of Intent will be sent by certified mail, return receipt requested; priority regular mail; electronic via@uwf.edu email; or delivered in person with written documentation of receipt obtained.

(b) The Faculty Member will be given ten (10) Days in which to respond in writing to the President or representative before the proposed action is taken.

(c) After the ten (10) Day period, the President or representative may
  (1) issue a notice of suspension or termination:
  (2) issue a notice of lesser disciplinary action:
  (3) issue a notice that no disciplinary action will be taken

(d) If the President or representative does not, within forty-five (45) Days of the date of the Notice of Intent take one of the actions described in Section 17.3(c) (Notice of Intent to Suspend or Terminate), the Faculty Member may request a decision of the President or representative. In response, the University may take the action specified in 17.3(c) or may request an extension of up to forty-five (45) Days. The University will provide this response within three (3) Days. Such extension will be granted by the UFF and additional extensions may be requested, if needed, and will be granted by the UFF.

(e) If no disciplinary action follows the Notice of Intent, the Notice of Intent will not be retained in the Faculty Member's master evaluation file or personnel file.

(f) The Faculty Member has the right to union representation during investigatory questioning that may reasonably be expected to result in disciplinary action.

Board of Trustees
Academic Affairs Committee
August 14, 2025

UWF BOT Academic Affairs Committee Charter Revisions

Recommended Action:
Approve the revisions to the UWF Board of Trustees Academic Affairs Committee Charter.

Background Information:
The UWF Board of Trustees Academic Affairs Committee Charter is required to review its Committee Charter at least every two years. The Academic Affairs Committee last reviewed their charter at the November 14, 2024, committee meeting. The Academic Affairs Committee Chair requested revisions to the committee charter.

Implementation Plan:
The charter revisions will be effective upon approval.

Fiscal Implications:
Fiscal oversight by the UWF Board of Trustees.

Relevant Authority:
UWF Board of Trustees Bylaws 3.3 and Board of Trustees Academic Affairs Committee.

Supports Strategic Direction(s):
This action item supports all seven Strategic Directions.

Supporting Documents:
1. UWF BOT Academic Affairs Committee Charter - Redline
2. UWF BOT Academic Affairs Committee Charter - Clean

Prepared by:
Jaromy Kuhl, Senior Vice President and Provost, 850.474.2035, jkuhl@uwf.edu

Presenter:
Jaromy Kuhl, Senior Vice President and Provost

Board of Trustees
UNIVERSITY of WEST FLORIDA

Academic Affairs Committee Charter

1. Overall Purpose and Objectives:

1.1 The Academic Affairs Committee ("Committee") is a committee of the University of West Florida ("University") Board of Trustees ("Board") whose members are appointed by the Chair of the Board.

1.2 The general purpose of the Committee is to review and make recommendations to the Board regarding the institution's academic mission, as well as policies and resources needed to realize that mission, execute UWF's academic strategic priorities, and ensure the quality and integrity of each of UWF's academic programs.

1.3 The Committee shall provide governance oversight on such matters as academic program development, review, accreditation, and discontinuance; student admission and performance standards; faculty tenure; major academic initiatives; and maintaining an appropriate balance among teaching, research/scholarship, and service.

2. Authority:

The Board authorizes the Committee to:

2.1 Monitor the relationship between academic mission and strategy.

2.2 Review proposals for new academic programs, information from periodic program reviews and accreditation processes, and proposals for the discontinuance of any academic programs.

2.3 Ensure appropriate alignment between the University's academic philosophy and plan and ensure that programs are appropriate to respond to student interest and professional workforce needs.

2.4 Monitor University compliance with the Board's academic regulations.

2.5 Ensure that the academic budget reflects the institution's academic mission and priorities.

2.6 Ensure that faculty personnel policies and other academic policies address state and federal expectations and complement the University's academic priorities.

2.7 Ensure that the institution assesses the effectiveness of its academic programs.

3. Organization Membership:

3.1 The Chair of the Board will appoint the chair and members of the Committee.

3.2 The Committee will be comprised of at least three (3) members, including the president of the Faculty Senate, all of whom are voting Trustees of the University.

3.3 The Chair of the Board will serve as an ex officio voting member of the Committee.

3.4 A majority of the Committee members, if not all, shall possess general knowledge about University academics at the governance level.

3.5 Members will serve on the Committee until their departure, resignation, a new Faculty Senate president begins ~~their~~ his or her term, or replacement by the Chair of the Board.

3.6 The Chair of the Committee serves as the liaison to the Board's Executive Committee ~~is the Chair of the Committee~~.

3.7 The Provost/Vice President of Academic Affairs will serve as staff and primary liaison to the Committee.

4. Meetings:

4.1 A simple majority of the members of the Committee will constitute a quorum for the transaction of business.

4.2 The Committee shall meet at least four (4) times annually. Additional meetings may be held as the circumstances dictate. The meetings will be open to the public. The Committee will invite members of the administration, faculty, or others to attend meetings and provide pertinent information.

4.3 The Committee shall maintain written minutes of its meetings, and ~~for~~ the Committee Chair ~~to~~ shall approve each meeting's agenda.

4.4 The Provost/Vice President of Academic Affairs will regularly meet and correspond with the Chair of the Committee. Said Provost/Vice President of Academic Affairs will further advise and keep informed, as needed, both the President and the Chair of the Board on a regular basis regarding matters brought before and actions taken by the Committee, as well as proposed additions to, amendments to, or deletions of academic policies that otherwise would not come before the Committee.

4.5 The Committee shall provide regular updates of Committee activities to the Board for matters within the Committee's area of responsibility.

4.6 The Committee may request special presentations or reports that may enhance members' understanding of their responsibilities.

4.7 It is the intent of the Committee for matters within its purview to come before the Committee as early as possible, and likewise proposed additions, amendments, or deletions of academic policies that otherwise would not come before the Committee, so that the Committee can issue its recommendations and exercise its oversight at the beginning of any particular project or matter.

5. Roles and Responsibilities:

5.1 The Committee shall be responsible for reviewing and recommending to the Board policies affecting the overall academics of the University. The Committee shall bring action items and make reports to the Board as it deems necessary.

5.2 Regularly review pertinent data and other information to monitor academic programs to ensure that they reflect the University's mission, priorities, and strategies.

5.3 Ensure that the University's strategic plan is built upon a comprehensive academic plan.

5.4 Review academic policies and propose new or revised policies, as appropriate, to the Board.

5.5 Monitor the University's strategies in enrollment management.

5.6 Monitor the integration of information technology into the University's teaching and learning.

5.7 Review significant findings and recommendations received from the ~~Southern Association of Colleges and Schools – Council on Colleges (SACS-COC)~~University's institutional accreditor and specialized accrediting agencies and ensure that any recommendations and requirements are addressed appropriately within designated timeframes.

5.8 Review the University's data and peer institution data regarding educational status, performance, quality, and value, and ensure that academic Key Performance Indicators are appropriately set and met.

5.9 Maintain appropriate flexibility to address changing conditions and provide reasonable assurances to the Board that the academic programs, quality of faculty, and academic policies are appropriate and in compliance with state and federal requirements.

5.10 Take responsibility for serving as diligent and knowledgeable Board members regarding academic programs and policies.

5.11 Specific Responsibilities of the Committee include:

5.11.1 Conduct or authorize investigations into matters within the Committee's scope of responsibilities. The Committee shall be empowered to retain independent counsel or others to assist it in the conduct of any investigation.

5.11.2 Report Committee actions to the Board with such recommendations the Committee may deem appropriate.

5.11.3 Bring to the attention of the Board any matters concerning the University's academic programs or faculty on which it requires guidance or direction from the Board.

5.11.4 Consider and advise on any matter referred to it by the Board, the University President, or the Provost/Vice President of Academic Affairs.

5.11.5 Perform other governance oversight as assigned by the Board.

6. Charter Review:

6.1 Adopting a formal written charter that is approved by the Board. The charter shall specify the scope of responsibility, process, membership, etc. The charter will be reviewed as necessary but at least every two years, beginning two years from the adoption date, and the Committee will present ~~discuss~~ any required or recommended changes to the Board.

6.2 Ensure that the charter is approved or reapproved by the Board after each update.

History: *originally an integral part of the former BOT Academic and Student Affairs Committee, 12/09/05; realigned as a stand-alone committee and adopted, 03/08/12; substantive revisions adopted 11/14/2024; revised [date].*

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Board of Trustees
UNIVERSITY of WEST FLORIDA

Academic Affairs Committee Charter

1. Overall Purpose and Objectives:

1.1 The Academic Affairs Committee ("Committee") is a committee of the University of West Florida ("University") Board of Trustees ("Board") whose members are appointed by the Chair of the Board.

1.2 The general purpose of the Committee is to review and make recommendations to the Board regarding the institution's academic mission, as well as policies and resources needed to realize that mission, execute UWF's academic strategic priorities, and ensure the quality and integrity of each of UWF's academic programs.

1.3 The Committee shall provide governance oversight on such matters as academic program development, review, accreditation, and discontinuance; student admission and performance standards; faculty tenure; major academic initiatives; and maintaining an appropriate balance among teaching, research/scholarship, and service.

2. Authority:

The Board authorizes the Committee to:

2.1 Monitor the relationship between academic mission and strategy.

2.2 Review proposals for new academic programs, information from periodic program reviews and accreditation processes, and proposals for the discontinuance of any academic programs.

2.3 Ensure appropriate alignment between the University's academic philosophy and plan and ensure that programs are appropriate to respond to student interest and professional workforce needs.

2.4 Monitor University compliance with the Board's academic regulations.

2.5 Ensure that the academic budget reflects the institution's academic mission and priorities.

2.6 Ensure that faculty personnel policies and other academic policies address state and federal expectations and complement the University's academic priorities.

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3. Organization Membership:

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3.5 Members will serve on the Committee until their departure, resignation, a new Faculty Senate president begins his or her term, or replacement by the Chair of the Board.

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4.5 The Committee shall provide regular updates of Committee activities to the Board for matters within the Committee's area of responsibility.

4.6 The Committee may request special presentations or reports that may enhance members' understanding of their responsibilities.

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5. Roles and Responsibilities:

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5.7 Review significant findings and recommendations received from the University's institutional accreditor and specialized accrediting agencies and ensure that any recommendations and requirements are addressed appropriately within designated timeframes.

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5.9 Maintain appropriate flexibility to address changing conditions and provide reasonable assurances to the Board that the academic programs, quality of faculty, and academic policies are appropriate and in compliance with state and federal requirements.

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empowered to retain independent counsel or others to assist it in the conduct of any investigation.

5.11.2 Report Committee actions to the Board with such recommendations the Committee may deem appropriate.

5.11.3 Bring to the attention of the Board any matters concerning the University's academic programs or faculty on which it requires guidance or direction from the Board.

5.11.4 Consider and advise on any matter referred to it by the Board, the University President, or the Provost/Vice President of Academic Affairs.

5.11.5 Perform other governance oversight as assigned by the Board.

6. Charter Review:

6.1 Adopting a formal written charter that is approved by the Board. The charter shall specify the scope of responsibility, process, membership, etc. The charter will be reviewed as necessary but at least every two years, beginning two years from the adoption date, and the Committee will present any required or recommended changes to the Board.

6.2 Ensure that the charter is approved or reapproved by the Board after each update.

History: *originally an integral part of the former BOT Academic and Student Affairs Committee, 12/09/05; realigned as a stand-alone committee and adopted, 03/08/12; substantive revisions adopted 11/14/2024; revised [date].*

Board of Trustees
Academic Affairs Committee
August 14, 2025

General Education Course Offerings

Recommended Action:
Approve the list of general education course offerings effective Fall 2026.

Background Information:
Board of Governors (BOG) Regulation 8.005, General Education Course Options, was revised effective January 24, 2024, and created a new annual review of general education course offerings for each state university.

UWF's initial list effective for Fall 2025 was approved by the BOG on January 30, 2025. UWF personnel and leadership have worked with BOG staff on the course descriptions and student learning outcomes for the new and updated courses. Each course has received appropriate faculty governance and administrative oversight, and each course meets general education course requirements in accordance with sections 1007.24, 1007.25, and 1007.55, Florida Statutes.

UWF requests approval of the attached list of courses to be offered across the five disciplinary subject areas of communications, humanities, mathematics, natural science, and social sciences.

Implementation Plan:
1. The UWF BOT Academic Affairs Committee approves the list of general education course offerings effective Fall 2026 on August 14, 2025.
2. The UWF BOT approves the list of general education course offerings effective Fall 2026 at its special meeting on August 14, 2025.
3. UWF will submit the list of general education course offerings and signed certification form to the Office of K-20 Articulation of the Florida Department of Education upon approval of the BOT and prior to the deadline of September 1, 2025.
4. Upon approval by the Articulation Coordinating Committee (ACC), the ACC will submit UWF's completed list of general education courses to the Board of Governors no later than December 1, 2025.
5. The Board of Governors will consider UWF's completed list of general education courses for approval and implementation effective Fall 2026 during its January 2026 meeting.
6. UWF will implement the BOG approved list of general education course offerings in Fall 2026.

Fiscal Implications:
No Fiscal Implications

Relevant Authority:
BOG Regulation 8.005, General Education Course Options
Sections 1007.24, 1007.25, and 1007.55, Florida Statutes

Supports Strategic Direction(s):
Strategic Direction 1: Student Centered and Focused and Strategic Direction 3: Exceptional Academic Programming and Scholarship Aligned with State Needs

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Supporting Documents:
1. General Education Course Offerings List for UWF effective Fall 2026
2. Certification Form

Prepared by:
Dr. Eric Kollar, Director of General Education, Division of Academic Affairs, ekollar1@uwf.edu

Presenter:
Dr. Dallas Snider, Vice Provost, Division of Academic Affairs

Statewide Course Numbering System
General Education Course Report

Prefix	Level	Course Number	Lab	Course Title	Credit	General Ed Core Discipline Area	General Ed Discipline Area	Course Review Status	General Education Updates	Total # Institutions Offering Course	Included in 2025-26 Gen Ed List	Last Semester & Year Course Taught	Course Descritption	Learning Outcomes
AMH	2	010		UNITED STATES TO 1877	3	Social Sciences	Social Sciences	No Updates		49	Yes	Fall 2025	IN THIS COURSE STUDENTS WILL EXAMINE UNITED STATES HISTORY FROM BEFORE EUROPEAN CONTACT TO 1877. TOPICS WILL INCLUDE BUT ARE NOT LIMITED TO INDIGENOUS PEOPLES, THE EUROPEAN BACKGROUND, THE COLONIAL PERIOD, THE AMERICAN REVOLUTION, THE ARTICLES OF CONFEDERATION, THE CONSTITUTION, ISSUES WITHIN THE NEW REPUBLIC, SECTIONALISM, MANIFEST DESTINY, SLAVERY, THE AMERICAN CIVIL WAR, AND RECONSTRUCTION.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL DESCRIBE THE FACTUAL DETAILS OF THE SUBSTANTIVE HISTORICAL EPISODES UNDER STUDY. STUDENTS WILL IDENTIFY AND ANALYZE FOUNDATIONAL DEVELOPMENTS THAT SHAPED AMERICAN HISTORY FROM BEFORE EUROPEAN CONTACT TO 1877 USING CRITICAL THINKING SKILLS. STUDENTS WILL DEMONSTRATE AN UNDERSTANDING OF THE PRIMARY IDEAS, VALUES, AND PERCEPTIONS THAT HAVE SHAPED UNITED STATES HISTORY. STUDENTS WILL DEMONSTRATE COMPETENCY IN CIVIC LITERACY. ADDITIONAL SLOS: RECOGNIZE HISTORY AS AN INTERPRETATIVE ACCOUNT OF THE HUMAN PAST CREATED IN THE PRESENT FROM SURVIVING EVIDENCE. BUILD HISTORICAL KNOWLEDGE ABOUT AMERICAN HISTORY PRIOR TO 1877. EVALUATE HISTORIANS' ARGUMENTS EXPLAINING HOW THEY WERE CONSTRUCTED AND MIGHT BE IMPROVED. EVALUATE AND ANALYZE PRIMARY SOURCES. DISCUSS AND PRACTICE THE BASIC METHODS AND TRADITIONS OF RESEARCH AND ANALYSIS IN HISTORY. UWF GENERAL EDUCATION SLOS: SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS (CRITICAL THINKING). REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT (INTEGRITY AND VALUES).
AMH	2	020		UNITED STATES SINCE 1877	3	Social Sciences	Social Sciences	No Updates		47	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL TRACE THE HISTORY OF THE UNITED STATES FROM THE END OF THE RECONSTRUCTION ERA TO THE CONTEMPORARY ERA. TOPICS WILL INCLUDE BUT ARE NOT LIMITED TO THE RISE OF INDUSTRIALIZATION, THE UNITED STATES' EMERGENCE AS AN ACTOR ON THE WORLD STAGE, CONSTITUTIONAL AMENDMENTS AND THEIR IMPACT, THE PROGRESSIVE ERA, WORLD WAR I, THE GREAT DEPRESSION AND NEW DEAL, WORLD WAR II, ISSUES OF CIVIL AND MINORITY RIGHTS, THE COLD WAR, AND THE UNITED STATES SINCE 1989.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL DESCRIBE THE FACTUAL DETAILS OF THE SUBSTANTIVE HISTORICAL EPISODES UNDER STUDY. STUDENTS WILL IDENTIFY AND ANALYZE FOUNDATIONAL DEVELOPMENTS THAT SHAPED AMERICAN HISTORY SINCE 1877 USING CRITICAL THINKING SKILLS. STUDENTS WILL DEMONSTRATE AN UNDERSTANDING OF THE PRIMARY IDEAS, VALUES, AND PERCEPTIONS THAT HAVE SHAPED AMERICAN HISTORY. STUDENTS WILL DEMONSTRATE COMPETENCY IN CIVIC LITERACY. ADDITIONAL SLOS: STUDENTS WILL DEVELOP AND DEMONSTRATE AN UNDERSTANDING OF THE BASIC PRINCIPLES AND PRACTICES OF AMERICAN DEMOCRACY AND HOW THEY ARE APPLIED IN OUR REPUBLICAN FORM OF GOVERNMENT. STUDENTS WILL DEVELOP AND DEMONSTRATE AN UNDERSTANDING OF THE UNITED STATES CONSTITUTION AND ITS APPLICATION. STUDENTS WILL DEVELOP AND DEMONSTRATE KNOWLEDGE OF THE FOUNDING DOCUMENTS AND HOW THEY HAVE SHAPED THE NATURE AND FUNCTIONS OF OUR INSTITUTIONS OF SELF-GOVERNANCE. STUDENTS WILL DEVELOP AND DEMONSTRATE AN UNDERSTANDING OF LANDMARK SUPREME COURT CASES, LANDMARK LEGISLATION, AND LANDMARK EXECUTIVE ACTIONS AND THEIR IMPACT ON LAW AND SOCIETY. STUDENTS WILL SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS. STUDENTS WILL REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT.
AML	2	010		AMERICAN LITERATURE I	3		Humanities	No Updates		22	Yes	Spring 2025	SURVEY OF MAJOR AMERICAN LITERATURE FROM COLONIAL TIMES TO THE CIVIL WAR. INCLUDES SELECTIONS FROM THE WESTERN CANON. OPEN TO ALL STUDENTS.	RECOGNIZE ELEMENTS OF LITERARY WORKS (SUCH AS PLOT, SETTING, CHARACTER, POINT OF VIEW, FORM, AND NARRATIVE STRUCTURE) AND EFFECTIVELY USE LITERARY AND CRITICAL TERMINOLOGY CRITICALLY INTERPRET LITERARY WORKS BY AMERICAN WRITERS OF VARIOUS GENRES, PERIODS, TRADITIONS, AND ETHNIC BACKGROUNDS CONSTRUCT PERSUASIVE ARGUMENTS USING TEXTUAL EVIDENCE AND ANALYSIS PRESENT IDEAS CLEARLY AND EFFECTIVELY IN WRITTEN AND ORAL COMMUNICATIONS USING PROPER ENGLISH GRAMMAR AND SYNTAX AVOID PLAGIARISM PROPERLY CITE SOURCES USING MLA STYLE TOPICS COLONIALISM PURITAN ORIGINS EARLY REPUBLICAN LITERATURE ROMANTIC LITERATURE RISE OF THE NOVEL NATIVE AMERICAN LITERATURE SLAVE NARRATIVES
AML	2	020		AMERICAN LITERATURE II	3		Humanities	No Updates		20	Yes	Fall 2025	SURVEY OF MAJOR AMERICAN LITERATURE FROM THE CIVIL WAR TO THE PRESENT. INCLUDES SELECTIONS FROM THE WESTERN CANON. OPEN TO ALL STUDENTS.	RECOGNIZE ELEMENTS OF LITERARY WORKS (SUCH AS PLOT, SETTING, CHARACTER, POINT OF VIEW, FORM, AND NARRATIVE STRUCTURE) AND EFFECTIVELY USE LITERARY AND CRITICAL TERMINOLOGY CRITICALLY INTERPRET LITERARY WORKS BY AMERICAN WRITERS OF VARIOUS GENRES, PERIODS, TRADITIONS, AND ETHNIC BACKGROUNDS CONSTRUCT PERSUASIVE ARGUMENTS USING TEXTUAL EVIDENCE AND ANALYSIS PRESENT IDEAS CLEARLY AND EFFECTIVELY IN WRITTEN AND ORAL COMMUNICATIONS USING PROPER ENGLISH GRAMMAR AND SYNTAX AVOID PLAGIARISM PROPERLY CITE SOURCES USING MLA STYLE TOPICS ROMANTICISM REALISM NATURALISM INDUSTRIALIZATION WAR AND SOCIETY MODERNISM POSTMODERNISM
AMS	2	010		CIVICL DISCOURSE AND THE AMERICAN POLITICAL ORDER	3		Humanities	No Updates		2	Yes	N/A	STUDENTS WILL EXPLORE THE CONCEPT OF CIVIL DISCOURSE ALONG WITH THE BASIC PRINCIPLES OF AMERICAN DEMOCRACY AND HOW THEY ARE APPLIED IN OUR REPUBLICAN FORM OF GOVERNMENT. THROUGH A REVIEW OF THE US CONSTITUTION, FOUNDING DOCUMENTS AND LANDMARK SUPREME COURT CASES, STUDENTS WILL UNDERSTAND HOW THE NATURE AND FUNCTIONS OF OUR INSTITUTIONS OF SELF-GOVERNANCE HAVE BEEN SHAPED. STUDENTS WILL THEN APPLY THESE LESSONS TO CASE STUDIES.	STUDENT LEARNING OUTCOMES (SLO'S) DEFINE AND EXPLAIN THE BASIC PRINCIPLES AND TERMINOLOGY OF CIVIL DISCOURSE. REFLECT ON THE THEORIES AND EXPRESSIONS OF CIVIL DISCOURSE IN THE CONTEXT OF THE AMERICAN POLITICAL ORDER. ANALYZE AND DISCUSS PRIMARY TEXTS AND SITUATE THEM IN HISTORICAL, PHILOSOPHICAL, RELIGIOUS AND LITERARY CONTEXTS. COMPARE PRIMARY TEXTS WITH MODERN CONCEPTIONS OF THEM. EVALUATE MULTIPLE PERSPECTIVES AND COMPETING CLAIMS OF CIVIL DISCOURSE AND HISTORICAL CONTEXTS. UWF GENERAL EDUCATION SLO: INTERPRET AND ANALYZE TOOLS AND TECHNIQUES OF COMMUNICATION WITHIN CULTURAL FORMS OR CULTURAL CONTEXTS. IDENTIFY THE INTRINSIC VALUE OF CULTURE AND CULTURAL ARTIFCATS. UWF COLLEGE-LEVEL WRITING SLO: COMPOSE AND REVISE A RESEARCHED ACADEMIC PAPER THAT ADHERES TO DISCIPLINE-SPECIFIC CONVENTIONS. PRODUCE (THROUGH REVISION) EFFECTIVE WRITTEN COMMUNICATIONS THAT SUPPORT AUTHOR INTENT AND ADDRESS A SPECIFIC AUDIENCE.

Statewide Course Numbering System
General Education Course Report

ANT	2	000		INTRODUCTION TO ANTHROPOLOGY	3	Social Sciences	Social Sciences	No Updates		27	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL LEARN THE FOUNDATIONS OF ANTHROPOLOGY AS THE STUDY OF HUMAN VARIATION IN ITS BIOLOGICAL, SOCIAL, AND CULTURAL DIMENSIONS. STUDENTS WILL LEARN ABOUT ANTHROPOLOGICAL CONCEPTS, PRINCIPLES, AND METHODOLOGIES TO UNDERSTAND AND EXPLORE PAST AND PRESENT HUMAN BEHAVIOR. THEY WILL APPLY THE ANTHROPOLOGICAL APPROACH TO ANALYZE ISSUES PERTAINING TO PAST AND CONTEMPORARY CULTURES, AND DEVELOP INTELLECTUAL SKILLS AND HABITS TO UNDERSTAND BEHAVIORAL, SOCIAL AND CULTURAL ISSUES FROM MULTIPLE DISCIPLINARY PERSPECTIVES.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL EXPLAIN SCIENTIFIC APPROACHES TO THE STUDY OF HUMAN VARIATION AND HUMAN ORIGINS, INCLUDING PRIMATOLOGY, EXTINCT AND EXTANT HUMAN CULTURES, LANGUAGE, AND ETHNICITY. STUDENTS WILL EXPLAIN THE ORIGINS OF ANTHROPOLOGY AS A FOUNDATION DISCIPLINE IN THE SOCIAL SCIENCES THAT EXAMINES THE NATURE AND DEFINITION OF CULTURE. STUDENTS WILL APPLY ANTHROPOLOGICAL CONCEPTS, PRINCIPLES, AND METHODS TO THE SCIENTIFIC STUDY OF PAST AND PRESENT HUMAN BEHAVIOR. STUDENTS WILL EXPLAIN HOW ANTHROPOLOGY INCORPORATES MULTIDISCIPLINARY KNOWLEDGE AND PERSPECTIVES. STUDENTS WILL DESCRIBE ANTHROPOLOGICAL CONTRIBUTIONS TO CONTEMPORARY ISSUES. ADDITIONAL SLOS: DESCRIBE AND EXPLAIN THE ORIENTATION AND SCOPE OF ANTHROPOLOGY (AS A WHOLE) AND EACH OF ITS FOUR MAJOR SUBFIELDS CLASSIFY AND EXPLAIN THE KEY COMPONENTS AND BASIC FEATURES OF HUMAN EVOLUTION DESCRIBE AND EXPLAIN THE ROLE OF ANTHROPOLOGY IN PRESERVING CULTURAL MATERIALS AND DEVELOPING KNOWLEDGE OF THE HUMAN PAST ANALYZE AND DISCUSS BASIC FORMS AND FEATURES OF HUMAN SOCIAL ORGANIZATION AND THE ORIGINS OF CIVILIZATION IDENTIFY THE ELEMENTS OF LANGUAGE AND OTHER COMMUNICATIVE SYSTEMS DESCRIBE AND DISCUSS HUMAN CULTURAL AND BIOLOGICAL DIVERSITY PAST AND PRESENT IDENTIFY WAYS TO APPLY ANTHROPOLOGICAL KNOWLEDGE, THEORY, AND METHODS TO EVERYDAY LIFE (I.E., SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS AND REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT)
ANT	2	000		HONORS INTRODUCTION TO ANTHROPOLOGY	3	Social Sciences	Social Sciences	No Updates		4	Yes	N/A	IN THIS COURSE, STUDENTS WILL LEARN THE FOUNDATIONS OF ANTHROPOLOGY AS THE STUDY OF HUMAN VARIATION IN ITS BIOLOGICAL, SOCIAL, AND CULTURAL DIMENSIONS. STUDENTS WILL LEARN ABOUT ANTHROPOLOGICAL CONCEPTS, PRINCIPLES, AND METHODOLOGIES TO UNDERSTAND AND EXPLORE PAST AND PRESENT HUMAN BEHAVIOR. THEY WILL APPLY THE ANTHROPOLOGICAL APPROACH TO ANALYZE ISSUES PERTAINING TO PAST AND CONTEMPORARY CULTURES, AND DEVELOP INTELLECTUAL SKILLS AND HABITS TO UNDERSTAND BEHAVIORAL, SOCIAL AND CULTURAL ISSUES FROM MULTIPLE DISCIPLINARY PERSPECTIVES.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL EXPLAIN SCIENTIFIC APPROACHES TO THE STUDY OF HUMAN VARIATION AND HUMAN ORIGINS, INCLUDING PRIMATOLOGY, EXTINCT AND EXTANT HUMAN CULTURES, LANGUAGE, AND ETHNICITY. STUDENTS WILL EXPLAIN THE ORIGINS OF ANTHROPOLOGY AS A FOUNDATION DISCIPLINE IN THE SOCIAL SCIENCES THAT EXAMINES THE NATURE AND DEFINITION OF CULTURE. STUDENTS WILL APPLY ANTHROPOLOGICAL CONCEPTS, PRINCIPLES, AND METHODS TO THE SCIENTIFIC STUDY OF PAST AND PRESENT HUMAN BEHAVIOR. STUDENTS WILL EXPLAIN HOW ANTHROPOLOGY INCORPORATES MULTIDISCIPLINARY KNOWLEDGE AND PERSPECTIVES. STUDENTS WILL DESCRIBE ANTHROPOLOGICAL CONTRIBUTIONS TO CONTEMPORARY ISSUES. ADDITIONAL SLOS: DESCRIBE AND EXPLAIN THE ORIENTATION AND SCOPE OF ANTHROPOLOGY (AS A WHOLE) AND EACH OF ITS FOUR MAJOR SUBFIELDS CLASSIFY AND EXPLAIN THE KEY COMPONENTS AND BASIC FEATURES OF HUMAN EVOLUTION DESCRIBE AND EXPLAIN THE ROLE OF ANTHROPOLOGY IN PRESERVING CULTURAL MATERIALS AND DEVELOPING KNOWLEDGE OF THE HUMAN PAST ANALYZE AND DISCUSS BASIC FORMS AND FEATURES OF HUMAN SOCIAL ORGANIZATION AND THE ORIGINS OF CIVILIZATION IDENTIFY THE ELEMENTS OF LANGUAGE AND OTHER COMMUNICATIVE SYSTEMS DESCRIBE AND DISCUSS HUMAN CULTURAL AND BIOLOGICAL DIVERSITY PAST AND PRESENT IDENTIFY WAYS TO APPLY ANTHROPOLOGICAL KNOWLEDGE, THEORY, AND METHODS TO EVERYDAY LIFE (I.E., SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS AND REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT)
ANT	2	100		INTRODUCTION TO ARCHAEOLOGY	3		Social Sciences	No Updates		4	Yes	Fall 2025	THE HISTORICAL AND THEORETICAL BACKGROUNDS OF ARCHAEOLOGY, THE GOALS AND METHODS OF ARCHAEOLOGY, AND ARCHAEOLOGICAL FIELDWORK TECHNIQUES.	STUDENT LEARNING OUTCOMES (SLOS): BY THE END OF THIS COURSE, STUDENTS SHOULD BE ABLE TO: (1) EXPLAIN HOW SCIENTIFIC KNOWLEDGE IS DEVELOPED WITHIN A PARTICULAR FIELD OF INQUIRY; (2) ANALYZE THE ROLE OF EXPERIMENTAL DESIGN IN BUILDING SCIENTIFIC KNOWLEDGE; (3) EXAMINE THE EFFECTS OF SOCIAL, NATURAL, OR DIGITAL ENVIRONMENT OF HUMAN LIFE.
ANT	2	511		BIOLOGICAL ANTHROPOLOGY	3		Natural Sciences	No Updates		7	Yes	Fall 2025	HUMAN EVOLUTION AND VARIATION WITH EMPHASIS ON PRINCIPLES OF EVOLUTION, PRIMATE BIOLOGY, FOSSIL RECORDS, VARIABILITY IN LIVING POPULATIONS, AND THE BIOLOGICAL FOUNDATIONS OF HUMAN CULTURE CAPACITIES.	STUDENT LEARNING OUTCOMES (SLO'S) 1. EXPLAIN HOW SCIENTIFIC KNOWLEDGE IS DEVELOPED WITHIN A PARTICULAR FIELD OF INQUIRY. 2. ANALYZE THE ROLE OF EXPERIMENTAL DESIGN IN BUILDING SCIENTIFIC KNOWLEDGE. 3. EXAMINE THE EFFECTS OF SOCIAL, NATURAL, OR DIGITAL ENVIRONMENT OF HUMAN LIFE.
ARH	1	000		ART APPRECIATION	3	Humanities	Humanities	No Updates		38	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL DEVELOP THE ABILITY TO THINK CRITICALLY ABOUT HUMAN CULTURE AND BE PROVIDED WITH THE TOOLS TO UNDERSTAND, ANALYZE, AND DISCUSS WORKS OF VISUAL ART AND MATERIAL CULTURE. NOT OPEN TO ART MAJORS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL IDENTIFY AND DESCRIBE TERMS, CONCEPTS, AND METHODS USED IN THE DISCIPLINE OF ART HISTORY. STUDENTS WILL APPLY TERMS, CONCEPTS, AND METHODS USED IN THE DISCIPLINE OF ART HISTORY TO WORKS OF VISUAL ART AND MATERIAL CULTURE. STUDENTS WILL IDENTIFY AND DESCRIBE WORKS OF VISUAL ART AND MATERIAL CULTURE IN THE WORKS' CULTURAL CONTEXT, INCLUDING WORKS FROM OR INSPIRED BY THE WESTERN CANON AND OTHER CULTURAL TRADITIONS. STUDENTS WILL ANALYZE WORKS OF VISUAL ART AND MATERIAL CULTURE IN THE WORKS' CULTURAL CONTEXT, INCLUDING WORKS FROM OR INSPIRED BY THE WESTERN CANON AND OTHER CULTURAL TRADITIONS. STUDENTS WILL GENERATE AN ANALYTICAL RESPONSE TO WORKS OF VISUAL ART AND MATERIAL CULTURE IN THE WORKS' CULTURAL CONTEXT. ADDITIONAL SLOS: CRITICALLY ANALYZE AND UNDERSTAND WORKS OF ART AND ARCHITECTURE IN TERMS OF TIME PERIOD, LOCATION, SUBJECT MATTER, STYLE, AND MEANING. DISCUSS WORKS OF ART AND ARCHITECTURE USING A SPECIFIC VOCABULARY OF TECHNICAL AND ART HISTORICAL TERMINOLOGY. RECOGNIZE AND IDENTIFY MAJOR ARTISTS AND ARCHITECTS, AND ACQUIRE A BASIC KNOWLEDGE OF THEIR CONCEPTUAL MOTIVATIONS AND CONTRIBUTIONS TO SOCIETY. RECOGNIZE AND DESCRIBE THE FORMAL VISUAL ELEMENTS THAT SERVE AS THE VOCABULARY FOR WORKS OF VISUAL ART.

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ARH	2	050		WESTERN SURVEY I: PREHISTORY TO THE MEDIEVAL PERIOD	3		Humanities	No Updates		32	Yes	Fall 2025	ANALYZES THE HERITAGE OF THE WESTERN CANON WITHIN ITS CULTURAL CONTEXT FROM THE BIRTH OF ART THROUGH THE MEDIEVAL PERIOD.	APPLY THE APPROPRIATE VOCABULARY WHEN DESCRIBING WORKS OF ART CRITICALLY ANALYZE HOW THE VISUAL FORMS PRESENT IN A WORK OF ART CONVEY MEANING ISOLATE THE PRINCIPAL VISUAL FORMS AND MEDIA RESPONSIBLE FOR SHAPING STYLE BUILD A CONCEPTUAL FRAMEWORK OF THE WESTERN CANON FROM CAVE PAINTING THROUGH THE RENAISSANCE DEMONSTRATE HOW HISTORICAL STYLES OF THE WESTERN CANON CONVEY MEANINGS CONSISTENT WITH THE WORLDVIEW OF A CULTURAL ERA ISOLATE AND ANALYZE THE HISTORICAL FORCES (CULTURAL, SOCIO-ECONOMIC, AND POLITICAL) THAT ALTER THE PREVAILING WORLDVIEW AND THUS AFFECT BOTH STYLE AND MEANING IN ART. EFFECTIVELY DESCRIBE AND COMMUNICATE COMPLEX VISUAL IDEAS IN WRITTEN FORM
ARH	2	051		WESTERN SURVEY II: RENAISSANCE TO CONTEMPORARY	3		Humanities	No Updates		29	Yes	Summer 2025	ANALYZES THE AESTHETIC HERITAGE OF THE WESTERN CANON WITHIN ITS CULTURAL CONTEXT FROM THE FIFTEENTH CENTURY TO THE PRESENT. REQUIRED OF ALL ART MAJORS. SATISFIES THE LOWER DIVISION REQUIREMENT, ARH 1000.	STUDENTS WILL LEARN TO RECOGNIZE HISTORIC STYLES OF THE WESTERN CANON, THEIR SEQUENCE, AND THE CULTURAL FORCES THAT SHAPED THEM. THEY WILL ANALYZE AND INTERPRET ART AND ARCHITECTURE OF THE WESTERN CANON WITHIN THEIR HISTORICAL AND CULTURAL CONTEXT, AND HOW TO EXAMINE A WORK OF ART THROUGH FORMAL MEANS IN A WRITTEN PAPER. THEY WILL USE TECHNOLOGY TO RESEARCH AND ANALYZE WORKS OF ART. THEY WILL ORGANIZE AND EXPLAIN COMPLEX IDEAS EFFECTIVELY THROUGH A WRITTEN PAPER AND IN THE CONTEXT OF COMPARISONS AND ESSAYS IN EXAMS. THEY WILL DEVELOP AND EXECUTE PLANS FOR A PAPER THAT TAKES INTO ACCOUNT RESOURCES AND TIME AVAILABLE.
ART	1	015	C	EXPLORING ARTISTIC VISION	3		Humanities	Removed from General Education		1	Yes	Fall 2019	CHALLENGES THE STUDENT TO EXPLORE ALTERNATIVE MODES OF PERCEPTION AND INTERPRETATION, AND INCLUDES ELEMENTS OF THE WESTERN CANON, THROUGH LECTURES, DISCUSSION, AND HANDS-ON APPLICATION. MATERIAL AND SUPPLY FEE WILL BE ASSESSED.	STUDENT LEARNING OUTCOMES STUDENTS WILL BE ABLE TO: --DEFINE THE VARIOUS ROLES FOR VISUAL COMMUNICATION WITHIN DIFFERENT SOCIETIES --ANALYZE HOW THESE ROLES BUTTRESS THE EXISTING INSTITUTIONS WITHIN SPECIFIC SOCIETIES --WEIGH THE IMPACT OF TECHNOLOGY ON VISUAL MEDIA TODAY --ILLUSTRATE THE SPEED AND REACH OF VISUAL IDEAS WITHIN TODAY'S GLOBAL CULTURE --REFRAME THE DIALOG, BY EXPLOITING THE WAYS IN WHICH INSTITUTIONS USE IMAGES TO CONSTRUCT MEANING
AST	1	002		DESCRIPTIVE ASTRONOMY	3	Natural Sciences	Natural Sciences	No Updates		39	Yes	Fall 2025	THIS COURSE PROVIDES A COMPREHENSIVE LOOK AT MODERN ASTRONOMY, EMPHASIZING THE USE OF THE SCIENTIFIC METHOD AND THE APPLICATION OF PHYSICAL LAWS TO UNDERSTAND THE UNIVERSE INCLUDING EARTH AND ITS ENVIRONMENT. THROUGHOUT THIS COURSE, STUDENTS WILL DEVELOP THE ABILITY TO DISCERN SCIENTIFIC KNOWLEDGE FROM NON-SCIENTIFIC CLAIMS BY USING CRITICAL THINKING.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL DEFINE TERMS USED TO MEASURE AND DESCRIBE THE UNIVERSE. STUDENTS WILL EXPLAIN THE PROCESSES INVOLVED IN THE FORMATION AND EVOLUTION OF CELESTIAL BODIES OVER ASTRONOMICAL TIME ACCORDING TO DIFFERENT MODELS AND THEORIES. STUDENTS WILL DESCRIBE HOW SCIENTIFIC THEORIES EVOLVE IN RESPONSE TO NEW OBSERVATIONS AND CRITICALLY EVALUATE THEIR IMPACT ON SOCIETY. STUDENTS WILL FORMULATE EMPIRICALLY TESTABLE HYPOTHESES DERIVED FROM THE STUDY OF PHYSICAL PROCESSES AND PHENOMENA. STUDENTS WILL APPLY LOGICAL REASONING SKILLS THROUGH SCIENTIFIC CRITICISM AND ARGUMENT TO SEPARATE SCIENCE FROM NON-SCIENCE. STUDENTS WILL GATHER AND ANALYZE ASTRONOMICAL DATA AND COMMUNICATE RESULTS IN GRAPHIC AND WRITTEN FORMS. ADDITIONAL SLOS: STUDENTS WILL: DEFINE COMMON ASTRONOMICAL TERMS AND EXPLAIN BASIC CONCEPTS AND THEORIES FOR A RANGE OF ASTROPHYSICAL PHENOMENA. DESCRIBE THE UNIVERSE USING BASIC PHYSICAL LAWS DERIVED ON EARTH. MEMORIZE MAJOR SCIENTIFIC DEVELOPMENTS IN ASTRONOMY AND SUMMARIZE THEIR IMPACTS ON SOCIETY AND OUR ENVIRONMENT SUCH AS RECOGNIZING OUR PLACE IN THE UNIVERSE, EVALUATING THE VALIDITY OF ASTROLOGY, COMPARING ENERGY SOURCES, AND HOW ATMOSPHERIC EFFECTS OF PLANETS INFLUENCE CLIMATE CHANGE. EVALUATE THE DIFFERENCE BETWEEN GOOD SCIENCE AND BAD SCIENCE. UTILIZE SCIENTIFIC REASONING (USE OF LOGIC, OBSERVATIONS, AND CRITICAL THINKING) TO INTERPRET THE WORLD AROUND THEM. FORMULATE EMPIRICALLY-TESTABLE HYPOTHESES DERIVED FROM THE STUDY OF PHYSICAL PROCESSES AND PHENOMENA AND APPLY LOGICAL REASONING SKILLS THROUGH SCIENTIFIC CRITICISM AND ARGUMENT. SOLVE PROBLEMS AND UTILIZE QUANTITATIVE AND QUALITATIVE REASONING TO ASSESS PROBLEMS. EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE.
AST	2	037		LIFE IN THE UNIVERSE	3		Natural Sciences	No Updates		2	Yes	Fall 2025	THIS ASTRONOMY-BASED COURSE CONTEMPLATES THE POSSIBILITIES OF LIFE ELSEWHERE IN OUR SOLAR SYSTEM AND THE UNIVERSE THROUGH A MULTIDISCIPLINARY SCIENCE APPROACH. CONDITIONS FOR LIFE TO FORM AND THE LIKELIHOOD THAT SUCH CONDITIONS MAY EXIST ELSEWHERE IN THE UNIVERSE ARE DISCUSSED. ALSO CONSIDERED ARE SCHEMES PROPOSED FOR THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI).	STUDENT LEARNING OUTCOMES (SLO'S) STUDENTS WILL: DEMONSTRATE KNOWLEDGE OF THE SCIENTIFIC METHOD UTILIZE THE BASIC CONCEPTS OF ASTRONOMY/ASTROPHYSICS AND BIOLOGY RELATED TO LIFE IN THE UNIVERSE INCLUDING: THE MOLECULAR BASIS FOR LIFE, ITS BUILDING BLOCKS, ORIGIN AND DEVELOPMENT OF LIFE ON EARTH, REQUIREMENTS FOR LIFE, AND POSSIBLE LOCATIONS OF LIFE DEMONSTRATE AWARENESS OF SCIENTIFIC DEVELOPMENTS IN FIELDS RELATED TO LIFE IN THE UNIVERSE AND THEIR IMPACT ON SOCIETY AND THE WORLD WE LIVE IN DEMONSTRATE UNDERSTANDING OF SCIENTIFIC TERMS, CONCEPTS AND THEORIES, AND THE ABILITY TO FORMULATE EMPIRICALLY-TESTABLE HYPOTHESES DERIVED FROM THE STUDY OF PHYSICAL PROCESSES. EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE.

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BOT	2	010		GENERAL BOTANY	3		Natural Sciences	No Updates		6	Yes	Fall 2025	INTRODUCTION TO THE BASIC CONCEPTS WHICH APPLY TO ALL PLANTS INCLUDING CELL THEORY, BIOSYNTHETIC PROCESSES, PHYSIOLOGICAL RESPONSE, DEVELOPMENT AND REPRODUCTION, AS WELL AS CONSIDERATION OF PLANT MORPHOLOGY, SYSTEMATICS AND EVOLUTION. MATERIAL AND SUPPLY FEE WILL BE ASSESSED FOR CORRESPONDING LAB.	STUDENT LEARNING OUTCOMES (SLO'S) ALC DOMAIN 1: CONTENT IDENTIFY AND EXPLAIN THE FUNCTIONS OF THE ORGANS, TISSUES, CELLS, ORGANELLES, AND OTHER STRUCTURES THAT MAKE UP A PLANT. EXPLAIN IMPORTANT PHYSIOLOGICAL AND DEVELOPMENTAL PROCESSES IN PLANT BIOLOGY INCLUDING PHOTOSYNTHESIS, MEMBRANE TRANSPORT, NUTRIENT ACQUISITION, WATER MOVEMENTS, RESPONSES TO ENVIRONMENTAL STIMULI, AND HORMONAL CONTROLS. DESCRIBE THE BASIC TENETS OF PLANT TAXONOMY AND EVOLUTION. DESCRIBE THE BASIC ECOLOGY AND DIVERSITY OF PLANTS IN THE BIOSPHERE. EXPLAIN THE IMPORTANCE AND PRACTICAL APPLICATIONS OF PLANTS IN EVERYDAY LIFE. DESCRIBE CAREER OPTIONS AVAILABLE TO STUDENTS WHO STUDY PLANT SCIENCE. ALC DOMAIN 2: CRITICAL THINKING EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE. USE EXPERIMENTAL EVIDENCE TO SUPPORT AND EXPLAIN MECHANISTIC MODELS IN PLANT BIOLOGY. IDENTIFY THE ESSENTIAL FEATURES OF A GRAPH AND GENERATE AN ANALYSIS OF ITS CONTENTS IN RELATION TO THE FUNDAMENTAL PRINCIPLES OF PLANT BIOLOGY. ALC DOMAIN 3: COMMUNICATION CORRECTLY AND ACCURATELY EMPLOY THE TERMINOLOGY OF PLANT BIOLOGY. WRITE CLEAR AND CONCISE INTERPRETATIONS OF DATA SETS USING PROPER GRAMMAR, SPELLING, AND PUNCTUATION. WRITE A CLEAR AND CONCISE TECHNICAL LAB REPORT (OPTIONAL EXTRA CREDIT). ALC DOMAIN 4: INTEGRITY/VALUES EXPLAIN THE ETHICAL IMPORTANCE OF ACCURATE AND PRECISE COLLECTION AND REPORTING OF EXPERIMENTAL DATA. IDENTIFY ISSUES ARISING FROM THE USE OF GENETICALLY MODIFIED ORGANISMS.
BSC	1	005		GENERAL BIOLOGY FOR NON-MAJORS	3	Natural Sciences	Natural Sciences	No Updates		37	Yes	Fall 2025	THIS COURSE APPLIES THE SCIENTIFIC METHOD TO CRITICALLY EXAMINE AND EXPLAIN THE NATURAL WORLD INCLUDING BUT NOT LIMITED TO CELLS, ORGANISMS, GENETICS, EVOLUTION, ECOLOGY, AND BEHAVIOR.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL EVALUATE DATA REGARDING VALIDITY. STUDENTS WILL READ AND INTERPRET A VARIETY OF SCIENTIFIC DATA. STUDENTS WILL DESCRIBE THE NATURAL WORLD. STUDENTS WILL ARTICULATE AND PRACTICE THE SCIENTIFIC METHOD. ADDITIONAL SLOS: GENERAL BIOLOGY IS DESIGNATED AS A GENERAL EDUCATION COURSE. THE GENERAL EDUCATION CURRICULUM AT THE UNIVERSITY OF WEST FLORIDA IS DESIGNED TO PROVIDE A COHESIVE PROGRAM OF STUDY THAT PROMOTES THE DEVELOPMENT OF A BROADLY EDUCATED PERSON AND PROVIDES THE KNOWLEDGE AND SKILLS NEEDED TO SUCCEED IN UNIVERSITY STUDIES. IDENTIFY THE CONCEPTS, PRINCIPLES, AND THEORIES THAT CONSTITUTE THE CORE OF BIOLOGY. RECOGNIZE STRUCTURES MAKING UP BIOLOGICAL MATERIAL. DESCRIBE METABOLIC PROCESSES OF LIFE. EMPLOY BIOLOGICAL TERMINOLOGY ACCURATELY. EXPLAIN HOW DNA RELATES TO GENETIC AND METABOLIC PROCESSES. RELATE BIOLOGICAL FUNCTIONS ON DIFFERENT SCALES OF LIFE – POPULATION, COMMUNITY.
BSC	1	050		FUNDAMENTALS OF ECOLOGY	3		Natural Sciences	No Updates		7	Yes	Summer 2021	INTENDED FOR NON-MAJORS WHO HAVE AN INTEREST IN NATURE AND HOW THEY INTERACT WITH NATURE. GIVES GENERAL OVERVIEW OF ECOLOGICAL PRINCIPLES AND HOW THESE PRINCIPLES INFLUENCE THE OUTSIDE WORLD AROUND US. IMBEDDED ARE SEVERAL ACTIVITIES THAT ARE ASSOCIATED WITH EACH CHAPTER. THE ACTIVITIES WERE DEVELOPED SO THAT THE STUDENT WILL GAIN A RESPECT FOR ECOLOGY AS WELL AS SHOW HOW ECOLOGICAL PRINCIPLES AFFECT YOUR DAILY LIFE.	STUDENT LEARNING OUTCOMES (SLO'S) COURSE GOALS AND STUDENT LEARNING OUTCOMES: BY THE END OF THIS COURSE YOU SHOULD BE ABLE TO: 1. DESCRIBE ENVIRONMENTAL PROBLEMS, THEIR CAUSES AND SUSTAINABILITY. 2. EXPLAIN THE UNDERLYING BIOLOGICAL AND CHEMICAL PRINCIPLES OF ECOLOGY. 3. EXPLAIN BIODIVERSITY, EVOLUTION, AND HOW ECOSYSTEMS WORK. 4. DISCUSS THE HUMAN POPULATION GROWTH AND ITS IMPACT. 5. IDENTIFY CHANGES IN CLIMATE AND THE IMPACT ON BIODIVERSITY 6. DESCRIBE AQUATIC AND TERRESTRIAL DIVERSITY AND BIOMES AND THE CURRENT THREATS TO THESE ECOSYSTEMS. 7. DISCUSS THE SPECIES EXTINCTION AND THE LOSS OF ECOSYSTEM SERVICES, 8. EVALUATE CURRENT WAYS TO SUSTAIN BIODIVERSITY IN BOTH TERRESTRIAL AND AQUATIC ECOSYSTEMS. GENERAL EDUCATION SLO: 1. EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE.
BSC	1	085		ANATOMY AND PHYSIOLOGY I	3	Natural Sciences	Natural Sciences	No Updates		25	Yes	Fall 2025	THIS COURSE IS THE FIRST PART OF A TWO-SEMESTER SEQUENCE IN WHICH STUDENTS EXAMINE HUMAN ANATOMY AND PHYSIOLOGY THROUGH A SYSTEMS APPROACH BASED ON THE INTERACTION BETWEEN FORM AND FUNCTION, FROM THE MICROSCOPIC COMPONENTS OF CELLS AND TISSUES TO THE ORGANISMAL LEVEL. EMPHASIS IS PLACED ON HISTOLOGY AND THE INTEGUMENTARY, SKELETAL, MUSCULAR, AND NERVOUS SYSTEMS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL IDENTIFY CELL STRUCTURES AND DESCRIBE THEIR FUNCTIONS. STUDENTS WILL DISTINGUISH TISSUES BY STRUCTURE, LOCATION IN THE BODY, AND CONTRAST THEIR NORMAL PHYSIOLOGY. STUDENTS WILL DEMONSTRATE AN UNDERSTANDING OF ANATOMICAL STRUCTURE, ORGANIZATION OF THE BODY, CAVITIES, PLANES, AND DIRECTIONAL TERMS. STUDENTS WILL IDENTIFY AND DESCRIBE STRUCTURES OF INTEGUMENTARY, SKELETAL, MUSCULAR, AND NERVOUS SYSTEMS. STUDENTS WILL INTERPRET THE FUNCTIONS OF THE INTEGUMENTARY, SKELETAL, MUSCULAR, AND NERVOUS SYSTEMS. STUDENTS WILL EXPLAIN HOW THE COMPONENTS OF THE HUMAN BODY MAINTAIN HOMEOSTASIS. STUDENTS WILL ANALYZE AND INTERPRET PHYSIOLOGICAL DATA. ADDITIONAL SLOS: UPON COMPLETION OF THE COURSE, STUDENTS WILL: DEVELOP A VOCABULARY OF APPROPRIATE TERMINOLOGY TO EFFECTIVELY COMMUNICATE INFORMATION RELATED TO ANATOMY AND PHYSIOLOGY. RECOGNIZE THE ANATOMICAL STRUCTURES AND EXPLAIN THE PHYSIOLOGICAL FUNCTIONS OF BODY SYSTEMS. RECOGNIZE AND EXPLAIN THE PRINCIPLE OF HOMEOSTASIS AND THE USE OF FEEDBACK LOOPS TO CONTROL PHYSIOLOGICAL SYSTEMS IN THE HUMAN BODY. USE ANATOMICAL KNOWLEDGE TO PREDICT PHYSIOLOGICAL CONSEQUENCES, AND USE KNOWLEDGE OF FUNCTION TO PREDICT THE FEATURES OF ANATOMICAL STRUCTURES. RECOGNIZE AND EXPLAIN THE INTERRELATIONSHIPS WITHIN AND BETWEEN ANATOMICAL AND PHYSIOLOGICAL SYSTEMS OF THE HUMAN BODY. SYNTHESIZE IDEAS TO MAKE A CONNECTION BETWEEN KNOWLEDGE OF ANATOMY AND PHYSIOLOGY AND REAL-WORLD SITUATIONS, INCLUDING HEALTHY LIFESTYLE DECISIONS AND HOMEOSTATIC IMBALANCES. DEMONSTRATE LABORATORY PROCEDURES USED TO EXAMINE ANATOMICAL STRUCTURES AND EVALUATE PHYSIOLOGICAL FUNCTIONS OF EACH ORGAN SYSTEM. INTERPRET GRAPHS OF ANATOMICAL AND PHYSIOLOGICAL DATA. FULFILLMENT OF THESE GOALS WILL BE ASSESSED USING EXAMS, QUIZZES, HOMEWORK EXERCISES AND DISCUSSIONS. UWF GENERAL EDUCATION SLO: EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE.

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BSC	1	086		ANATOMY & PHYSIOLOGY II	3		Natural Sciences	No Updates		17	Yes	Fall 2025	CONTINUATION OF ANATOMY AND PHYSIOLOGY I. REVIEWS BASIC ANATOMICAL/ PHYSIOLOGICAL ATTRIBUTES OF ENDOCRINE, CARDIOPULMONARY, DIGESTIVE, REPRODUCTIVE AND IMMUNE SYSTEMS. LAB OPTIONAL.	STUDENT LEARNING OUTCOMES (SLO'S) CLO-1 DEVELOP A VOCABULARY OF APPROPRIATE TERMINOLOGY TO EFFECTIVELY COMMUNICATE INFORMATION RELATED TO ANATOMY AND PHYSIOLOGY. CLO-2 RECOGNIZE THE ANATOMICAL STRUCTURES AND EXPLAIN THE PHYSIOLOGICAL FUNCTIONS OF BODY SYSTEMS. CLO-3 RECOGNIZE AND EXPLAIN THE PRINCIPLE OF HOMEOSTASIS AND THE USE OF FEEDBACK LOOPS TO CONTROL PHYSIOLOGICAL SYSTEMS IN THE HUMAN BODY. CLO-4 USE ANATOMICAL KNOWLEDGE TO PREDICT PHYSIOLOGICAL CONSEQUENCES AND USE KNOWLEDGE OF FUNCTION TO PREDICT THE FEATURES OF ANATOMICAL STRUCTURES. CLO-5 RECOGNIZE AND EXPLAIN THE INTERRELATIONSHIPS WITHIN AND BETWEEN ANATOMICAL AND PHYSIOLOGICAL SYSTEMS OF THE HUMAN BODY. CLO-6 SYNTHESIZE IDEAS TO MAKE A CONNECTION BETWEEN KNOWLEDGE OF ANATOMY AND PHYSIOLOGY AND REAL-WORLD SITUATIONS, INCLUDING HEALTHY LIFESTYLE DECISIONS AND HOMEOSTATIC IMBALANCES. CLO-7 DEMONSTRATE CLINICAL LABORATORY PROCEDURES USED TO EXAMINE ANATOMICAL STRUCTURES AND EVALUATE THE PHYSIOLOGICAL FUNCTIONS OF EACH ORGAN SYSTEM. CLO-8 INTERPRET GRAPHS OF ANATOMICAL AND PHYSIOLOGICAL DATA. CLO-9 EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE. FULFILLMENT OF THESE GOALS WILL BE ASSESSED USING EXAMS, QUIZZES, AND HOMEWORK EXERCISES.
BSC	2	010		BIOLOGY I	3	Natural Sciences	Natural Sciences	No Updates		31	Yes	Fall 2025	IN THIS COURSE STUDENTS WILL APPLY THE SCIENTIFIC METHOD TO CRITICALLY EXAMINE AND EXPLAIN THE NATURAL WORLD. THIS COURSE WILL COVER MOLECULAR BIOLOGY, CELLULAR BIOLOGY, GENETICS, METABOLISM, AND REPLICATION.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL DEMONSTRATE SCIENTIFIC LITERACY BY ARTICULATING AND PRACTICING THE SCIENTIFIC METHOD. STUDENTS WILL EVALUATE DATA REGARDING VALIDITY. STUDENTS WILL READ AND INTERPRET A VARIETY OF SCIENTIFIC DATA. STUDENTS WILL IDENTIFY MAJOR MACROMOLECULES AND STATE THEIR IMPORTANCE TO LIVING ORGANISMS. STUDENTS WILL EXPLAIN METABOLISM. STUDENTS WILL COMPARE AND CONTRAST PROKARYOTIC AND EUKARYOTIC STRUCTURES AND PROCESSES OF CELL DIVISION AND REPLICATION. STUDENTS WILL EXPLAIN GENE EXPRESSION. STUDENTS WILL SOLVE PROBLEMS IN TRANSMISSION GENETICS. ADDITIONAL SLOS: UPON COMPLETION OF THIS COURSE, STUDENTS WILL BE ABLE TO: EXPLAIN HOW CELLS ARE THE FUNDAMENTAL LIVING UNIT OF ALL ORGANISMS. DESCRIBE THE DISTRIBUTION OF ELECTRONS WITHIN ATOMS AND COVALENT BONDS. DISCUSS THE POLARITY OF WATER AND ITS UNIQUE ROLE IN CELLS. DESCRIBE THE MACROMOLECULES FOUND IN CELLS AN EXPLAIN HOW COVALENTLY LINKED BUILDING BLOCKS MAKE UP THE MACROMOLECULES. DESCRIBE THE FUNCTION OF PROTEINS IN MAINTAINING THE FORM OF A CELL. EXPLAIN THE FUNCTION OF PROTEINS IN THE CATALYSIS OF BIOCHEMICAL TRANSFORMATIONS. DESCRIBE HOW BIOLOGISTS STUDY THE FUNCTIONS AND SUBCELLULAR STRUCTURES.. DISCUSS THE ORGANIZATION OF CELL MEMBRANES AND THEIR ARRANGEMENTS OF LIPIDS AND PROTEINS. DISCUSS THE CONTRIBUTION OF THE CYTOSKELETON TO THE INTERNAL ORGANIZATION OF A CELL. EXPLAIN THE PROCESSES THAT CONSTITUTE CELLULAR RESPIRATION (GLYCOLYSIS, ACETYL-COA FORMATION, THE CITRIC ACID CYCLE, AND OXIDATIVE PHOSPHORYLATION) AND THEIR ROLE IN THE BIOENERGETICS OF A CELL. EXPLAIN CELL DIVISION AND THE REGULATION OF PASSAGE THROUGH THE CELL CYCLE. DESCRIBE MEIOSIS AND SEXUAL REPRODUCTION. DISCUSS MENDELIAN GENETICS AND THE PRINCIPLES OF INHERITANCE. EXPLAIN HOW GENES AFFECT THE BIOCHEMICAL PROCESSES AND MORPHOLOGICAL PROPERTIES OF ORGANISMS. EXPLAIN CHEMICAL STRUCTURE OF DNA. DESCRIBE THE PROCESSES OF DNA SYNTHESIS AND REPAIR. DISCUSS HOW DNA DIRECTS THE SYNTHESIS OF PROTEINS AND HOW CELLS REGULATE GENE EXPRESSION. EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE.
BSC	2	011		BIOLOGY II	3		Natural Sciences	No Updates		23	Yes	Fall 2025	EXPLORES THE DIVERSITY OF LIFE INCLUDING BACTERIA, PROTISTS, FUNGI, PLANTS AND ANIMALS AT THE INTRODUCTORY LEVEL DESIGNED FOR STUDENTS STARTING A MAJOR IN BIOLOGY. THE COURSE WILL OUTLINE THE TREE OF LIFE IN ILLUSTRATING THE EVOLUTIONARY RELATIONSHIPS AMONG ORGANISMS. THE COURSE WILL ALSO COVER BASIC FUNCTIONAL MORPHOLOGY AND PHYSIOLOGY AT THE ORGANISMAL LEVEL, AND PROVIDE AN INTRODUCTION TO ECOLOGICAL INTERACTIONS AT THE POPULATION AND COMMUNITY LEVEL	STUDENT LEARNING OUTCOMES UPON COMPLETION OF THIS COURSE, STUDENTS WILL BE ABLE TO ATTAIN THE FOLLOWING COMPETENCIES: IDENTIFY THE MAIN TAXONOMIC CATEGORIES OF LIFE. DESCRIBE THE CHARACTERS THAT DEFINE WHY ORGANISMS ARE PLACED IN THE MAIN TAXONOMIC CATEGORIES. EVALUATE CHARACTERS BY COMPARISON/CONTRAST AMONG DIFFERENT LIFE FORMS TO CATEGORIZE UNKNOWN SPECIMENS. IDENTIFY THE MAIN MORPHOLOGICAL STRUCTURES OF PLANTS. DESCRIBE THE MAIN PHYSIOLOGICAL PATHWAYS USED BY PLANTS. DISCUSS HOW THE MORPHOLOGY AND PHYSIOLOGY OF PLANTS RELATE TO ONE ANOTHER. IDENTIFY THE MAIN MORPHOLOGICAL STRUCTURES OF ANIMALS. DESCRIBE THE MAIN BODY SYSTEMS AND PHYSIOLOGICAL PATHWAYS USED BY ANIMALS. DISCUSS HOW THE MORPHOLOGY AND PHYSIOLOGY OF ANIMALS RELATE TO ONE ANOTHER. DESCRIBE THE CHARACTERISTICS OF POPULATION AND COMMUNITY LEVELS OF ORGANIZATION. DISCUSS HOW INTERACTIONS BETWEEN POPULATIONS AND COMMUNITIES DETERMINE BIOLOGICAL FITNESS. EVALUATE ECOLOGICAL/ENVIRONMENTAL ISSUES AND PREDICT CONSEQUENCES TO POPULATIONS AND COMMUNITIES. EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE.
BSC	2	311		INTRODUCTION TO OCEANOGRAPHY AND MARINE BIOLOGY	3		Natural Sciences	No Updates		5	Yes	Summer 2025	AN INTRODUCTION TO THE CHEMICAL, PHYSICAL AND GEOLOGICAL FEATURES OF THE WORLD OCEAN AND THE MAJOR GROUPS OF LIVING MARINE ORGANISMS THAT INHABIT IT. PHYSICAL CHEMICAL AND BIOLOGICAL INTERRELATIONSHIPS WILL BE EMPHASIZED. CREDIT NOT GRANTED TOWARD A MAJOR IN BIOLOGY.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION STUDENT LEARNING OUTCOME: EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE. STUDENT LEARNING OUTCOMES: 1. IDENTIFY THE STRUCTURE OF THE EARTH'S CRUST AND INTERIOR 2. EXPLAIN THE MECHANISMS AND THEORY OF PLATE TECTONICS 3. DESCRIBE HOW OCEAN FLOORS ARE FORMED 4. IDENTIFY MAJOR OCEANIC CURRENT TYPES 5. IDENTIFY THE CHEMICAL COMPONENTS TO LIFE 6. IDENTIFY THE MAJOR HABITAT TYPES 7. UNDERSTAND AND EXPLAIN THE HISTORY OF EVOLUTIONARY THOUGHT 8. UNDERSTAND THE HISTORY OF CLASSIFICATION AND BE ABLE TO IDENTIFY AND EXPLAIN THE HIERARCHY OF LIFE 9. LIST THE MAJOR CHARACTERISTICS OF THE KINGDOMS OF LIFE

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CCJ	2	002		SURVEY OF CRIME AND JUSTICE	3		Social Sciences	Updated	Learning Outcomes	2	Yes	Fall 2025	AN INTRODUCTION TO THE AMERICAN CRIMINAL JUSTICE SYSTEM THROUGH THE LENS OF SOCIAL SCIENCE INQUIRY. EXAMINES THE HISTORICAL FOUNDATIONS, ETHICAL PHILOSOPHIES, AND EVOLVING PRACTICES OF JUSTICE IN THE UNITED STATES. EXPLORES THE TRADITIONS AND PHILOSOPHIES THAT SHARE THE AMERICAN JUSTICE SYSTEM AND EVALUATES CLASSICAL CHALLENGES OF CRIME AND JUSTICE SUCH AS DUE PROCESS, EQUAL PROTECTION, AND THE RULE OF LAW. EMPHASIS IS PLACED ON HOW JUSTICE INSTITUTIONS INTERSECT WITH BROADER CIVIC, CONSTITUTIONAL, AND SOCIETAL FRAMEWORKS. DESIGNED FOR STUDENTS ACROSS DISCIPLINES, THIS COURSE FOSTERS INFORMED AND ETHICAL CITIZENSHIP BY EXPLORING HOW JUSTICE IS CONCEPTUALIZED, IMPLEMENTED, AND ANALYZED IN AMERICAN SOCIETY.	1) REASON ETHICALLY WITHIN THE TRADITIONS OF CLASSICAL AND CONTEMPORARY THEORIES OF JUSTICE, DUE PROCESS, AND THE RULE OF LAW. 2) APPLY SOCIAL SCIENCE METHODS TO INTERPRET CRIME DATA, POLICY RESPONSES, AND INSTITUTIONAL OUTCOMES AND THEIR IMPACT ON SOCIETY. 3) DESCRIBE THE ORGANIZATION AND FUNCTION OF THE U.S. CRIMINAL JUSTICE SYSTEM WITHIN THE BROADER CONTEXT OF CIVIC AND CONSTITUTIONAL PRINCIPLES. 4) ANALYZE CRIME PATTERNS AND CRITICALLY EVALUATE COMPETING EXPLANATIONS FOR CRIMINAL BEHAVIOR FROM MULTIPLE DISCIPLINARY PERSPECTIVES. 5) EXPLAIN HOW THE COMPONENTS OF THE JUSTICE SYSTEM RESPOND TO CRIME, INCLUDING HOW INSTITUTIONAL PRACTICES REFLECT ENDURING DISCOURSE REGARDING JUSTICE, PUNISHMENT, AND PUBLIC SAFETY.
CGS	2	020		INTRODUCTION TO MACHINE LEARNING	3		Natural Sciences	No Updates		1	Yes	Spring 2025	THIS COURSE OFFERS AN INTRODUCTION TO MACHINE LEARNING THAT IS DESIGNED FOR AN INTERDISCIPLINARY AUDIENCE. STUDENTS IN THIS COURSE WILL CRITICALLY EXAMINE HOW THE SCIENTIFIC METHOD IS USED IN MACHINE LEARNING MODEL CREATION AND EXPLORE THE MACHINE LEARNING LANDSCAPE INCLUDING THE SCOPE AND ITS APPLICABILITY IN A WIDER CONTEXT AND IN A VARIETY OF DISCIPLINES. THIS COURSE WILL ALSO PROVIDE STUDENTS WITH AN OVERVIEW OF THE FIELD OF DATA SCIENCE SHOULD THEY LIKE TO PURSUE IT AS THEIR CHOICE IN HIGHER EDUCATION.	STUDENT LEARNING OUTCOMES (SLO'S) EXPLAIN WHAT IS MACHINE LEARNING IDENTIFY TYPES OF MACHINE LEARNING ALGORITHMS ARTICULATE HOW MACHINE LEARNING IS USED IN PREDICTIVE ANALYTICS DESCRIBE STRENGTHS AND LIMITATIONS OF MACHINE LEARNING ALGORITHMS DISCUSS APPLICABILITY OF MACHINE LEARNING ACROSS MULTIPLE DOMAINS CRITICALLY EXAMINE AND EVALUATE THE PRINCIPLES OF THE SCIENTIFIC METHOD, MODEL CONSTRUCTION, AND USE THE SCIENTIFIC METHOD TO EXPLAIN NATURAL EXPERIENCES AND PHENOMENA. UWF GENERAL EDUCATION SLO(S): EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE (CRITICAL THINKING)
CHM	1	020		CONCEPTS IN CHEMISTRY	3	Natural Sciences	Natural Sciences	No Updates		27	Yes	Fall 2025	THIS COURSE PROVIDES STUDENTS WITH AN INTRODUCTION TO CHEMICAL PRINCIPLES AND APPLICATIONS FOR THE NON-SCIENCE MAJOR. STUDENTS WILL ENGAGE IN PROBLEM SOLVING AND CRITICAL THINKING WHILE APPLYING CHEMICAL CONCEPTS. TOPICS WILL INCLUDE THE SCIENTIFIC METHOD OF PROBLEM SOLVING, CLASSIFICATION OF MATTER, ATOMIC THEORY, THE PERIODIC TABLE, GASES, CHEMICAL REACTIONS, ENERGY, AND CHEMICAL BONDS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL BE ABLE TO DISTINGUISH BETWEEN PHYSICAL AND CHEMICAL PROPERTIES AND CHANGES. STUDENTS WILL RECOGNIZE COMPONENTS OF GASEOUS CHEMISTRY. STUDENTS WILL RECOGNIZE COMPONENTS OF AQUEOUS CHEMISTRY INCLUDING PROPERTIES OF WATER, SOLUTIONS, AND ACIDS AND BASES. STUDENTS WILL CORRELATE THE DESIGN OF THE PERIODIC TABLE TO PERIODIC TRENDS AND PHYSICAL AND CHEMICAL PROPERTIES ELEMENTS. STUDENTS WILL WRITE AND INTERPRET CHEMICAL FORMULA AND WRITE BALANCE CHEMICAL EQUATIONS. ADDITIONAL SLOS: STUDENTS WILL DEMONSTRATE CRITICAL THINKING RELATED TO CHEMISTRY ISSUES IN SOCIETY BY USING THE SCIENTIFIC PROCESS AS A TOOL TO CONSTRUCT INFORMED OPINIONS. STUDENTS WILL BE ABLE TO DISTINGUISH RELIABLE INFORMATION FROM MISINFORMATION AND DISINFORMATION IN ORDER TO FOLLOW THE SCIENTIFIC PROCESS. STUDENTS WILL ENGAGE WITH OTHER STUDENTS IN RESPECTFUL DISCUSSIONS AROUND CHEMISTRY ISSUES IN SOCIETY IN ORDER TO PRACTICE COMMUNICATING THEIR OPINIONS. ASSESSMENTS OF THE SLOS WILL BE THROUGH GRADED DISCUSSIONS, QUIZZES, AND EXAMS. UWF GENERAL EDUCATION, CRITICAL THINKING SLO: EVALUATING SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE.

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CHM	2	045		GENERAL CHEMISTRY I	3	Natural Sciences	Natural Sciences	No Updates		35	Yes	Fall 2025	THIS COURSE IS DESIGNED FOR STUDENTS PURSUING CAREERS IN THE SCIENCES OR WHO NEED A MORE RIGOROUS PRESENTATION OF CHEMICAL CONCEPTS THAN IS OFFERED IN AN INTRODUCTORY COURSE. STUDENTS WILL ENGAGE IN PROBLEM SOLVING AND CRITICAL THINKING WHILE APPLYING CHEMICAL CONCEPTS. TOPICS WILL INCLUDE THE PRINCIPLES OF CHEMISTRY INCLUDING ATOMIC THEORY, ELECTRONIC AND MOLECULAR STRUCTURE, MEASUREMENT, STOICHIOMETRY, BONDING, PERIODICITY, THERMOCHEMISTRY, NOMENCLATURE, SOLUTIONS, AND THE PROPERTIES OF GASES.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL APPLY THE LAW OF CONSERVATION OF MATTER AND ENERGY. STUDENTS WILL IMPLEMENT RULES OF SIGNIFICANT NUMBERS TO ALL MEASUREMENTS. STUDENTS WILL EXPLAIN THE FUNDAMENTAL PROPERTIES OF MATTER INCLUDING BUT NOT LIMITED TO ATOMIC AND ELECTRONIC STRUCTURE, AND PERIODICITY. STUDENTS WILL APPLY IUPAC RULES OF NOMENCLATURE. STUDENTS WILL PREDICT MOLECULAR GEOMETRY AND PROPERTIES FROM BONDING THEORIES. STUDENTS WILL PREDICT AND EXPLAIN THE PRODUCTS OF CHEMICAL REACTIONS (E.G., ACID-BASE, OXIDATION-REDUCTION, PRECIPITATION, DISSOCIATION). ADDITIONAL SLOS: SUCCESSFUL STUDENTS WILL ACQUIRE AND DEMONSTRATE BASIC KNOWLEDGE OF THEORIES, CONCEPTS, AND PRINCIPLES IN GENERAL CHEMISTRY. TOPICS INCLUDE BUT ARE NOT LIMITED TO THE PHYSICAL AND CHEMICAL PROPERTIES OF MATTER, ATOMIC THEORY, MOLECULAR STRUCTURE, MASS RELATIONSHIPS IN CHEMICAL REACTIONS, REACTIONS IN AQUEOUS SOLUTIONS, GASES, THERMOCHEMISTRY, QUANTUM THEORY, THE ELECTRONIC STRUCTURE OF ATOMS, PERIODIC TRENDS, AND CHEMICAL BONDING. AS A RESULT, SUCCESSFUL STUDENTS WILL BE ABLE TO DEMONSTRATE MASTERY OF THESE: BE ABLE TO USE ASSIGNED FORMULA/RULES FOR THESE TOPICS. APPLY THIS BASIC KNOWLEDGE TO SOLVE PROBLEMS. TO PROBLEM SOLVE THE STUDENT WILL LEARN TO: DEFINE THE PROBLEM APPROPRIATELY. DEVELOP DISCIPLINE-BASED STRATEGIES INCLUDING DIMENSIONAL ANALYSIS. PROVIDE THEIR RATIONALE FOR THE SELECTION OF THE PROBLEM-SOLVING STRATEGY. APPLY THE STRATEGY; EXPRESS THE ANSWER WITH THE CORRECT UNITS AND SIGNIFICANT FIGURES. EVALUATE THE RESULTS QUANTITATIVELY AND QUALITATIVELY. DETERMINE IF THE RESULTS ARE REASONABLE AND ACCURATE BASED UPON THEIR KNOWLEDGE. SHOW CONCERN FOR PRECISION BY AVOIDING CARELESS ERRORS. REVISE STRATEGY IF NECESSARY. DEMONSTRATE CRITICAL THINKING SKILLS BY EVALUATION OF SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE. THIS STRATEGIC LEARNING OBJECTIVE WILL BE ASSESSED BY TEST RESULTS. CRITICAL THINKING. CRITICAL THINKING SKILLS ARE DEMONSTRATED BY THE EVALUATION OF SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE.
CHM	2	046		GENERAL CHEMISTRY II	3		Natural Sciences	No Updates		22	Yes	Fall 2025	CONTINUATION OF CHM 2045 WITH EMPHASIS ON CHEMICAL CALCULATIONS AND PROBLEM SOLVING. TOPICS INCLUDE THERMODYNAMICS, EQUILIBRIA, KINETICS AND AN INTRODUCTION TO TRANSITION METAL COMPLEXES. A GRADE OF "C-" OR HIGHER IS REQUIRED IN PREREQUISITE COURSES.	STUDENT LEARNING OUTCOMES: UPON COMPLETION OF CHM 2046, ALL STUDENTS SHOULD BE ABLE TO: • EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE • DESCRIBE THE FORCES THAT ACT BETWEEN MOLECULES AND IONS • UNDERSTAND PHASE TRANSITIONS AND INTERPRET PHASE DIAGRAMS • USE HEATING AND COOLING CURVES TO DETERMINE PHYSICAL PROPERTIES • DESCRIBE THE SOLUTION PROCESS • CALCULATE AND CONVERT AMONG COMMON SOLUTION CONCENTRATION UNITS • CALCULATE THE COLLIGATIVE PROPERTIES OF A SOLUTION • DEFINE CHEMICAL KINETICS, REACTION RATES, AND ACTIVATION ENERGY • WRITE RATE EXPRESSION AND RATE LAW FOR CHEMICAL REACTIONS • UNDERSTAND EQUILIBRIUM PROCESSES • DETERMINE EQUILIBRIUM CONSTANT EXPRESSIONS FOR REACTIONS • DEFINE ACIDS AND BASES • CALCULATE PH FOR AQUEOUS SOLUTIONS AND BUFFER SYSTEMS • CONSTRUCT AND INTERPRET TITRATION CURVES • DEFINE ENTROPY AND FREE ENERGY • CALCULATE CHANGES IN THERMODYNAMICS FUNCTIONS DURING CHEMICAL REACTIONS • BALANCE REDOX REACTIONS AND DESIGN ELECTROCHEMICAL CELLS • DEFINE RADIOACTIVITY AND NUCLEAR REACTIONS • UNDERSTAND AND DETERMINE RADIOACTIVE DECAY RATES FROM HALF-LIFE INFORMATION
CIS	2	530		INTRODUCTION TO CYBERSECURITY	3		Social Sciences	No Updates		1	Yes	Fall 2025	THIS COURSE INTRODUCES STUDENTS TO CYBERSECURITY . IT PROVIDES INFORMATION RELATED TO CYBER THREATS AS WELL AS THE BASIC SECURITY DESIGN AND INFORMATION ASSURANCE FUNDAMENTALS. IN ADDITION THE COURSE COVERS INFORMATION ASSURANCE CONTROLLING LAWS AND GUIDELINES.	UPON SUCCESSFUL COMPLETION OF THE COURSE, STUDENTS WILL BE ABLE TO: LIST THE FUNDAMENTAL CONCEPTS OF THE INFORMATION ASSURANCE / CYBER DEFENSE DISCIPLINE. DESCRIBE HOW THE FUNDAMENTAL CONCEPTS OF CYBER DEFENSE CAN BE USED TO PROVIDE SYSTEM SECURITY. IDENTIFY THE BAD ACTORS IN CYBERSPACE AND COMPARE AND CONTRAST THEIR RESOURCES, CAPABILITIES/TECHNIQUES, MOTIVATIONS, AVERSION TO RISK. DESCRIBE DIFFERENT TYPES OF ATTACKS AND THEIR CHARACTERISTICS. IDENTIFY THE NEEDED DESIGN PRINCIPLE WHEN GIVEN A SPECIFIC SCENARIO. LIST THE APPLICABLE LAWS AND POLICIES RELATED TO CYBER DEFENSE AND DESCRIBE THE MAJOR COMPONENTS OF EACH PERTAINING TO THE STORAGE AND TRANSMISSION OF DATA. DESCRIBE THEIR RESPONSIBILITIES RELATED TO THE HANDLING OF INFORMATION ABOUT VULNERABILITIES. DESCRIBE HOW THE TYPE OF LEGAL DISPUTE (CIVIL, CRIMINAL, PRIVATE) AFFECTS THE EVIDENCE USED TO RESOLVE IT. LIST THE FIRST PRINCIPLES OF SECURITY. DESCRIBE WHY EACH PRINCIPLE IS IMPORTANT TO SECURITY AND HOW IT ENABLES THE DEVELOPMENT OF SECURITY MECHANISMS THAT CAN IMPLEMENT DESIRED SECURITY POLICIES. ANALYZE COMMON SECURITY FAILURES AND IDENTIFY SPECIFIC DESIGN PRINCIPLES THAT HAVE BEEN VIOLATED. IDENTIFY THE NEEDED DESIGN PRINCIPLE WHEN GIVEN A SPECIFIC SCENARIO. DESCRIBE WHY GOOD HUMAN MACHINE INTERFACES ARE IMPORTANT TO SYSTEM USE. EXPLAIN THE INTERACTION BETWEEN SECURITY AND SYSTEM USABILITY AND THE IMPORTANCE FOR MINIMIZING THE AFFECTS OF SECURITY MECHANISMS. EXAMINE THE ARCHITECTURE OF A TYPICAL, COMPLEX SYSTEM AND IDENTIFY SIGNIFICANT VULNERABILITIES, RISKS, AND POINTS AT WHICH SPECIFIC SECURITY TECHNOLOGIES/METHODS SHOULD BE EMPLOYED.

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COM	2	023		DEATH AND COMMUNICATION	3		Social Sciences	Removed from General Education		1	Yes	Spring 2025	IN THIS COURSE WE SHALL EXAMINE TOPICS RELATED TO DEATH. THE CHIEF FOCUS OF THIS CLASS WILL BE INTERPERSONAL COMMUNICATION AND DEATH. WE WILL EXPLORE END-OF-LIFE COMMUNICATION IN A FAMILY CONTEXT. OTHER TOPICS INCLUDE DEATH RITUALS IN DIVERSE CULTURAL CONTEXTS, THE HIGH COST OF DYING IN THE UNITED STATES, AND DEATH POLICY. PLEASE BE AWARE THAT SOME OF THESE ISSUES CAN BE RATHER DISQUIETING TO CONSIDER AND DISCUSS. STUDENTS SHOULD CONSIDER THE SUBJECT MATTER BEFORE DECIDING TO ENROLL IN THIS COURSE.	STUDENTS WILL DEMONSTRATE AN ABILITY TO RESEARCH DEATH RITUALS IN CULTURES OTHER THAN THEIR OWN CULTURE. STUDENTS WILL DEMONSTRATE THEIR ABILITY TO CONDUCT A PURPOSEFUL CONVERSATION ABOUT DEATH AND REFLECT ON THAT CONVERSATION BY COMPLETING ASSIGNMENT ONE IN THIS CLASS. STUDENTS WILL DEMONSTRATE AN UNDERSTANDING OF IMPORTANT CONCEPTS RELATED TO DEATH INCLUDING UNCERTAINTY MANAGEMENT THEORY.
CPO	2	002		COMPARATIVE POLITICS	3		Social Sciences	No Updates		7	Yes	Fall 2025	EXAMINATION OF POLITICAL PROCESSES AND POLITICAL INSTITUTIONS IN SELECTED FOREIGN COUNTRIES SUCH AS BRITAIN, FRANCE, GERMANY, USSR, JAPAN AND INDIA. METHODS OF CROSS-NATIONAL POLITICAL ANALYSIS. AS WITH ALL INTRODUCTORY SOCIAL SCIENCE COURSES IN THE GENERAL EDUCATION CURRICULUM, THIS COURSE WILL PROVIDE STUDENTS WITH AN UNDERSTANDING OF THE BASIC SOCIAL AND BEHAVIORAL SCIENCE CONCEPTS AND PRINCIPLES USED IN THE ANALYSIS OF BEHAVIOR AND PAST AND PRESENT SOCIAL, POLITICAL, AND ECONOMIC ISSUES.	STUDENT LEARNING OUTCOMES (SLO'S) STUDENT LEARNING OUTCOMES • IDENTIFY THEORIES OF COMPARING COUNTRIES • EXPLORE THE ADVANTAGES AND LIMITATIONS OF CIVIC PARTICIPATION IN DIFFERENT POLITICAL CONTEXTS • COMPARE AND CONTRAST SPECIFIC COUNTRIES IN TERMS OF THEIR HISTORIES, GOVERNING INSTITUTIONS, AND CHALLENGES UWF GENERAL EDUCATION STUDENT LEARNING OUTCOMES • CRITICAL THINKING: SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS. • INTEGRITY/VALUES: REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT.
CRW	2	001		INTRODUCTION TO CREATIVE WRITING	3		Communication	No Updates		8	Yes	Fall 2025	OVERVIEW AND INTRODUCTION TO THREE GENRES OF CREATIVE WRITING: POETRY, FICTION, AND CREATIVE NONFICTION; INCLUDES ELEMENTS OF THE WESTERN CANON. WILL BE TAUGHT AS PART LECTURE/DISCUSSION AND PART WRITING WORKSHOP. CREDIT CANNOT BE RECEIVED IN BOTH CRW 2001 AND CRW 2000.	STUDENT LEARNING OUTCOMES (SLO'S) DEMONSTRATE IN WRITTEN WORK THE CONVENTIONS OF POETRY, FICTION, DRAMA, AND NONFICTION INCLUDING METAPHOR, NARRATIVE, METER, TONE AND IMAGERY. SUBMIT ORIGINAL WORK FOR DISCUSSION IN A WORKSHOP ENVIRONMENT AND PROVIDE WRITTEN AND ORAL CRITICISM TO PEERS THROUGHOUT THE DRAFTING PROCESS OF A CREATIVE WORK. REVISE WORK BY INTEGRATING ANALYTICAL COMMENTS BY THE PROFESSOR AND CLASSMATES INTO EACH STUDENT'S REVISION PROCESS OF HIS OR HER CREATIVE WORK. ADDRESS IN WRITING AND CONVERSATION THE MULTICULTURAL DIMENSIONS AND CONFLICTS INHERENT IN LITERATURE
DEP	2	004		HUMAN DEVELOPMENT ACROSS THE LIFESPAN	3		Social Sciences	No Updates		27	Yes	Fall 2025	THIS COURSE IS A SURVEY OF MAJOR THEMES AND RECENT FINDINGS IN THE AREA OF HUMAN DEVELOPMENT ACROSS THE LIFE SPAN. AN EMPHASIS WILL BE ON THE MAJOR TRANSITIONS FROM FETAL DEVELOPMENT THROUGH DEATH IN THE PHYSICAL, COGNITIVE, SOCIAL, AND EMOTIONAL DOMAINS. THE IMPACT OF INDIVIDUAL DIFFERENCES ON DEVELOPMENT WILL BE EXAMINED.	STUDENT LEARNING OUTCOMES (SLO'S) THE SUCCESSFUL STUDENT WILL BE ABLE TO: DIFFERENTIATE KEY LIFESPAN THEORIES, CONCEPTS, AND TERMS. IDENTIFY MAJOR PHYSICAL CHANGES THAT OCCUR THROUGHOUT THE LIFESPAN. IDENTIFY MAJOR COGNITIVE CHANGES THAT OCCUR THROUGHOUT THE LIFESPAN. IDENTIFY MAJOR SOCIOEMOTIONAL CHANGES THAT OCCUR THROUGHOUT THE LIFESPAN. APPLY LIFESPAN THEMES TO EXPERIENCES OUTSIDE OF THE CLASSROOM. UWF GENERAL EDUCATION SLOS: CRITICAL THINKING GENERAL EDUCATION OUTCOME: SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS. INTEGRITY AND VALUES GENERAL EDUCATION OUTCOME: REASON ETHICALLY WITHIN AN APPROPRIATE DISCIPLINARY CONTEXT.
ECO	2	013		PRINCIPLES OF ECONOMICS MACRO	3	Social Sciences	Social Sciences	No Updates		45	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL LEARN THE FOUNDATIONS OF MACROECONOMICS AS THE BRANCH OF ECONOMICS CONCERNED WITH HOW DECISION-MAKING, IN AN ENVIRONMENT OF SCARCITY, MAPS ONTO THE AGGREGATE ECONOMY. STUDENTS WILL EXAMINE THEORIES AND EVIDENCE RELATED TO THE FOLLOWING CORE SET OF TOPICS: NATIONAL INCOME DETERMINATION, MONEY, MONETARY AND FISCAL POLICY, MACROECONOMIC CONDITIONS, INTERNATIONAL TRADE AND THE BALANCE OF PAYMENTS, AND ECONOMIC GROWTH AND DEVELOPMENT.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL RECOGNIZE THAT ALL DECISIONS HAPPEN IN AN ENVIRONMENT OF SCARCITY. STUDENTS WILL EXAMINE THEORIES AND EVIDENCE REGARDING HOW CHANGES IN AGGREGATE MEASUREMENTS ARE RELATED TO ECONOMIC PERFORMANCE. STUDENTS WILL RECOGNIZE THE RELATIONSHIPS BETWEEN THE COMPONENTS OF THE NATIONAL INCOME ACCOUNTS. STUDENTS WILL ANALYZE THEORY AND EVIDENCE REGARDING FISCAL AND MONETARY POLICIES AND HOW THEY AFFECT THE ECONOMY. STUDENTS WILL IDENTIFY THEORIES OF LONG-TERM ECONOMIC GROWTH AND EXAMINE EVIDENCE FOR THOSE THEORIES.
ENC	1	101		ENGLISH COMPOSITION I	3	Communication	Communication	No Updates		64	Yes	Fall 2025	THIS COURSE INTRODUCES STUDENTS TO RHETORICAL CONCEPTS AND AUDIENCE-CENTERED APPROACHES TO WRITING INCLUDING COMPOSING PROCESSES, LANGUAGE CONVENTIONS AND STYLE, AND CRITICAL ANALYSIS AND ENGAGEMENT WITH WRITTEN TEXTS AND OTHER FORMS OF COMMUNICATION.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL APPLY RHETORICAL KNOWLEDGE TO COMMUNICATE FOR A RANGE OF AUDIENCES AND PURPOSES. STUDENTS WILL EMPLOY CRITICAL THINKING TO ANALYZE FORMS OF COMMUNICATION. STUDENTS WILL ENGAGE IN WRITING PROCESSES THAT INVOLVE DRAFTING, REVISING, AND REFLECTING. ADDITIONAL SLOS: DEVELOP A WRITING PROJECT THROUGH MULTIPLE DRAFTS. CLEARLY AND EFFECTIVELY COMMUNICATE YOUR IDEAS. APPLY THE SURFACE FEATURES OF WRITING, CORRECTLY IDENTIFYING PATTERNS OF ERRORS. INCORPORATE APPROPRIATE AND ACCURATE CONVENTIONS IN TERMS OF RESEARCH AND SOURCE CITATION. REFLECT ON YOUR WRITING PROCESS THROUGH ANALYSIS OF REVISION AND DRAFTING.

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ENC	1	102		ENGLISH COMPOSITION II	3		Communication	No Updates		52	Yes	Fall 2025	INTRODUCTION TO PUBLIC WRITING WITH AN EMPHASIS ON RHETORICAL AND GENRE ANALYSIS. COURSE PROVIDES INSTRUCTION ON WRITING TO AUDIENCES IN SITUATIONS AND CONTEXTS BEYOND THE ACADEMIC ESSAY. STUDENTS WILL LEARN TO ORGANIZE AND PRESENT IDEAS IN A RANGE OF DIGITAL AND PRINT GENRES AND MULTIPLE MODES OF COMMUNICATION.	CLEARLY AND EFFECTIVELY COMMUNICATE YOUR IDEAS USE KEY RHETORICAL CONCEPTS THROUGH ANALYZING AND COMPOSING A VARIETY OF TEXTS EVALUATE AUDIENCE AND SELECT AN APPROPRIATE GENRE AND MEDIUM BASED ON PURPOSE AND CONTEXT SELECT DIGITAL ENVIRONMENTS, MEDIA, AND GENRE FOR PRODUCTION OF TEXTS, RESEARCH, AND COLLABORATION SYNTHESIZE AND ANALYZE TO DETERMINE EFFECTIVE INTEGRATION OF SOURCES INTO WRITING PROJECTS
ENC	1	102		HONORS ENGLISH COMPOSITION II	3		Communication	Addition to GE for 26-27 Academic Year		11	No	N/A	INTRODUCTION TO PUBLIC WRITING WITH AN EMPHASIS ON RHETORICAL AND GENRE ANALYSIS. COURSE PROVIDES INSTRUCTION ON WRITING TO AUDIENCES IN SITUATIONS AND CONTEXTS BEYOND THE ACADEMIC ESSAY. STUDENTS WILL LEARN TO ORGANIZE AND PRESENT IDEAS IN A RANGE OF DIGITAL AND PRINT GENRES AND MULTIPLE MODES OF COMMUNICATION. THIS COURSE IS OFFERED FOR STUDENTS PARTICIPATING IN THE KUGELMAN HONORS PROGRAM.	CLEARLY AND EFFECTIVELY COMMUNICATE YOUR IDEAS USE KEY RHETORICAL CONCEPTS THROUGH ANALYZING AND COMPOSING A VARIETY OF TEXTS EVALUATE AUDIENCE AND SELECT AN APPROPRIATE GENRE AND MEDIUM BASED ON PURPOSE AND CONTEXT SELECT DIGITAL ENVIRONMENTS, MEDIA, AND GENRE FOR PRODUCTION OF TEXTS, RESEARCH, AND COLLABORATION SYNTHESIZE AND ANALYZE TO DETERMINE EFFECTIVE INTEGRATION OF SOURCES INTO WRITING PROJECTS
ENL	2	010		HISTORY OF ENGLISH LITERATURE I	3		Humanities	No Updates		2	Yes	Fall 2025	HISTORICAL SURVEY OF BRITISH LITERATURE FROM BEOWULF TO 1660. INCLUDES SELECTIONS FROM THE WESTERN CANON. OPEN TO ALL STUDENTS.	RECOGNIZE ELEMENTS OF LITERARY WORKS (SUCH AS PLOT, SETTING, CHARACTER, POINT OF VIEW, FORM, AND NARRATIVE STRUCTURE) AND EFFECTIVELY USE LITERARY AND CRITICAL TERMINOLOGY. CRITICALLY INTERPRET LITERARY WORKS BY ENGLISH WRITERS OF VARIOUS GENRES, PERIODS, TRADITIONS, AND ETHNIC BACKGROUNDS. CONSTRUCT PERSUASIVE ARGUMENTS IN WRITING USING TEXTUAL EVIDENCE AND ANALYSIS. PRESENT IDEAS CLEARLY AND EFFECTIVELY IN WRITTEN AND ORAL COMMUNICATIONS USING PROPER ENGLISH GRAMMAR AND SYNTAX AVOID PLAGIARISM PROPERLY CITE SOURCES USING MLA STYLE
ENL	2	020		HISTORY OF ENGLISH LITERATURE II	3		Humanities	No Updates		2	Yes	Spring 2025	HISTORICAL TRENDS: 1660 TO PRESENT. INCLUDES SELECTIONS FROM THE WESTERN CANON. OPEN TO ALL STUDENTS.	RECOGNIZE ELEMENTS OF LITERARY WORKS (SUCH AS PLOT, SETTING, CHARACTER, POINT OF VIEW, FORM, AND NARRATIVE STRUCTURE) AND EFFECTIVELY USE LITERARY AND CRITICAL TERMINOLOGY CRITICALLY INTERPRET LITERARY WORKS BY ENGLISH WRITERS OF VARIOUS GENRES, PERIODS, TRADITIONS, AND ETHNIC BACKGROUNDS CONSTRUCT PERSUASIVE ARGUMENTS USING TEXTUAL EVIDENCE AND ANALYSIS PRESENT IDEAS CLEARLY AND EFFECTIVELY IN WRITTEN AND ORAL COMMUNICATIONS USING PROPER ENGLISH GRAMMAR AND SYNTAX AVOID PLAGIARISM PROPERLY CITE SOURCES USING MLA STYLE
ESC	2	000		INTRODUCTION TO EARTH SCIENCE	3	Natural Sciences	Natural Sciences	No Updates		27	Yes	Fall 2025	USING THE SCIENTIFIC METHOD, CRITICAL THINKING SKILLS, DATA ANALYSIS, THIS COURSE WILL EXAMINE THE FUNDAMENTAL PROCESSES OF THE EARTH SYSTEM, COMPOSED OF AN ATMOSPHERE, HYDROSPHERE, LITHOSPHERE, BIOSPHERE, AND EXOSPHERE, THROUGH TIME. THE COURSE WILL ALSO EXPLORE INTERACTIONS BETWEEN THESE SPHERES, INCLUDING CRITICAL ANALYSIS OF SCIENTIFIC THEORIES AND EMPHASIZE EARTH'S CONNECTIONS WITH HUMANS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL USE CRITICAL THINKING TO RECOGNIZE THE RIGOROUS STANDARDS OF SCIENTIFIC THEORIES. STUDENTS WILL ANALYZE AND SYNTHESIZE EARTH SCIENCE DATA TO DRAW SCIENTIFICALLY VALID CONCLUSIONS. STUDENTS WILL RECOGNIZE THE DIFFERENT TIME SCALES ASSOCIATED WITH DIFFERENT EARTH PROCESSES. STUDENTS WILL EFFECTIVELY COMMUNICATE THE IMPORTANCE OF THE INTERACTIONS BETWEEN HUMANS AND THE EARTH'S SPHERES. STUDENTS WILL APPLY THEIR UNDERSTANDING OF THESE EARTH SCIENCE PRINCIPLES TO COMPLEX GLOBAL AND LOCAL ISSUES. UWF GENERAL EDUCATION SLO: THE MAJOR GENERAL EDUCATION LEARNING OUTCOME FOR THIS COURSE IS CRITICAL THINKING: EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE. ADDITIONAL COURSE SLOS: CRITICALLY EXAMINE THE CONCEPTS, POLICIES, AND METHODOLOGIES OF EARTH SCIENCE, AND INTERPRET HOW HUMAN ACTIVITIES AFFECT, AND ARE AFFECTED BY EARTH PROCESSES. DESCRIBE THEIR ENVIRONMENT IN TERMS OF GEOLOGICAL, GEOMORPHOLOGICAL, AND METEOROLOGICAL PROCESSES AND PRINCIPLES. DOCUMENT AND ARTICULATE NATURAL PHYSICAL PROCESSES AND SYSTEMS.
EUH	1	000		WESTERN PERSPECTIVES I	3		Social Sciences	No Updates		20	Yes	Fall 2025	STUDENTS WILL GAIN AN UNDERSTANDING OF THE BASIC SOCIAL AND BEHAVIORAL SCIENCE CONCEPTS AND PRINCIPLES USED IN THE ANALYSIS OF BEHAVIOR, PAST AND PRESENT. THE COURSE SURVEYS THE MAJOR ECONOMIC, SOCIAL, POLITICAL, RELIGIOUS, AND CULTURAL INSTITUTIONS AND IDEAS FROM THE BEGINNING OF WESTERN CIVILIZATION TO THE EARLY MODERN EUROPEAN PERIOD. THIS COURSE EXAMINES THE MAJOR EVENTS IN THE HISTORY OF WESTERN CIVILIZATION FROM ANTIQUITY TO THE 17TH CENTURY. IT ALSO EXAMINES EUROPE'S SOCIAL, RELIGIOUS, SCIENTIFIC, CULTURAL, POLITICAL, AND INTELLECTUAL DEVELOPMENTS FROM ANTIQUITY TO THE 17TH CENTURY.	STUDENT LEARNING OUTCOMES (SLO'S) TRACE THE GENERAL PROGRESSION OF POLITICS AND SOCIETY IN WESTERN CIVILIZATION. ANALYZE ARGUMENTS, FORM AND SUPPORT CONCLUSIONS, EVALUATE INFORMATION, AND PRESENT THESE CONCLUSIONS IN COHERENT ANALYTICAL PAPERS. EVALUATE AND ANALYZE PRIMARY SOURCES. UTILIZE THE BASIC METHODS AND TRADITIONS OF RESEARCH AND ANALYSIS IN HISTORY. UWF GENERAL EDUCATION SLO(S): SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS (CRITICAL THINKING). CRITICAL THINKING WILL BE ASSESSED THROUGH A SHORT ESSAY BASED ON PRIMARY SOURCE DOCUMENTS. REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT (INTEGRITY/VALUES). INTEGRITY/VALUES WILL BE ASSESSED THROUGH A QUIZ AND ESSAY. COLLEGE-LEVEL COMMUNICATION SLO(S): PRODUCE (THROUGH REVISION) EFFECTIVE WRITTEN COMMUNICATIONS THAT SUPPORT AUTHOR INTENT AND ADDRESS A SPECIFIC AUDIENCE.

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EUH	1	001		WESTERN PERSPECTIVES II	3		Social Sciences	No Updates		15	Yes	Fall 2024	STUDY OF THE WEST'S GEOGRAPHICAL, SOCIO-CULTURAL, POLITICAL AND SCIENTIFIC DEVELOPMENTS WITH AN EMPHASIS ON HOW CHANGES IN THESE AREAS HELPED TO SHAPE CIVILIZATION IN THE WEST, INFLUENCED THE NON-WESTERN WORLD, AND PROVIDED INSIGHT INTO THE CURRENT CONDITIONS IN THE WEST AND ITS RELATIONSHIP WITH THE GLOBAL COMMUNITY.	STUDENT LEARNING OUTCOMES (SLO'S) -STUDENTS WILL RECOGNIZE POLITICAL, SOCIAL, ECONOMIC, TECHNICAL, AND CULTURAL TRENDS IN EUROPEAN HISTORY SINCE 1648. -STUDENTS WILL BE ABLE TO IDENTIFY PRIMARY SOURCES AND USE THEM TO OBTAIN EVIDENCE. -STUDENTS WILL SELECT FACTUAL AND INTERPRETIVE INFORMATION FROM SECONDARY SOURCES, SUCH AS TEXTS, MONOGRAPHS, AND LECTURES, REPRESENTING DIFFERENT TYPES AND METHODS OF HISTORY. -STUDENTS WILL SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS. -STUDENTS WILL REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT.
EVR	2	001		INTRODUCTION TO ENVIRONMENTAL SCIENCE	3	Natural Sciences	Natural Sciences	No Updates		31	Yes	Fall 2025	THIS COURSE IS A SURVEY OF BASIC CHEMICAL, BIOLOGICAL, AND PHYSICAL PRINCIPLES OF ENVIRONMENTAL SCIENCE AND THEIR APPLICATIONS TO ENVIRONMENTAL ISSUES. THIS COURSE IS APPROPRIATE FOR STUDENTS IN A WIDE RANGE OF DISCIPLINES OR PROGRAMS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL APPLY CRITICAL THINKING TO ANALYSIS AND INTERPRETATION OF ENVIRONMENTAL INFORMATION AND MODEL OUTPUT. STUDENTS WILL APPLY THE SCIENTIFIC METHOD TO EXPLAIN NATURAL EXPERIENCES AND PHENOMENA. STUDENTS WILL EXPLAIN THE BASIC CHEMICAL, BIOLOGICAL, AND PHYSICAL PRINCIPLES OF ENVIRONMENTAL SCIENCE. STUDENTS WILL USE EMPIRICAL EVIDENCE TO DESCRIBE THE HISTORICAL AND MODERN CONTEXT OF ENVIRONMENTAL PROBLEMS AND THEIR SOLUTIONS. ADDITIONAL SLOS: IDENTIFY, EXAMINE, AND DISCUSS CURRENT, GLOBAL ENVIRONMENTAL ISSUES. PERFORM COMMUNITY SERVICE ENGAGEMENT RELATED TO LESSONS LEARNED IN CLASS. EVALUATE PERSONAL DECISIONS AND ACTIONS THAT AFFECT THE ENVIRONMENT.
EVR	2	001		HONORS INTRODUCTION TO ENVIRONMENTAL SCIENCE	3	Natural Sciences	Natural Sciences	No Updates		8	Yes	N/A	THIS COURSE IS A SURVEY OF BASIC CHEMICAL, BIOLOGICAL, AND PHYSICAL PRINCIPLES OF ENVIRONMENTAL SCIENCE AND THEIR APPLICATIONS TO ENVIRONMENTAL ISSUES. THIS COURSE IS APPROPRIATE FOR STUDENTS IN A WIDE RANGE OF DISCIPLINES OR PROGRAMS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL APPLY CRITICAL THINKING TO ANALYSIS AND INTERPRETATION OF ENVIRONMENTAL INFORMATION AND MODEL OUTPUT. STUDENTS WILL APPLY THE SCIENTIFIC METHOD TO EXPLAIN NATURAL EXPERIENCES AND PHENOMENA. STUDENTS WILL EXPLAIN THE BASIC CHEMICAL, BIOLOGICAL, AND PHYSICAL PRINCIPLES OF ENVIRONMENTAL SCIENCE. STUDENTS WILL USE EMPIRICAL EVIDENCE TO DESCRIBE THE HISTORICAL AND MODERN CONTEXT OF ENVIRONMENTAL PROBLEMS AND THEIR SOLUTIONS. ADDITIONAL SLOS: IDENTIFY, EXAMINE, AND DISCUSS CURRENT, GLOBAL ENVIRONMENTAL ISSUES. PERFORM COMMUNITY SERVICE ENGAGEMENT RELATED TO LESSONS LEARNED IN CLASS. EVALUATE PERSONAL DECISIONS AND ACTIONS THAT AFFECT THE ENVIRONMENT.
FIN	2	104		PERSONAL FINANCE	3		Social Sciences	No Updates		3	Yes	Fall 2025	SURVEY OF PERSONAL FINANCIAL PLANNING TOPICS. INCLUDES: MANAGING MONEY AND CREDIT, PERSONAL LOANS, INSURANCE, INVESTMENTS, HOME OWNERSHIP, AND TAXES.	STUDENT LEARNING OUTCOMES (SLO'S) SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS. (CRITICAL THINKING: SOCIAL SCIENCES) REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT. (INTEGRITY/VALUES: SOCIAL SCIENCES) UTILIZE TIME VALUE OF MONEY CONCEPTS TO SOLVE A WIDE VARIETY OF FINANCIAL PROBLEMS INCLUDING AUTO AND REAL ESTATE FINANCING, AS WELL AS RETIREMENT PLANNING. (CRITICAL THINKING: SOCIAL SCIENCES) DESCRIBE THE COSTS AND BENEFITS OF HOME, AUTO, HEALTH, AND LIFE INSURANCE POLICIES IN THE LONG-TERM PLANNING OF PERSONAL AND FAMILY FINANCES. (INTEGRITY/VALUES: SOCIAL SCIENCES) IDENTIFY BASIC PERSONAL INCOME TAX CONCEPTS FOR HOUSEHOLD USE. EXPLAIN THE KEY CONCEPTS AND IMPORTANCE OF PERSONAL FINANCIAL STATEMENTS AND BUDGETING FOR HOUSEHOLDS. DESCRIBE IMPORTANT CASH MANAGEMENT CONSIDERATIONS. EXPLAIN THE WISE USE OF CREDIT AND PURCHASING DECISIONS AS THEY RELATE TO INDIVIDUALS. DESCRIBE THE KEY CONSIDERATIONS RELATED TO HOME AND AUTOMOBILE PURCHASE AND FINANCING DECISIONS. IDENTIFY LONG-TERM INVESTMENT AND RETIREMENT CONCEPTS AND STRATEGIES.
GEA	2	000		NATIONS AND REGIONS OF THE WORLD	3		Social Sciences	No Updates		16	Yes	Fall 2025	REGIONAL TREATMENT OF THE PHYSICAL & CULTURAL ENVIRONMENTS OF THE WORLD. INTERDEPENDENCE OF PEOPLES AND NATIONS OF THE WORLD WILL BE STRESSED WITHIN THE CONTEXT OF ENVIRONMENTAL ATTRIBUTES AND SHORTCOMINGS AND HUMAN RESPONSES TO ENVIRONMENTAL OPPORTUNITIES OR LIMITATIONS.	STUDENT LEARNING OUTCOMES (SLO'S) THE SOCIAL SCIENCE GEN ED SLOS ARE TO SOLVE PROBLEMS USING SOCIAL SCIENCE METHOD AND REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT. SPECIFIC COURSE SLOS ARE: DEFINE AND BE ABLE TO APPLY TO USE KEY CONCEPTS, IDEAS, AND TERMS IN EACH TEXT CHAPTER. (CLO1) IDENTIFY AND EXPLAIN MAJOR GEOGRAPHIC THEORIES POSED AND APPLIED BY GEOGRAPHERS. (CLO2) DESCRIBE GEOGRAPHIC, LAND USE, URBANIZATION, GLOBALIZATION, HISTORIC, CULTURAL, AND ETHNIC MODELS AND CONCEPTS AND THEN BE ABLE TO APPLY THOSE MODELS TO CURRENT AND FUTURE REALMS, REGIONS, AND THE WORLD. (CLO3) ASSESSMENT OF THE CLOS WILL BE VIA TREADED DISCUSSIONS, REACTION PAPERS, PROJECTS, AND QUIZZES IN EACH CHAPTER OR MODULE LEADING TO AN INTEGRATED ESSAY FORMAT CONCEPT FOCUSED FINAL EXAM. (CLO4) (NOTE: EACH CHAPTER OR MODULE CONTAINS VARIED DETAILED STUDENT LEARNING OUTCOMES (SLO) RELATED AND LINKED TO THE COURSE LEARNING OUTCOMES.)
GEB	1	011		INTRODUCTION TO BUSINESS	3		Social Sciences	No Updates		1	Yes	Fall 2025	PROVIDES IN-DEPTH COVERAGE OF ALL ASPECTS OF BUSINESS BY PRESENTING AN INTEGRATED AND BALANCED REVIEW OF THE EXTERNAL AND INTERNAL FORCES THAT COMPRISE BUSINESS AND ECONOMIC SYSTEMS. INTENDED PRIMARILY FOR FRESHMAN/SOPHOMORES TO ASSIST THE STUDENT'S SELECTION OF A BUSINESS CAREER OR BUSINESS MAJOR.	STUDENT LEARNING OUTCOMES (SLO'S) DISCUSS WHY BUSINESSES ARE STRUCTURED DIFFERENTLY BECAUSE OF FACTORS SUCH AS GEOGRAPHIC LOCATION, TARGET MARKETS, OR PRODUCT MIXES. DISCUSS THE DIFFERENT ELEMENTS INVOLVED WITH DOING BUSINESS INTERNATIONALLY DISCUSS HOW BUSINESSES ACHIEVE SUCCESS BY DEMONSTRATING ETHICAL BEHAVIOR EXPLAIN THE STRATEGIES FOR BUSINESS SUCCESS IN THE RELATIONSHIP ERA DESCRIBE FACTORS THAT AFFECT PERFORMANCE, MOTIVATION, AND GROUP WORK IN THE WORKPLACE DESCRIBE THE ELEMENTS OF CUSTOMER-DRIVEN MARKETING DEMONSTRATE THE USE OF TECHNOLOGY IN BUSINESS DISCUSS THE BASIC ELEMENTS OF FINANCIAL MANAGEMENT AND INVESTING SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS. REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT.

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GLY	2	010		PHYSICAL GEOLOGY	3	Natural Sciences	Natural Sciences	No Updates		17	Yes	Fall 2023	USING THE SCIENTIFIC METHOD, CRITICAL THINKING SKILLS, DATA ANALYSIS, THIS COURSE WILL EXAMINE THE FUNDAMENTAL PROCESSES OF THE EARTH SYSTEM, COMPOSED OF AN ATMOSPHERE, HYDROSPHERE, CRYOSPHERE, LITHOSPHERE, BIOSPHERE, AND EXOSPHERE THROUGH TIME. THE COURSE WILL ALSO EXPLORE INTERACTIONS BETWEEN THESE SPHERES, INCLUDING CRITICAL ANALYSIS OF SCIENTIFIC THEORIES AND EMPHASIZE LITHOSPHERIC CONNECTIONS WITH HUMANITY.	STUDENTS WILL USE CRITICAL THINKING TO RECOGNIZE THE RIGOROUS STANDARDS OF SCIENTIFIC THEORIES. STUDENTS WILL ANALYZE AND SYNTHESIZE GEOSCIENCE DATA TO DRAW SCIENTIFICALLY VALID CONCLUSIONS. STUDENTS WILL RECOGNIZE THE DIFFERENT TIME SCALES ASSOCIATED WITH DIFFERENT GEOLOGIC PROCESSES. STUDENTS WILL EFFECTIVELY COMMUNICATE THE IMPORTANCE OF THE INTERACTIONS BETWEEN HUMANS AND EARTH'S SPHERES. STUDENTS WILL APPLY THEIR UNDERSTANDING OF THESE GEOLOGIC PRINCIPLES TO COMPLEX ISSUES. NATURAL SCIENCE GEN ED SLO: EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE. SPECIFIC COURSE SLOS: DESCRIBE THE SCIENTIFIC METHOD AND APPLY IT IN A GEOLOGICAL CONTEXT DESCRIBE EARTH'S MAJOR SYSTEMS AND EXPLAIN HOW THEY INTERACT IDENTIFY COMMON ROCKS AND MINERALS AND INTERPRET HOW THEY FORM; DESCRIBE AND INTERPRET THE DEVELOPMENT OF LANDFORMS AND GEOLOGIC STRUCTURES EXPLAIN THE PLATE TECTONIC THEORY AND EXPLAIN ITS RELATIONSHIP TO EARTH PROCESSES, FEATURES, AND LANDFORMS.
HIS	2	050		EXPLORE HISTORY	3		Social Sciences	No Updates		2	Yes	Fall 2025	STUDENTS WILL GAIN AN UNDERSTANDING OF THE BASIC SOCIAL AND BEHAVIORAL SCIENCE CONCEPTS AND PRINCIPLES USED IN THE ANALYSIS OF BEHAVIOR, PAST AND PRESENT. THIS COURSE INTRODUCES THE FOUNDATIONS OF HISTORICAL RESEARCH METHODS AND INTERPRETATIONS. STUDENTS WILL LEARN AND PRACTICE HISTORICAL RESEARCH AND WRITING USING APPROPRIATE HISTORICAL RESEARCH TOOLS AND SKILLS. IN ADDITION TO THE BASIC SKILLS INTRODUCED, STUDENTS WILL ALSO DIVE INTO THE MODERN (POST-1700) HISTORY OF EURASIA.	STUDENT LEARNING OUTCOMES (SLO'S) UWF GENERAL EDUCATION SLOS: REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT (INTEGRITY/VALUES). SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS (CRITICAL THINKING) THIS SLO RELATES TO STUDENTS' ABILITY TO APPLY HISTORICAL REASONING TO EVALUATE PRIMARY AND SECONDARY SOURCES. ASSESSMENTS WILL BE THROUGH STANDARDIZED HISTORY ASSESSMENTS OF THINKING BASED ON THE WORK OF THE STANFORD HISTORY EDUCATION GROUP. ADDITIONAL SLOS: ANALYZE AND EVALUATE PRIMARY SOURCES AND FORM COHERENT ARGUMENTS, SOLVE PROBLEMS AND IDENTIFY AREAS FOR FURTHER INVESTIGATION. CRITICALLY INTERPRET HISTORICAL EVENTS OR PERIODS THROUGH A VARIETY OF CULTURAL PERSPECTIVES. DEMONSTRATE WRITTEN AND ORAL COMMUNICATION SKILLS SUCCESS.
HSC	2	100		PERSONAL, FAMILY AND COMMUNITY HEALTH	3		Social Sciences	No Updates		3	Yes	Fall 2025	THIS COURSE EXAMINES U.S. HEALTH PRIORITIES WITH AN EMPHASIS ON BEHAVIORAL AND SOCIAL DETERMINANTS OF HEALTH. THE BASIC SOCIAL AND BEHAVIORAL SCIENCE CONCEPTS WILL BE EXPLORED. THIS WILL INCLUDE PRINCIPLES USED IN THE ANALYSIS OF BEHAVIOR AND PAST AND PRESENT SOCIAL, POLITICAL, AND ECONOMIC ISSUES RELATED TO HEALTH. MATERIAL PRESENTED WILL RAISE LEVELS OF AWARENESS AND PROVIDE INFORMATION NEEDED TO MAKE INFORMED HEALTH RELATED CHOICES, ENCOURAGE ATTITUDE CHANGE, AND DEVELOP DECISION MAKING SKILLS WHICH FACILITATE HEALTHIER LIFESTYLE BEHAVIORS.	STUDENT LEARNING OUTCOMES (SLO'S) DIFFERENTIATE BETWEEN THE EIGHT DIMENSIONS OF WELLNESS AND EXPLAIN THEIR INTERRELATEDNESS. INCREASE KNOWLEDGE OF PREVALENCE, RISK FACTORS, AND TREATMENT TO COMMON HEALTH PROBLEMS. ANALYZE HOW HEALTH BEHAVIORS ARE INFLUENCED BY SOCIAL, POLITICAL, AND ECONOMIC FACTORS. DEMONSTRATE HOW THEORY AND RESEARCH CAN BE APPLIED IN REAL-WORLD SETTINGS TO IMPROVE HEALTH AND WELL-BEING. APPLY STRATEGIES TO IMPROVE PERSONAL HEALTH AND WELL-BEING. REQUIRED GENERAL EDUCATION OUTCOMES (SOCIAL SCIENCES): CRITICAL THINKING FOR SOCIAL SCIENCES - SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS. VALUES/INTEGRITY FOR SOCIAL SCIENCES - REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT.
HUM	2	020		INTRODUCTION TO HUMANITIES	3	Humanities	Humanities	No Updates		44	Yes	N/A	IN THIS COURSE, STUDENTS WILL LEARN ABOUT THE CREATIVE IDEAS AND ACCOMPLISHMENTS OF VARIOUS CULTURES IN VARIOUS FIELDS OF HUMANITIES THAT MAY INCLUDE ART, ARCHITECTURE, DRAMA, HISTORY, MUSIC, LITERATURE, PHILOSOPHY, AND RELIGION. THE COURSE WILL INCLUDE CULTURAL EXPRESSIONS FROM THE WESTERN CANON AND MAY ALSO INCLUDE EXPRESSIONS FROM AROUND THE GLOBE.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL DEMONSTRATE KNOWLEDGE OF ARTS AND IDEAS AND SYNTHESIZE INFORMATION FROM VARIOUS SOURCES. STUDENTS WILL ANALYZE AND INTERPRET SELECTED EXPRESSIONS OF ARTS AND IDEAS. STUDENTS WILL COMPARE AND CONTRAST SELECTED EXPRESSIONS OF ARTS AND IDEAS. STUDENTS WILL IDENTIFY CONTEXTUAL INFLUENCES ON THE DEVELOPMENT OF INTERDISCIPLINARY ARTS AND IDEAS.
HUM	2	020		HONORS INTRODUCTION TO HUMANITIES	3	Humanities	Humanities	No Updates		10	Yes	N/A	IN THIS COURSE, STUDENTS WILL LEARN ABOUT THE CREATIVE IDEAS AND ACCOMPLISHMENTS OF VARIOUS CULTURES IN VARIOUS FIELDS OF HUMANITIES THAT MAY INCLUDE ART, ARCHITECTURE, DRAMA, HISTORY, MUSIC, LITERATURE, PHILOSOPHY, AND RELIGION. THE COURSE WILL INCLUDE CULTURAL EXPRESSIONS FROM THE WESTERN CANON AND MAY ALSO INCLUDE EXPRESSIONS FROM AROUND THE GLOBE. THIS COURSE MEETS THE KUGELMAN HONORS PROGRAM HUMANITIES REQUIREMENT.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL DEMONSTRATE KNOWLEDGE OF ARTS AND IDEAS AND SYNTHESIZE INFORMATION FROM VARIOUS SOURCES. STUDENTS WILL ANALYZE AND INTERPRET SELECTED EXPRESSIONS OF ARTS AND IDEAS. STUDENTS WILL COMPARE AND CONTRAST SELECTED EXPRESSIONS OF ARTS AND IDEAS. STUDENTS WILL IDENTIFY CONTEXTUAL INFLUENCES ON THE DEVELOPMENT OF INTERDISCIPLINARY ARTS AND IDEAS.

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INR	2	002		INTERNATIONAL POLITICS	3		Social Sciences	No Updates		18	Yes	Fall 2025	THIS COURSE EXPLORES THE ORIGINS AND EVOLUTION OF THE INTERNATIONAL SYSTEM, THEORIES FOR UNDERSTANDING INTERNATIONAL POLITICS, AND EXPLANATIONS FOR FOREIGN POLICY, WAR AND TODAY'S GLOBALIZED ORDER. AS WITH ALL INTRODUCTORY SOCIAL SCIENCE COURSES IN THE GENERAL EDUCATION CURRICULUM, THIS COURSE WILL PROVIDE STUDENTS WITH AN UNDERSTANDING OF THE BASIC SOCIAL AND BEHAVIORAL SCIENCE CONCEPTS AND PRINCIPLES USED IN THE ANALYSIS OF BEHAVIOR AND PAST AND PRESENT SOCIAL, POLITICAL, AND ECONOMIC ISSUES.	STUDENT LEARNING OUTCOMES (SLO'S) RECOGNIZE THE HISTORY OF THE CURRENT INTERNATIONAL SYSTEM ANALYZE THE CAUSES AND REASONS FOR WAR INVESTIGATE THE CONSEQUENCES OF COLLECTIVE ACTION PROBLEMS EVALUATE THE MERITS OF STUDYING INTERNATIONAL RELATIONS REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT (INTEGRITY/VALUES GENERAL EDUCATION SLO) SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS (CRITICAL THINKING GENERAL EDUCATION SLO)
LIT	2	000		INTRODUCTION TO LITERATURE	3	Humanities	Humanities	No Updates		38	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL BE ASSIGNED READINGS REPRESENTATIVE OF A BROAD RANGE OF LITERARY GENRES AND CULTURES. THESE READINGS WILL COVER A VARIETY OF LITERARY MOVEMENTS AND HISTORICAL ERAS. THE READINGS WILL INCLUDE, BUT ARE NOT LIMITED TO, SELECTIONS FROM THE WESTERN CANON. WRITTEN ANALYSIS OF LITERARY WORKS MAY BE REQUIRED. STUDENTS WILL BE PROVIDED WITH OPPORTUNITIES TO PRACTICE CRITICAL INTERPRETATION.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL IDENTIFY A VARIETY OF LITERARY MOVEMENTS, HISTORICAL ERAS, AND/OR CULTURAL CONTEXTS. STUDENTS WILL DEMONSTRATE CRITICAL THINKING AND ANALYTICAL SKILLS. ADDITIONAL SLOS: PROPERLY IDENTIFY LITERARY AND RHETORICAL ELEMENTS SUCH AS PLOT, TONE, SETTING, METAPHOR, IMAGERY, POINT OF VIEW, FORM, ETC. ANALYZE THE RELATIONSHIP BETWEEN LITERARY/RHETORICAL ELEMENTS AND THE EXPRESSION OF LITERARY MEANING OR CONTENT. DESCRIBE THE SOCIAL, PHILOSOPHICAL AND/OR SCHOLARLY SIGNIFICANCE OF PRIMARY TEXTS FROM DISTINCT LITERARY-HISTORICAL PERIODS. INTERPRET LITERARY TEXTS. PRODUCE SEVERAL ESSAYS THAT DEFEND AN ARGUABLE THESIS WITH CLOSE READINGS OF PRIMARY LITERARY TEXTS. AUTHOR RESPECTFUL REVIEWS OF OTHER STUDENTS' WORK.
LIT	2	030		INTRODUCTION TO POETRY	3		Humanities	No Updates		5	Yes	Fall 2020	ELEMENTS OF POETRY, TERMINOLOGY OF PROSODY, GENRE, AND THE POETIC PROCESS. THIS COURSE INCLUDES ELEMENTS OF THE WESTERN CANON. WRITING OF SHORT ANALYTICAL PAPERS AND CREATIVE WORKS. THE COURSE IS OPEN TO ALL UWF STUDENTS.	PROPERLY IDENTIFY BASIC ELEMENTS OF POETRY, INCLUDING TONE, GENRE, IMAGERY, FIGURES OF SPEECH, AND SYMBOLISM. RECOGNIZE AND APPLY BASIC ELEMENTS OF PROSODY INCLUDING RHYTHM AND METRICS. ANALYZE THE RELATIONSHIP BETWEEN THE FORMAL ELEMENTS OF POETRY AND ITS MEANING OR CONTENT. DESCRIBE THE SOCIAL, PHILOSOPHICAL AND/OR SCHOLARLY SIGNIFICANCE OF POETRY FROM A VARIETY OF CULTURES AND HISTORICAL PERIODS. INTERPRET POETRY IN TRANSLATION. PRODUCE SEVERAL ESSAYS THAT DEFEND AN ARGUABLE THESIS WITH CLOSE READINGS OF POETRY AS WELL AS A NUMBER OF SHORT CREATIVE WORKS.
MAC	1	105	C	COLLEGE ALGEBRA WITH LAB	4	Mathematics	Mathematics	No Updates		9	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL DEVELOP PROBLEM SOLVING SKILLS, CRITICAL THINKING, COMPUTATIONAL PROFICIENCY, AND CONTEXTUAL FLUENCY THROUGH THE STUDY OF EQUATIONS, FUNCTIONS, AND THEIR GRAPHS. EMPHASIS WILL BE PLACED ON QUADRATIC, EXPONENTIAL, AND LOGARITHMIC FUNCTIONS. TOPICS WILL INCLUDE SOLVING EQUATIONS AND INEQUALITIES, DEFINITION AND PROPERTIES OF A FUNCTION, DOMAIN AND RANGE, TRANSFORMATIONS OF GRAPHS, OPERATIONS ON FUNCTIONS, COMPOSITE AND INVERSE FUNCTIONS, BASIC POLYNOMIAL AND RATIONAL FUNCTIONS, EXPONENTIAL AND LOGARITHMIC FUNCTIONS, AND APPLICATIONS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL SOLVE AN EQUATION OR AN INEQUALITY USING AN APPROPRIATE TECHNIQUE. STUDENTS WILL DEFINE AND DESCRIBE FUNCTIONS, THEIR PROPERTIES, AND GRAPHS. STUDENTS WILL MANIPULATE FUNCTIONS TO SIMPLIFY EXPRESSIONS AND FIND NEW FUNCTIONS. STUDENTS WILL USE TRANSFORMATIONS TO WRITE AN EQUATION FOR A FUNCTION AND TO GRAPH A FUNCTION. STUDENTS WILL MODEL AND SOLVE REAL WORLD PROBLEMS USING FUNCTIONS. ADDITIONAL SLOS: UPON SUCCESSFUL COMPLETION OF THE COURSE, STUDENTS SHOULD BE ABLE TO: DEMONSTRATE THE ABILITY TO IDENTIFY FUNCTIONS AND THEIR PROPERTIES DEMONSTRATE THE ABILITY TO ANALYZE AND GRAPH POLYNOMIAL, RATIONAL, RADICAL, EXPONENTIAL, AND LOGARITHMIC FUNCTIONS DEMONSTRATE THE ABILITY TO PERFORM OPERATIONS ON THESE FUNCTIONS SOLVE EXPONENTIAL AND LOGARITHMIC EQUATIONS SOLVE SYSTEMS OF LINEAR EQUATIONS SOLVE PROBLEMS INVOLVING APPLICATIONS OF ALGEBRAIC AND TRANSCENDENTAL FUNCTIONS.
MAC	1	105		COLLEGE ALGEBRA	3	Mathematics	Mathematics	No Updates		52	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL DEVELOP PROBLEM SOLVING SKILLS, CRITICAL THINKING, COMPUTATIONAL PROFICIENCY, AND CONTEXTUAL FLUENCY THROUGH THE STUDY OF EQUATIONS, FUNCTIONS, AND THEIR GRAPHS. EMPHASIS WILL BE PLACED ON QUADRATIC, EXPONENTIAL, AND LOGARITHMIC FUNCTIONS. TOPICS WILL INCLUDE SOLVING EQUATIONS AND INEQUALITIES, DEFINITION AND PROPERTIES OF A FUNCTION, DOMAIN AND RANGE, TRANSFORMATIONS OF GRAPHS, OPERATIONS ON FUNCTIONS, COMPOSITE AND INVERSE FUNCTIONS, BASIC POLYNOMIAL AND RATIONAL FUNCTIONS, EXPONENTIAL AND LOGARITHMIC FUNCTIONS, AND APPLICATIONS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL SOLVE AN EQUATION OR AN INEQUALITY USING AN APPROPRIATE TECHNIQUE. STUDENTS WILL DEFINE AND DESCRIBE FUNCTIONS, THEIR PROPERTIES, AND GRAPHS. STUDENTS WILL MANIPULATE FUNCTIONS TO SIMPLIFY EXPRESSIONS AND FIND NEW FUNCTIONS. STUDENTS WILL USE TRANSFORMATIONS TO WRITE AN EQUATION FOR A FUNCTION AND TO GRAPH A FUNCTION. STUDENTS WILL MODEL AND SOLVE REAL WORLD PROBLEMS USING FUNCTIONS. ADDITIONAL SLOS: UPON SUCCESSFUL COMPLETION OF THE COURSE, STUDENTS SHOULD BE ABLE TO: DEMONSTRATE THE ABILITY TO IDENTIFY FUNCTIONS AND THEIR PROPERTIES DEMONSTRATE THE ABILITY TO ANALYZE AND GRAPH POLYNOMIAL, RATIONAL, RADICAL, EXPONENTIAL, AND LOGARITHMIC FUNCTIONS DEMONSTRATE THE ABILITY TO PERFORM OPERATIONS ON THESE FUNCTIONS SOLVE EXPONENTIAL AND LOGARITHMIC EQUATIONS SOLVE SYSTEMS OF LINEAR EQUATIONS SOLVE PROBLEMS INVOLVING APPLICATIONS OF ALGEBRAIC AND TRANSCENDENTAL FUNCTIONS.
MAC	1	114		TRIGONOMETRY	3		Mathematics	No Updates		37	Yes	Fall 2025	TRIGONOMETRIC FUNCTIONS, THEIR PROPERTIES AND GRAPHS, INVERSE TRIGONOMETRIC FUNCTIONS, THEIR PROPERTIES AND GRAPHS, TRIGONOMETRIC IDENTITIES, CONDITIONAL TRIGONOMETRIC EQUATIONS; SOLUTIONS OF TRIANGLES, VECTOR ALGEBRA, PARAMETRIC EQUATIONS, POLAR COORDINATES, APPLICATIONS. COLLEGE ALGEBRA OR A STRONG HIGH SCHOOL ALGEBRA BACKGROUND IS REQUIRED.	STUDENT LEARNING OUTCOMES (SLO'S) UPON COMPLETION OF THE COURSE, STUDENTS WILL HAVE THE ABILITY TO: GRAPH TRIGONOMETRIC AND INVERSE TRIGONOMETRIC FUNCTIONS DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS APPLY TRIGONOMETRIC FORMULAS ESTABLISH TRIGONOMETRIC IDENTITIES SOLVE TRIGONOMETRIC EQUATIONS SOLVE RIGHT AND OBLIQUE TRIANGLES GRAPH EQUATIONS IN POLAR AND RECTANGULAR COORDINATES ESTABLISH TRIGONOMETRIC IDENTITIES SOLVE TRIGONOMETRIC EQUATIONS

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MAC	1	140		PRECALCULUS ALGEBRA	3		Mathematics	No Updates		33	Yes	Fall 2023	STRESSES THE ASPECTS OF ALGEBRA THAT ARE IMPORTANT FOR THE CALCULUS SEQUENCE. LAYS EMPHASIS ON GRAPHS IN THE STUDY OF FUNCTIONS AND ALGEBRAIC RELATIONS. COVERS POLYNOMIALS; RATIONAL FUNCTIONS; LOGARITHMIC, EXPONENTIAL, AND PIECEWISE DEFINED FUNCTIONS; INEQUALITIES; CONIC SECTIONS; MATRICES; SEQUENCES, AND SERIES; MATHEMATICAL INDUCTION. PREREQUISITE COURSE OR APPROPRIATE SCORE ON PLACEMENT TEST IS REQUIRED.	STUDENT LEARNING OUTCOMES (SLO'S) ALGEBRAICALLY ANALYZE POLYNOMIAL AND RATIONAL FUNCTIONS GRAPH AND SOLVE EXPONENTIAL AND LOGARITHMIC FUNCTIONS SOLVE EXPONENTIAL AND LOGARITHMIC EQUATIONS SOLVE POLYNOMIAL AND RATIONAL INEQUALITIES ANALYZE EQUATIONS OF PARABOLAS, ELLIPSES, AND HYPERBOLAS SOLVE SYSTEMS OF LINEAR EQUATIONS, INCLUDING THE USE OF DETERMINANTS PERFORM OPERATIONS ON SEQUENCES GENERAL EDUCATION: APPLY MATHEMATICAL PRINCIPLES TO DETERMINE A STRATEGY FOR SOLVING A PROBLEM. EXECUTE APPROPRIATE MATHEMATICAL TECHNIQUES FOR SOLVING A PROBLEM AND INTERPRET RESULTS OF A SOLUTION.
MAC	1	147		PRECALCULUS WITH TRIGONOMETRY	4		Mathematics	No Updates		29	Yes	Fall 2025	THIS COURSE STRESSES THE ASPECTS OF ALGEBRA AND TRIGONOMETRY THAT ARE IMPORTANT FOR THE CALCULUS SEQUENCE. THE COURSE LAYS EMPHASIS ON GRAPHS IN THE STUDY OF FUNCTIONS AND ALGEBRAIC RELATIONS; COVERS POLYNOMIALS, RATIONAL FUNCTIONS, LOGARITHMIC, EXPONENTIAL, AND PIECEWISE DEFINE FUNCTIONS; INEQUALITIES; CONIC SECTIONS; MATRICES; AND SEQUENCES AND SERIES. ADDITIONALLY, THE COURSE COVERS ANGLES, TRIGONOMETRIC FUNCTIONS AND GRAPHS; INVERSE TRIGONOMETRIC FUNCTIONS AND GRAPHS; TRIGONOMETRIC FORMULAS, IDENTITIES AND EQUATIONS; SOLUTIONS OF TRIANGLES; AND POLAR COORDINATES, EQUATIONS, AND GRAPHS.	STUDENT LEARNING OUTCOMES (SLO'S) UPON SUCCESSFUL COMPLETION OF THE COURSE, STUDENTS SHOULD BE ABLE TO: ALGEBRAICALLY ANALYZE POLYNOMIAL AND RATIONAL FUNCTIONS GRAPH AND SOLVE EXPONENTIAL, LOGARITHMIC, TRIGONOMETRIC, AND INVERSE TRIGONOMETRIC FUNCTIONS SOLVE EXPONENTIAL, LOGARITHMIC AND TRIGONOMETRIC EQUATIONS SOLVE POLYNOMIAL AND RATIONAL INEQUALITIES ANALYZE EQUATIONS OF PARABOLAS, ELLIPSES, AND HYPERBOLAS SOLVE SYSTEMS OF EQUATIONS, INCLUDING USE OF DETERMINANTS PERFORM OPERATIONS ON SEQUENCES DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS APPLY TRIGONOMETRIC FORMULAS ESTABLISH TRIGONOMETRIC IDENTITIES SOLVE RIGHT AND OBLIQUE TRIANGLES GRAPH EQUATIONS IN POLAR AND RECTANGULAR COORDINATES.
MAC	2	233		CALCULUS WITH BUSINESS APPLICATIONS	3		Mathematics	No Updates		37	Yes	Fall 2025	SETS AND FUNCTIONS; DERIVATIVES; AREAS UNDER A CURVE; INTEGRATION; EXPONENTIALS AND LOGARITHMS; APPLICATIONS OF DERIVATIVES AND INTEGRALS.	UPON COMPLETION OF THE COURSE, THE STUDENT WILL: • DEMONSTRATE THE ABILITY TO EVALUATE THE LIMITS OF ALGEBRAIC FUNCTIONS. • DEMONSTRATE THE ABILITY TO DIFFERENTIATE ALGEBRAIC, EXPONENTIAL, AND LOGARITHMIC FUNCTIONS. • DEMONSTRATE THE ABILITY TO EVALUATE INTEGRALS OF ALGEBRAIC, EXPONENTIAL, AND LOGARITHMIC FUNCTIONS. • DEMONSTRATE A BROAD UNDERSTANDING OF THE GEOMETRICAL AND ANALYTICAL MEANING OF THE DERIVATIVE AND THE INTEGRAL BY SOLVING APPLICATIONS PROBLEMS.
MAC	2	311		ANALYTIC GEOMETRY AND CALCULUS I	4	Mathematics	Mathematics	No Updates		45	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL DEVELOP PROBLEM SOLVING SKILLS, CRITICAL THINKING, COMPUTATIONAL PROFICIENCY, AND CONTEXTUAL FLUENCY THROUGH THE STUDY OF LIMITS, DERIVATIVES, AND DEFINITE AND INDEFINITE INTEGRALS OF FUNCTIONS OF ONE VARIABLE, INCLUDING ALGEBRAIC, EXPONENTIAL, LOGARITHMIC, AND TRIGONOMETRIC FUNCTIONS, AND APPLICATIONS. TOPICS WILL INCLUDE LIMITS, CONTINUITY, DIFFERENTIATION AND RATES OF CHANGE, OPTIMIZATION, CURVE SKETCHING, AND INTRODUCTION TO INTEGRATION AND AREA.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL CALCULATE A LIMIT, DERIVATIVE, OR INTEGRAL USING APPROPRIATE TECHNIQUES. STUDENTS WILL DETERMINE THE CONTINUITY AND DIFFERENTIABILITY OF A FUNCTION. STUDENTS WILL USE LIMITS AND DERIVATIVES TO ANALYZE RELATIONSHIPS BETWEEN THE EQUATION OF A FUNCTION AND ITS GRAPH. STUDENTS WILL APPLY DIFFERENTIATION TECHNIQUES TO MODEL AND SOLVE REAL WORLD PROBLEMS. STUDENTS WILL USE INTEGRALS AND THE FUNDAMENTAL THEOREM OF CALCULUS TO ANALYZE THE RELATIONSHIP BETWEEN THE INTEGRAL OF A FUNCTION AND THE RELATED AREA. ADDITIONAL SLOS: UPON COMPLETION OF THE COURSE, STUDENTS WILL: DEMONSTRATE THE ABILITY TO EVALUATE LIMITS OF ALGEBRAIC, TRIGONOMETRIC, TRANSCENDENTAL, AND PIECEWISE FUNCTIONS, DETERMINE WHERE ALGEBRAIC, TRIGONOMETRIC, TRANSCENDENTAL, AND PIECEWISE FUNCTIONS ARE CONTINUOUS, DIFFERENTIATE ALGEBRAIC, TRIGONOMETRIC, AND TRANSCENDENTAL FUNCTIONS, EVALUATE SIMPLE INTEGRALS OF ALGEBRAIC, TRIGONOMETRIC, AND TRANSCENDENTAL FUNCTIONS, AND SHOW A BROAD UNDERSTANDING OF THE GEOMETRICAL AND ANALYTICAL MEANING OF THE DERIVATIVE AND THE INTEGRAL BY SOLVING APPLICATION PROBLEMS. TOPICS LIMITS AND CONTINUITY THE DERIVATIVE DIFFERENTIATION RULES IMPLICIT DIFFERENTIATION AND RELATED RATES PROBLEMS EXPONENTIAL AND LOGARITHMIC FUNCTIONS AND THEIR DERIVATIVES ANALYSIS OF FUNCTIONS ABSOLUTE MAXIMA AND MINIMA PROBLEMS THE INDEFINITE INTEGRAL INTEGRATION BY SUBSTITUTION AREA AND THE DEFINITE INTEGRAL FUNDAMENTAL THEOREM OF CALCULUS
MAC	2	312		ANALYTIC GEOMETRY AND CALCULUS II	4		Mathematics	No Updates		36	Yes	Fall 2025	APPLICATION OF THE DEFINITE INTEGRAL. HYPERBOLIC AND INVERSE TRIGONOMETRIC FUNCTIONS. METHODS OF INTEGRATION. SEQUENCES AND INFINITE SERIES.	STUDENT LEARNING OUTCOMES (SLO'S) AS THE SECOND COURSE IN THE REGULAR CALCULUS SEQUENCE, THE COURSE IS A CONTINUATION OF CALCULUS I. THE AIM IS TO EQUIP THE STUDENT WITH SOME OF THE NECESSARY TOOLS, THE AMMUNITION, AND THE ANALYTICAL MATURITY FOR FURTHER DEVELOPMENT IN SCIENCE AND ENGINEERING. STUDENTS WHO SUCCESSFULLY COMPLETE THIS COURSE WILL BE ABLE TO DO THE FOLLOWING: APPLY THE METHOD OF INTEGRATION TO FIND (AREAS BETWEEN CURVES), VOLUMES OF SOLIDS OF REVOLUTION, THE LENGTH OF A PLAIN CURVE AND THE SURFACE AREA OF SOLIDS OF REVOLUTION. APPLY TECHNIQUES OF INTEGRATION TO INCLUDE INTEGRATION BY PARTS, TRIGONOMETRIC SUBSTITUTIONS, PARTIAL FRACTIONS, AND DIRECT SUBSTITUTION. RECOGNIZE AND INTEGRATE LOGARITHMIC, EXPONENTIAL, AND HYPERBOLIC FUNCTIONS. MANIPULATE SEQUENCES AND SERIES: CALCULATE LIMITS OF SEQUENCES AND SUMS OF SERIES. APPLY APPROPRIATE TESTS TO DETERMINE THE CONVERGENCE OF SERIES. DETERMINE TAYLOR SERIES FOR A GIVEN FUNCTION. EVALUATE IMPROPER INTEGRALS. APPLY MATHEMATICAL PRINCIPLES TO DETERMINE A STRATEGY FOR SOLVING A PROBLEM. EXECUTE APPROPRIATE MATHEMATICAL TECHNIQUES FOR SOLVING A PROBLEM AND INTERPRET RESULTS OF A SOLUTION.

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MAC	1	147		HONORS PRECALCULUS WITH TRIGONOMETRY	4		Mathematics	Addition to GE for 26-27 Academic Year		3	No	N/A	THIS COURSE STRESSES THE ASPECTS OF ALGEBRA AND TRIGONOMETRY THAT ARE IMPORTANT FOR THE CALCULUS SEQUENCE. THE COURSE LAYS EMPHASIS ON GRAPHS IN THE STUDY OF FUNCTIONS AND ALGEBRAIC RELATIONS; COVERS POLYNOMIALS, RATIONAL FUNCTIONS, LOGARITHMIC, EXPONENTIAL, AND PIECEWISE DEFINE FUNCTIONS; INEQUALITIES; CONIC SECTIONS; MATRICES; AND SEQUENCES AND SERIES. ADDITIONALLY, THE COURSE COVERS ANGLES, TRIGONOMETRIC FUNCTIONS AND GRAPHS; INVERSE TRIGONOMETRIC FUNCTIONS AND GRAPHS; TRIGONOMETRIC FORMULAS, IDENTITIES AND EQUATIONS; SOLUTIONS OF TRIANGLES; AND POLAR COORDINATES, EQUATIONS, AND GRAPHS. THIS COURSE IS OFFERED FOR STUDENTS PARTICIPATING IN THE KUGELMAN HONORS PROGRAM.	STUDENT LEARNING OUTCOMES (SLO'S) UPON SUCCESSFUL COMPLETION OF THE COURSE, STUDENTS SHOULD BE ABLE TO: ALGEBRAICALLY ANALYZE POLYNOMIAL AND RATIONAL FUNCTIONS GRAPH AND SOLVE EXPONENTIAL, LOGARITHMIC, TRIGONOMETRIC, AND INVERSE TRIGONOMETRIC FUNCTIONS SOLVE EXPONENTIAL, LOGARITHMIC AND TRIGONOMETRIC EQUATIONS SOLVE POLYNOMIAL AND RATIONAL INEQUALITIES ANALYZE EQUATIONS OF PARABOLAS, ELLIPSES, AND HYPERBOLAS SOLVE SYSTEMS OF EQUATIONS, INCLUDING USE OF DETERMINANTS PERFORM OPERATIONS ON SEQUENCES DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS APPLY TRIGONOMETRIC FORMULAS ESTABLISH TRIGONOMETRIC IDENTITIES SOLVE RIGHT AND OBLIQUE TRIANGLES GRAPH EQUATIONS IN POLAR AND RECTANGULAR COORDINATES.
MAC	2	313		ANALYTIC GEOMETRY AND CALCULUS III	4		Mathematics	Addition to GE for 26-27 Academic Year		30	No	Fall 2025	ANALYTIC GEOMETRY AND CALCULUS. VECTORS AND VECTOR-VALUED FUNCTIONS. PARTIAL DIFFERENTIATION. MULTIPLE INTEGRATION.	UWF GENEDERAL EDUCATION SLO(S): APPLY MATHEMATICAL PRINCIPLES TO DETERMINE A STRATEGY FOR SOLVING A PROBLEM (CRITICAL THINKING). EXECUTE APPROPRIATE MATHEMATICAL TECHNIQUES FOR SOLVING A PROBLEM AND INTERPRET RESULTS OF A SOLUTION (CRITICAL THINKING). ADDITIONAL SLO(S): PERFORM ALGEBRAIC AND GEOMETRICAL MANIPULATIONS OF VECTORS IN 2 AND 3 DIMENSIONS AND SOLVE PROBLEMS IN ANALYTIC GEOMETRY VIA VECTOR MODELS. PERFORM PARTIAL DIFFERENTIATION OF A FUNCTION OF SEVERAL VARIABLES AND INTERPRET THE RESULTS IN THE APPROPRIATE PROBLEM CONTEXTS. DETERMINE AND CLASSIFY THE CRITICAL POINTS OF FUNCTIONS OF SEVERAL VARIABLES. USE THE GRADIENT OF A FUNCTION OF SEVERAL VARIABLES TO SOLVE GEOMETRICAL PROBLEM PERTAINING TO SURFACES. EVALUATE MULTIVARIABLE INTEGRALS.
MAP	2	302		DIFFERNTIAL EQUATIONS	3		Mathematics	Addition to GE for 26-27 Academic Year		24	No	Fall 2025	INTRODUCTION TO ORDINARY DIFFERENTIAL EQUATIONS; EMPHASIS ON LINEAR EQUATIONS, OPERATOR METHODS, SYSTEMS OF EQUATIONS, AND APPLICATIONS.	STUDENT LEARNING OUTCOMES (SLO'S) STUDENTS WHO SUCCESSFULLY COMPLETE THIS COURSE WILL BE ABLE TO: 1. CLASSIFY FIRST ORDER EQUATIONS BY ORDER, LINEARITY, AND TYPE (SEPARABLE, EXACT, LINEAR, HOMOGENEOUS, BERNOULLI). 2. SOLVE 5 TYPES OF FIRST-ORDER EQUATIONS IDENTIFIED IN #1. 3. ARTICULATE THE MAIN DIFFERENCES BETWEEN LINEAR AND NONLINEAR D.E. TO INCLUDE EXISTENCE AND UNIQUENESS THEOREMS. 4. FIND THE GENERAL SOLUTION FOR HOMOGENEOUS SECOND ORDER EQUATION, GIVEN ONE SOLUTION. 5. SOLVE LINEAR HIGHER-ORDER EQUATIONS WITH CONSTANT COEFFICIENTS. 6. APPLY THE METHODS OF UNDETERMINED COEFFICIENTS AND VARIATION OF PARAMETERS TO FIND A PARTICULAR SOLUTION. 7. SOLVE DIFFERENTIAL EQUATIONS USING LAPLACE TRANSFORMS. 8. UTILIZE THE UNIT STEP FUNCTION TO SOLVE EQUATION INVOLVING PIECE-WISE FORCING TERMS. 9.SOLVE SYSTEMS OF DIFFERENTIAL EQUATIONS USING MATRIX AND OPERATOR METHODS.
MCB	1	000		FUNDAMENTALS OF MICROBIOLOGY	3		Natural Sciences	No Updates		3	Yes	Fall 2025	AN INTRODUCTORY MICROBIOLOGY COURSE FOR NON-SCIENCE MAJORS SPECIFICALLY DESIGNED TO MEET THE MICROBIOLOGY PRE-REQUISITE REQUIREMENT FOR THE 4 YEAR BSN DEGREE. WILL COVER THE PRINCIPLES OF MICROBIOLOGY, INCLUDING CELLULAR ORGANIZATION, GROWTH, AND METABOLISM OF MAJOR MICROBIAL GROUPS (BACTERIA, FUNGI, VIRUSES AND PROTOZOA); CULTIVATION AND CONTROL OF MICROBES; AND THE INTERACTION BETWEEN MICROORGANISMS AND HUMANS AS IT RELATES TO DISEASE TRANSMISSION, PATHOGENESIS, CONTROL MEASURES, AND TREATMENT.	UPON COMPLETION OF THIS COURSE, STUDENTS WILL BE ABLE TO: EMPLOY THE PROPER USE OF SCIENTIFIC NAMES, TECHNICAL TERMINOLOGY IN ORAL AND WRITTEN COMMUNICATION. WRITE CLEAR PROSE WHEN ANALYZING THEORIES AND FORMATTING HYPOTHESES IN ESSAY EXAMINATIONS.
MGF	1	130		MATHEMATICAL THINKING	3	Mathematics	Mathematics	No Updates		41	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL UTILIZE MULTIPLE MEANS OF PROBLEM SOLVING THROUGH STUDENT-CENTERED MATHEMATICAL EXPLORATION. THE COURSE IS DESIGNED TO TEACH STUDENTS TO THINK MORE EFFECTIVELY AND VASTLY INCREASE THEIR PROBLEM-SOLVING ABILITY THROUGH PRACTICAL APPLICATION AND DIVERGENT THINKING. THIS COURSE IS APPROPRIATE FOR STUDENTS IN A WIDE RANGE OF DISCIPLINES/PROGRAMS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL DETERMINE EFFICIENT MEANS OF SOLVING A PROBLEM THROUGH INVESTIGATION OF MULTIPLE MATHEMATICAL MODELS. STUDENTS WILL APPLY LOGIC IN CONTEXTUAL SITUATIONS TO FORMULATE AND DETERMINE THE VALIDITY OF LOGICAL STATEMENTS USING A VARIETY OF METHODS. STUDENTS WILL APPLY MATHEMATICAL CONCEPTS VISUALLY AND CONTEXTUALLY TO REPRESENT, INTERPRET AND REASON ABOUT GEOMETRIC FIGURES. STUDENTS WILL RECOGNIZE THE CHARACTERISTICS OF NUMBERS AND UTILIZE NUMBERS ALONG WITH THEIR OPERATIONS APPROPRIATELY IN CONTEXT. STUDENTS WILL ANALYZE AND INTERPRET REPRESENTATIONS OF DATA TO DRAW REASONABLE CONCLUSIONS. ADDITIONAL SLOS: DETERMINE EFFICIENT MEANS OF SOLVING A PROBLEM THROUGH THE INVESTIGATION OF MULTIPLE MATHEMATICAL MODELS. APPLY LOGIC IN CONTEXTUAL SITUATIONS TO FORMULATE AND DETERMINE THE VALIDITY OF LOGICAL STATEMENTS USING A VARIETY OF METHODS. APPLY MATHEMATICAL CONCEPTS VISUALLY AND CONTEXTUALLY TO REPRESENT, INTERPRET, AND REASON ABOUT GEOMETRIC FIGURES. RECOGNIZE THE CHARACTERISTICS OF NUMBERS AND UTILIZE NUMBERS ALONG WITH THEIR OPERATIONS APPROPRIATELY IN CONTEXT. ANALYZE AND INTERPRET REPRESENTATIONS OF DATA TO DRAW REASONABLE CONCLUSIONS. APPLY MATHEMATICAL PRINCIPLES TO DETERMINE A STRATEGY FOR SOLVING A PROBLEM. EXECUTE APPROPRIATE MATHEMATICAL TECHNIQUES FOR SOLVING A PROBLEM AND INTERPRET RESULTS OF A SOLUTION.

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MGF	1	131		MATHEMATICS IN CONTEXT	3		Mathematics	No Updates		31	Yes	Fall 2025	THROUGH THIS COURSE, STUDENTS WILL EXPERIENCE THE PRACTICALITY OF MATHEMATICS IN GLOBAL SOCIETY. STUDENTS WILL ENGAGE IN THE APPLICATIONS OF TOOLS AND TECHNIQUES OF MATHEMATICS IN A VARIETY OF CONTEXTUAL SITUATIONS FROM EVERYDAY LIFE. THIS COURSE IS APPROPRIATE FOR STUDENTS IN A WIDE RANGE OF DISCIPLINES/PROGRAMS.	STUDENT LEARNING OUTCOMES (SLO'S) APPLY MATHEMATICAL MODELS TO CIVICALLY CONTEXTUAL SITUATIONS (E.G., STOCKS, FINANCE, VOTING, POPULATION DYNAMICS, ETC.). ORGANIZE, VISUALIZE, AND MODEL DATA IN A MEANINGFUL WAY. ANALYZE AND INTERPRET REPRESENTATIONS OF DATA TO DRAW REASONABLE CONCLUSIONS. ENGAGE IN WAYS OF THINKING THAT MAY INVOLVE SAMPLE SIZE, COUNTING STRATEGIES, CHANCE, RATIOS, AND PROPORTIONS. APPLY MATHEMATICAL PRINCIPLES TO DETERMINE A STRATEGY FOR SOLVING A PROBLEM. EXECUTE APPROPRIATE MATHEMATICAL TECHNIQUES FOR SOLVING A PROBLEM AND INTERPRET RESULTS OF A SOLUTION.
MMC	2	000		PRINCIPLES OF MASS COMMUNICATION	3		Communication	Updated	Learning Outcomes	4	Yes	Spring 2025	PRINCIPLES, ISSUES, ORGANIZATIONS AND FUNCTIONS OF FILM, RADIO, TELEVISION, PRINT AND OTHER MEDIA OF MASS COMMUNICATION. CONSIDERATION OF CURRENT PRACTICES AND RECENT DEVELOPMENTS AND THEIR IMPLICATIONS FOR THE FUTURE DIRECTION OF MASS MEDIA.	STUDENT LEARNING OUTCOMES (SLO'S) 1. DEMONSTRATE AN UNDERSTANDING OF THE RESOURCES AVAILABLE FOR PRINT, BROADCAST, AND WEB FOR GATHERING AND DISSEMINATING INFORMATION. 2. IDENTIFY THE STRENGTHS AND DIFFERENCES OF VARIOUS FORMS OF MASS COMMUNICATION. 3. DESCRIBE THE PROCESS OF AUDIENCE ANALYSIS AS IT RELATES TO DIFFERENT FORMS OF MASS COMMUNICATION. 4. ANALYZE HOW THE INTERNET AND SOCIAL MEDIA HAVE CHANGED MASS MEDIA AND COMMUNICATION. 5. ASSESS THE ROLE AND IMPACT MASS COMMUNICATION HAS HAD ON SOCIETIES, ESPECIALLY IN THE UNITED STATES. 6. DIFFERENTIATE MASS COMMUNICATION FROM OTHER SUBSETS OF THE COMMUNICATION DISCIPLINE. 7. COMPARE AND CONTRAST THE DIFFERENCES OF ADVERTISING AND PUBLIC RELATIONS. 8. ANALYZE THE ETHICAL AND LAWFUL ASPECTS OF MASS COMMUNICATION. 9. COMPOSE AND REVISE A RESEARCHED ACADEMIC PAPER THAT ADHERES TO DISCIPLINE-SPECIFIC CONVENTIONS.
MUH	2	004		THE MUSIC EXPERIENCE - CONCERTS	3		Humanities	No Updates		1	Yes	Fall 2025	THIS COURSE COVERS MAJOR COMPOSERS AND PERIODS OF MUSIC WITHIN THE WESTERN CANON. ALONG THE WAY, STUDENTS WILL LEARN THE HISTORY AND ETIQUETTE OF CONCERT PERFORMANCE.	STUDENT LEARNING OUTCOMES (SLOS) ? STUDENTS WILL EXHIBIT A HISTORICAL PERSPECTIVE INTO THE VARIOUS ERAS AND COMPOSERS OF EUROPEAN, AMERICAN, AND WORLD ART MUSIC. ? STUDENTS WILL DEMONSTRATE KNOWLEDGE OF HISTORICAL INFLUENCES WHICH HAVE SHAPED COMPOSERS AND THEIR MUSIC AND THE REASONS FOR THE CREATION OF SUCH DIVERSE MUSIC WITHIN EACH STYLISTIC PERIOD AND CULTURE. ? STUDENTS WILL DEMONSTRATE A BASIC KNOWLEDGE OF THE FUNDAMENTALS OF MUSIC AND THE ACCOMPANYING VOCABULARY. ? STUDENTS WILL SHOW SKILLS FOR LISTENING TO MANY TYPES OF CULTURALLY DIVERSE MUSIC THROUGH GUIDED LISTENING ACTIVITIES. ? STUDENTS WILL ARTICULATE KNOWLEDGE OF ACCEPTED CONCERT ETIQUETTE AS WELL AS HOW TO READ A CONCERT PROGRAM WITH INCREASED INSIGHT AND UNDERSTANDING. ? STUDENTS WILL BE ABLE TO IDENTIFY DIFFERENT TYPES AND STYLES OF MUSIC. ? STUDENTS WILL ARTICULATE KNOWLEDGE AND APPRECIATION FOR THE STRUCTURE OF THE ARTS INDUSTRY AS WELL AS THE LEVEL OF ACHIEVEMENT NECESSARY BY PERFORMERS AND COMPOSERS TO MAKE A LIVING AS MUSICIANS.
MUL	2	010		MUSIC APPRECIATION	3	Humanities	Humanities	No Updates		43	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL SURVEY THE HISTORY OF CLASSICAL MUSIC FROM ANTIQUITY TO THE MODERN PERIOD, FOCUSING ON WESTERN MUSIC. THE CURRICULUM MAY ALSO INTEGRATE A VARIETY OF POPULAR AND GLOBAL STYLES WHERE APPROPRIATE. CREDIT CANNOT BE EARNED IN BOTH MUH 2110 AND MUL 2010.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL DISCUSS AND ANALYZE MUSIC USING TERMINOLOGY APPROPRIATE FOR THE COURSE. STUDENTS WILL DEMONSTRATE FUNDAMENTAL KNOWLEDGE OF THE WORKS OF SIGNIFICANT COMPOSERS. STUDENTS WILL IDENTIFY CONNECTIONS BETWEEN MUSIC AND THE OTHER ARTS. STUDENTS WILL IDENTIFY HISTORICAL STYLES AND PERIODS BASED ON INSTRUMENTS AND PERFORMANCE PRACTICES UTILIZED. ADDITIONAL SLOS: AT THE END OF THIS COURSE, STUDENTS WILL BE ABLE TO: IDENTIFY MAJOR FORMAL CHARACTERISTICS AND DISTINGUISH BETWEEN MAJOR MUSICAL STYLES OF THE FIVE MAIN PERIODS OF WESTERN MUSIC DEVELOPMENT: MIDDLE AGES, RENAISSANCE, BAROQUE, CLASSICAL, AND THE 20TH-21ST CENTURIES. RECOGNIZE THE DIVERSITY OF HISTORIC AND SOCIAL CIRCUMSTANCES THAT INFLUENCED THE DEVELOPMENT OF WESTERN ART MUSIC, AS WELL AS THE ROLE THAT MUSIC PLAYED IN THE DEVELOPMENT OF OTHER ARTS AND OF THE WESTERN SOCIETY AT LARGE. APPLY THE KNOWLEDGE OF MUSIC HISTORY AND MUSIC THEORY TO THE PERSONAL LISTENING EXPERIENCE, BOTH IN THE CONTEXT OF LIVE MUSICAL PERFORMANCE AND LISTENING TO THE RECORDED MUSIC. LISTEN TO MUSIC ATTENTIVELY AND RECOGNIZE THE MOST IMPORTANT FORMAL CHARACTERISTICS AND ELEMENTS OF MUSIC: MEDIA, TEXTURE, AND GENRE. IDENTIFY BY LISTENING TO MUSIC COMPOSITIONS OF THE MIDDLE AGES AND RENAISSANCE. IDENTIFY BY LISTENING TO MUSIC COMPOSITIONS BY AT LEAST THREE MAJOR COMPOSERS OF EACH OF THE FOLLOWING ERAS: BAROQUE, CLASSICAL, ROMANTIC, AND THE 20TH CENTURY. INTERACT EFFECTIVELY WITH INDIVIDUALS WHO DO NOT SHARE YOUR HERITAGE. USE TECHNOLOGY EFFECTIVELY FOR A VARIETY OF PURPOSES.

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MUL	2	010		HONORS MUSIC APPRECIATION	3	Humanities	Humanities	No Updates		6	Yes	N/A	IN THIS COURSE, STUDENTS WILL SURVEY THE HISTORY OF CLASSICAL MUSIC FROM ANTIQUITY TO THE MODERN PERIOD, FOCUSING ON WESTERN MUSIC. THE CURRICULUM MAY ALSO INTEGRATE A VARIETY OF POPULAR AND GLOBAL STYLES WHERE APPROPRIATE. CREDIT CANNOT BE EARNED IN BOTH MUH 2110 AND MUL 2010.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL DISCUSS AND ANALYZE MUSIC USING TERMINOLOGY APPROPRIATE FOR THE COURSE. STUDENTS WILL DEMONSTRATE FUNDAMENTAL KNOWLEDGE OF THE WORKS OF SIGNIFICANT COMPOSERS. STUDENTS WILL IDENTIFY CONNECTIONS BETWEEN MUSIC AND THE OTHER ARTS. STUDENTS WILL IDENTIFY HISTORICAL STYLES AND PERIODS BASED ON INSTRUMENTS AND PERFORMANCE PRACTICES UTILIZED. ADDITIONAL SLOS: AT THE END OF THIS COURSE, STUDENTS WILL BE ABLE TO: IDENTIFY MAJOR FORMAL CHARACTERISTICS AND DISTINGUISH BETWEEN MAJOR MUSICAL STYLES OF THE FIVE MAIN PERIODS OF WESTERN MUSIC DEVELOPMENT: MIDDLE AGES, RENAISSANCE, BAROQUE, CLASSICAL, AND THE 20TH-21ST CENTURIES. RECOGNIZE THE DIVERSITY OF HISTORIC AND SOCIAL CIRCUMSTANCES THAT INFLUENCED THE DEVELOPMENT OF WESTERN ART MUSIC, AS WELL AS THE ROLE THAT MUSIC PLAYED IN THE DEVELOPMENT OF OTHER ARTS AND OF THE WESTERN SOCIETY AT LARGE. APPLY THE KNOWLEDGE OF MUSIC HISTORY AND MUSIC THEORY TO THE PERSONAL LISTENING EXPERIENCE, BOTH IN THE CONTEXT OF LIVE MUSICAL PERFORMANCE AND LISTENING TO THE RECORDED MUSIC. LISTEN TO MUSIC ATTENTIVELY AND RECOGNIZE THE MOST IMPORTANT FORMAL CHARACTERISTICS AND ELEMENTS OF MUSIC: MEDIA, TEXTURE, AND GENRE. IDENTIFY BY LISTENING TO MUSIC COMPOSITIONS OF THE MIDDLE AGES AND RENAISSANCE. IDENTIFY BY LISTENING TO MUSIC COMPOSITIONS BY AT LEAST THREE MAJOR COMPOSERS OF EACH OF THE FOLLOWING ERAS: BAROQUE, CLASSICAL, ROMANTIC, AND THE 20TH CENTURY. INTERACT EFFECTIVELY WITH INDIVIDUALS WHO DO NOT SHARE YOUR HERITAGE. USE TECHNOLOGY EFFECTIVELY FOR A VARIETY OF PURPOSES.
PHC	2	082		INFORMATICS AND YOUR HEALTH	3		Natural Sciences	No Updates		1	Yes	Summer 2025	MULTI-DISCIPLINARY EXPLORATION OF HOW INFORMATION IS REPRESENTED, PROCESSED, SHARED, AND PROTECTED IN TOOLS/APPLICATIONS DIRECTLY LINKED TO THE HEALTH OF YOU AND THE PLANET. EXAMINES IMPACTS ON INDIVIDUALS AND PUBLIC HEALTH; PROVIDES PRACTICE WITH A VARIETY OF DIGITAL TECHNOLOGIES AND DATA COLLECTION STRATEGIES; ADDRESSES INTERPRETING RESULTS OF AND CONCERNS IN MEDICAL AND HEALTH-RELATED HUMAN SUBJECT RESEARCH. DEVELOPS PROFESSIONAL AND TECHNICAL SKILLS, INCLUDING PRESENTING IDEAS THROUGH WRITTEN/VERBAL COMMUNICATION, CITING AI TOOLS AS PART OF AI-FACILITATED LEARNING, AND APPLYING ETHICAL PROTOCOLS WITHIN AI-AUGMENTED WORKFLOWS FOR VISUALIZING DATA. STUDENTS WILL USE THE SCIENTIFIC METHOD TO FORMULATE HYPOTHESES IN MAP AND DATA DASHBOARD DESIGN PROCESSES TO CREATE VISUALIZATIONS TO EXPLAIN OBSERVED PATTERNS AND STATISTICAL MODELS DERIVED FROM THEIR COLLECTED GEOLOCATED DATA TO FOSTER AN UNDERSTANDING OF SCIENTIFIC PRINCIPLES AND THEIR PRACTICAL APPLICATION TOWARD REAL-WORLD ISSUES.	STUDENT LEARNING OUTCOMES (SLO'S) USE THE SCIENTIFIC METHOD TO DEVELOP RESEARCH QUESTIONS/HYPOTHESES THAT EXPLAIN DATA COLLECTED FROM NATURAL EXPERIENCES/PHENOMENA RELATED TO YOUR HEALTH AND THE HEALTH OF OUR PLANET CRITICALLY EXAMINE AND EVALUATE THE PRINCIPLES OF THE SCIENTIFIC METHOD WHEN CONSTRUCTING MODELS FOR DATA VISUALIZATIONS EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE PRODUCE MAP-BASED AND DATA DASHBOARD MODELS THAT SUPPORT AUTHOR INTENT AND ADDRESS SPECIFIC RESEARCH QUESTIONS FOR A TARGETED AUDIENCE DESCRIBE INFORMATICS METHODS AND RESOURCES USED AS STRATEGIC TOOLS TO DESCRIBE OR PROMOTE HEALTH AT THE INDIVIDUAL AND GLOBAL/PLANET LEVEL
PHI	2	010		INTRODUCTION TO PHILOSOPHY	3	Humanities	Humanities	No Updates		48	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL BE INTRODUCED TO THE NATURE OF PHILOSOPHY, PHILOSOPHICAL THINKING, MAJOR INTELLECTUAL MOVEMENTS IN THE HISTORY OF PHILOSOPHY, INCLUDING TOPICS FROM THE WESTERN PHILOSOPHICAL TRADITION, AND VARIOUS PROBLEMS IN PHILOSOPHY. STUDENTS WILL STRENGTHEN THEIR INTELLECTUAL SKILLS, BECOME MORE EFFECTIVE LEARNERS, AND DEVELOP BROAD FOUNDATIONAL KNOWLEDGE.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL DEVELOP CRITICAL THINKING SKILLS. STUDENTS WILL DEMONSTRATE AN UNDERSTANDING OF CLASSICAL WESTERN PHILOSOPHICAL VIEWS. STUDENTS WILL ANALYZE, EXPLAIN, AND EVALUATE FOUNDATIONAL CONCEPTS OF EPISTEMOLOGY, METAPHYSICS, AND ETHICS. ADDITIONAL SLOS: INTERPRET AND ANALYZE TOOLS AND TECHNIQUES OF COMMUNICATION WITHIN CULTURAL FORMS OR CULTURAL CONTEXTS. IDENTIFY THE INTRINSIC VALUE OF CULTURE AND CULTURAL ARTIFACTS.

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PHI	2	103		CRITICAL THINKING	3		Humanities	No Updates		5	Yes	Fall 2025	A COURSE IN PRACTICAL REASONING DESIGNED TO SHARPEN ABILITIES AT ANALYZING, EVALUATING, AND CONSTRUCTING ARGUMENTS. TO ASSIST IN DECISION MAKING, THERE WILL BE AN APPRAISAL OF THE EVALUATION OF EVIDENCE, PRACTICE IN THE DETECTION OF FALLACIES AND IRRELEVANCIES, AND THE TESTING OF THE ARGUMENTS FOR VALIDITY AND RELIABILITY. INCLUDED IN THESE STRATEGIES WILL BE EXAMINING ASSUMPTIONS, QUESTIONING SOCRATICALLY, ANALYZING EXPERIENCES, AND EVALUATING PERSPECTIVES WITHIN THE WESTERN CANON. THESE STRATEGIES WILL BE APPLIED TO A NUMBER OF REAL LIFE SITUATIONS. APPROPRIATE FOR AND APPLICABLE TO ANY MAJOR.	STUDENT LEARNING OUTCOMES (SLO'S): PRODUCE (THROUGH REVISION) EFFECTIVE WRITTEN COMMUNICATIONS THAT SUPPORT AUTHOR INTENT AND ADDRESS A SPECIFIC AUDIENCE. CONSTRUCT CLEAR ARGUMENTS BASED UPON MULTIPLE EXPERIENCES AND PERSPECTIVES FOR REAL LIFE SITUATIONS. EVALUATE ARGUMENTS FOR FALLACIES AND RELIABILITY. INTERPRET AND ANALYZE TOOLS AND TECHNIQUES OF COMMUNICATION WITHIN DIVERSE CULTURAL FORMS OR CULTURAL CONTEXTS, SPECIFICALLY WITHIN THE WESTERN CANON. IDENTIFY THE INTRINSIC VALUE OF CULTURE AND CULTURAL ARTIFACTS.
PHI	2	600		INTRODUCTION TO ETHICS	3		Humanities	Addition to GE for 26-27 Academic Year		34	No	N/A	THIS COURSE TRACES THE DEVELOPMENT OF ETHICAL THOUGHT FROM THE CLASSICAL PERIOD TO THE PRESENT, FOCUSING ON SEMINAL WORKS FROM THE WESTERN CANON THAT HAVE SHAPED MORAL PHILOSOPHY. READINGS INCLUDE CLASSIC TEXTS BY PLATO, ARISTOTLE, AQUINAS, KANT, MILL, AND OTHER INFLUENTIAL THINKERS WHOSE IDEAS HAVE HELPED FORGE THE MORAL FOUNDATIONS OF WESTERN CIVILIZATION.	COMMUNICATION: PRODUCE (THROUGH REVISION) EFFECTIVE WRITTEN COMMUNICATIONS THAT SUPPORT AUTHOR INTENT AND ADDRESS A SPECIFIC AUDIENCE. CRITICAL THINKING: INTERPRET AND ANALYZE TOOLS AND TECHNIQUES OF COMMUNICATION WITHIN CULTURAL FORMS OR CULTURAL CONTEXTS. INTEGRITY AND VALUES: IDENTIFY THE INTRINSIC VALUE OF CULTURE AND CULTURAL ARTIFACTS.
PHI	2	603		ETHICS IN CONTEMPORARY SOCIETY	3		Humanities	No Updates		2	Yes	Fall 2025	EXPLORES THE FUNDAMENTAL PROBLEMS OF WESTERN ETHICS, THE CLASSICAL AND JUDEO-CHRISTIAN TRADITIONS, MODERN IDEALS OF THE GOOD FOR THE INDIVIDUAL BUSINESS, POLITICS AND THE ENVIRONMENT WITHIN THE WESTERN CANON.	STUDENT LEARNING OUTCOMES (SLO'S) INTERPRET AND ANALYZE TOOLS AND TECHNIQUES OF COMMUNICATION WITHIN CULTURAL FORMS OR CULTURAL CONTEXTS. (CRITICAL THINKING) IDENTIFY THE INTRINSIC VALUE OF CULTURE AND CULTURAL ARTIFACTS. (INTEGRITY/VALUES) PRODUCE (THROUGH REVISION) EFFECTIVE WRITTEN COMMUNICATIONS THAT SUPPORT AUTHOR INTENT AND ADDRESS A SPECIFIC AUDIENCE. (GORDON RULE WRITING) ANALYZE THE ETHICAL DIMENSIONS OF ISSUES IN CONTEMPORARY PUBLIC DISCOURSES. EXAMINE ETHICAL THEORIES AND UNDERSTAND THEIR PRACTICAL IMPLICATIONS TO HUMAN LIVING. DEVELOP CRITICAL AND ANALYTICAL THINKING SKILLS THROUGH ETHICAL EVALUATION OF CASE STUDIES. AUGMENT RELEVANT LITERATURE ON CONTROVERSIAL ETHICAL ISSUES. EXPLORE DIVERSE VIEWS IN CONTEMPORARY SOCIETIES.
PHI	2	010		HONORS INTRODUCTION TO PHILOSOPHY	3	Humanities	Humanities	Addition to GE for 26-27 Academic Year			No	N/A	IN THIS COURSE, STUDENTS WILL BE INTRODUCED TO THE NATURE OF PHILOSOPHY, PHILOSOPHICAL THINKING, MAJOR INTELLECTUAL MOVEMENTS IN THE HISTORY OF PHILOSOPHY, INCLUDING TOPICS FROM THE WESTERN PHILOSOPHICAL TRADITION, AND VARIOUS PROBLEMS IN PHILOSOPHY. STUDENTS WILL STRENGTHEN THEIR INTELLECTUAL SKILLS, BECOME MORE EFFECTIVE LEARNERS, AND DEVELOP BROAD FOUNDATIONAL KNOWLEDGE. THIS COURSE MEETS THE KUGELMAN HONORS PROGRAM HUMANITIES REQUIREMENT.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL DEVELOP CRITICAL THINKING SKILLS. STUDENTS WILL DEMONSTRATE AN UNDERSTANDING OF CLASSICAL WESTERN PHILOSOPHICAL VIEWS. STUDENTS WILL ANALYZE, EXPLAIN, AND EVALUATE FOUNDATIONAL CONCEPTS OF EPISTEMOLOGY, METAPHYSICS, AND ETHICS. ADDITIONAL SLOS: INTERPRET AND ANALYZE TOOLS AND TECHNIQUES OF COMMUNICATION WITHIN CULTURAL FORMS OR CULTURAL CONTEXTS. IDENTIFY THE INTRINSIC VALUE OF CULTURE AND CULTURAL ARTIFACTS.
PHY	2	048	C	CALCULUS-BASED PHYSICS I STUDIO	5	Natural Sciences	Natural Sciences	Removed from General Education		18	Yes	Fall 2015	THIS CALCULUS-BASED COURSE SERVES AS THE FIRST IN A TWO-PART SERIES, COVERING TOPICS LIKE KINEMATICS, DYNAMICS, ENERGY, MOMENTUM, ROTATIONAL MOTION, FLUID DYNAMICS, OSCILLATORY MOTION, AND WAVES. DESIGNED FOR SCIENCE AND ENGINEERING MAJORS, THE COURSE INTEGRATES CRITICAL THINKING, ANALYTICAL SKILLS, AND REAL-WORLD APPLICATIONS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL SOLVE ANALYTICAL PROBLEMS DESCRIBING DIFFERENT TYPES OF MOTION, INCLUDING TRANSLATIONAL, ROTATIONAL, AND SIMPLE HARMONIC MOTION. STUDENTS WILL APPLY NEWTON'S LAWS, AND CONSERVATION LAWS TO SOLVE ANALYTICAL PROBLEMS OF MECHANICS. STUDENTS WILL IDENTIFY AND ANALYZE RELEVANT INFORMATION PRESENTED IN VARIOUS FORMATS SUCH AS GRAPHS, TABLES, DIAGRAMS, AND/OR MATHEMATICAL FORMULATIONS. STUDENTS WILL SOLVE REAL WORLD PROBLEMS USING CRITICAL THINKING SKILLS AND KNOWLEDGE DEVELOPED FROM THIS COURSE. ADDITIONAL SLOS: STUDENTS WILL: UTILIZE MODELS OF MOMENTUM CONSERVATION, INTERACTING OBJECTS, ENERGY CONSERVATION, ANGULAR MOMENTUM CONSERVATION, AND THERMODYNAMICS TO DESCRIBE THE NATURAL WORLD. MODEL REALITY IN TERMS OF ABSTRACT OBJECTS AND PHYSICAL LAWS. EXPRESS MODELS VERBALLY, GRAPHICALLY, AND MATHEMATICALLY. EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE.

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PHY	1	020		CONCEPTUAL PHYSICS	3	Natural Sciences	Natural Sciences	No Updates		28	Yes	Fall 2024	THIS COURSE OFFERS A COMPREHENSIVE SURVEY OF PHYSICS, COVERING A WIDE RANGE OF TOPICS INCLUDING MOTION, NEWTON'S LAWS, ENERGY, SOUND, HEAT, ELECTRICITY, MAGNETISM, AND OPTICS. EMPHASIZING A CONCEPTUAL UNDERSTANDING OF PHYSICS, THE COURSE INTEGRATES CRITICAL THINKING SKILLS AND REAL-WORLD APPLICATIONS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL CRITICALLY EVALUATE EVERYDAY PHENOMENA USING THE SCIENTIFIC METHOD. STUDENTS WILL EXPLAIN THE BASIS OF PHYSICAL PRINCIPLES (SUCH AS CONSERVATION LAWS) AND HOW THEY APPLY TO EVERYDAY PHENOMENA. STUDENTS WILL INTERPRET INFORMATION CONVEYED IN DIAGRAMS AND GRAPHS. STUDENTS WILL PERFORM SIMPLE CALCULATIONS RELEVANT TO REAL WORLD PROBLEMS. ADDITIONAL SLOS: STUDENTS WILL: DEMONSTRATE KNOWLEDGE OF THE SCIENTIFIC METHOD. DEMONSTRATE KNOWLEDGE OF MEASUREMENTS AND CONVERSIONS. DEMONSTRATE FUNDAMENTAL KNOWLEDGE OF THE TERMINOLOGY, MAJOR CONCEPTS, AND THEORIES OF PHYSICS. RELATE SCIENTIFIC DISCOVERIES AND THEORIES TO BROADER AREAS OF HUMAN CONCERN. EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE.
PHY	2	048		CALCULUS-BASED PHYSICS I	3	Natural Sciences	Natural Sciences	No Updates		26	Yes	Fall 2025	THIS CALCULUS-BASED COURSE SERVES AS THE FIRST IN A TWO-PART SERIES, COVERING TOPICS LIKE KINEMATICS, DYNAMICS, ENERGY, MOMENTUM, ROTATIONAL MOTION, FLUID DYNAMICS, OSCILLATORY MOTION, AND WAVES. DESIGNED FOR SCIENCE AND ENGINEERING MAJORS, THE COURSE INTEGRATES CRITICAL THINKING, ANALYTICAL SKILLS, AND REAL-WORLD APPLICATIONS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL SOLVE ANALYTICAL PROBLEMS DESCRIBING DIFFERENT TYPES OF MOTION, INCLUDING TRANSLATIONAL, ROTATIONAL, AND SIMPLE HARMONIC MOTION. STUDENTS WILL APPLY NEWTON'S LAWS, AND CONSERVATION LAWS TO SOLVE ANALYTICAL PROBLEMS OF MECHANICS. STUDENTS WILL IDENTIFY AND ANALYZE RELEVANT INFORMATION PRESENTED IN VARIOUS FORMATS SUCH AS GRAPHS, TABLES, DIAGRAMS, AND/OR MATHEMATICAL FORMULATIONS. STUDENTS WILL SOLVE REAL WORLD PROBLEMS USING CRITICAL THINKING SKILLS AND KNOWLEDGE DEVELOPED FROM THIS COURSE. ADDITIONAL SLOS: STUDENTS WILL: UTILIZE MODELS OF MOMENTUM CONSERVATION, INTERACTING OBJECTS, ENERGY CONSERVATION, ANGULAR MOMENTUM CONSERVATION, AND THERMODYNAMICS TO DESCRIBE THE NATURAL WORLD. MODEL REALITY IN TERMS OF ABSTRACT OBJECTS AND PHYSICAL LAWS. EXPRESS MODELS VERBALLY, GRAPHICALLY, AND MATHEMATICALLY. EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE.
PHY	2	049		CALCULUS-BASED PHYSICS II	3		Natural Sciences	No Updates		18	Yes	Fall 2025	CONTINUATION OF PHY 2048. ELECTROSTATICS AND MAGNETISM; BASIC ELECTRIC CIRCUITS; OPTICS; SELECTED TOPICS IN MODERN PHYSICS.	STUDENT LEARNING OUTCOMES (SLO'S) STUDENTS WILL: UTILIZE MODELS OF ELECTRIC AND MAGNETIC FIELDS, ELECTRIC AND MAGNETIC FORCES, ELECTRICAL CIRCUITS, AND ELECTROMAGNETIC RADIATION TO DESCRIBE THE NATURAL WORLD. MODEL REALITY IN TERMS OF ABSTRACT OBJECTS AND PHYSICAL LAWS. EXPRESS THESE MODELS VERBALLY, GRAPHICALLY, AND MATHEMATICALLY. EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE.
PHY	2	053		ALGEBRA-BASED PHYSICS I	3	Natural Sciences	Natural Sciences	No Updates		25	Yes	Fall 2025	THIS COURSE IS THE FIRST IN A TWO-PART SERIES INTENDED FOR NON-PHYSICS MAJORS, OFFERING AN ALGEBRA AND TRIGONOMETRY APPROACH TO TOPICS SUCH AS KINEMATICS, DYNAMICS, ENERGY, MOMENTUM, ROTATIONAL MOTION, FLUID DYNAMICS, OSCILLATORY MOTION, AND WAVES. THE COURSE FOSTERS ANALYTICAL AND CRITICAL THINKING SKILLS TO PROMOTE A SCIENTIFIC UNDERSTANDING OF THE REAL WORLD.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL SOLVE ANALYTICAL PROBLEMS DESCRIBING DIFFERENT TYPES OF MOTION, INCLUDING TRANSLATIONAL, ROTATIONAL, AND SIMPLE HARMONIC MOTION USING ALGEBRA AND TRIGONOMETRY. STUDENTS WILL APPLY NEWTON'S LAWS, AND CONSERVATION LAWS BY USING ALGEBRA AND TRIGONOMETRY TO SOLVE ANALYTICAL PROBLEMS OF MECHANICS. STUDENTS WILL IDENTIFY AND ANALYZE RELEVANT INFORMATION PRESENTED IN VARIOUS FORMATS SUCH AS GRAPHS, TABLES, DIAGRAMS, AND/OR MATHEMATICAL FORMULATIONS. STUDENTS WILL SOLVE REAL WORLD PROBLEMS USING CRITICAL THINKING SKILLS AND KNOWLEDGE DEVELOPED FROM THIS COURSE. ADDITIONAL SLOS: STUDENTS WILL: EXPLAIN THE LAWS OF MECHANICS AND USE THEM TO SOLVE REAL WORLD PROBLEMS. STATE AND USE THE LAWS OF CONSERVATION OF MOMENTUM, ENERGY, AND ANGULAR MOMENTUM. APPLY THE LAWS OF MECHANICS TO PLANETARY MOTION AND OSCILLATIONS. EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE.
PHY	2	054		ALGEBRA-BASED PHYSICS II	3		Natural Sciences	No Updates		15	Yes	Fall 2025	ALGEBRA-BASED PHYSICS II IS THE SECOND OF A TWO-SEMESTER SEQUENCE OF PHYSICS TOPICS CHOSEN AS AN INTRODUCTION TO THIS SCIENCE. THIS IS AN ALGEBRA AND TRIGONOMETRY BASED COURSE. LIGHT; OPTICS; ELECTRICITY AND MAGNETISM; CIRCUITS; ELEMENTARY QUANTUM THEORY; ATOMIC, NUCLEAR AND PARTICLE PHYSICS.	STUDENT LEARNING OUTCOMES (SLO'S) STUDENTS WILL: UTILIZE MODELS OF ELECTRIC AND MAGNETIC FIELDS, ELECTRIC AND MAGNETIC FORCES, ELECTRICAL CIRCUITS, AND ELECTROMAGNETIC RADIATION TO DESCRIBE THE NATURAL WORLD. MODEL REALITY IN TERMS OF ABSTRACT OBJECTS AND PHYSICAL LAWS. EXPRESS THESE MODELS VERBALLY, GRAPHICALLY, AND MATHEMATICALLY. EVALUATE SCIENTIFIC INFORMATION USING APPROPRIATE TOOLS AND STRATEGIES OF THE DISCIPLINE.
PLA	2	013		HONORS SURVEY OF AMERICAN LAW	3		Social Sciences	Updated	Learning Outcomes	1	Yes	N/A	STUDY OF AMERICAN LAW, FOCUSING ON WHY THERE ARE LAWS, AS WELL AS WHO MAKES AND ENFORCES THE LAWS. COVERS WHAT IS COMMONLY KNOWN AS "EVERYDAY LAW," THAT IS, HOW LAW AFFECTS US IN OUR DAILY LIVES. THIS COURSE SURVEYS THE MAIN AREAS OF PROCEDURAL AND SUBSTANTIVE LAW AND PROVIDES AN OVERVIEW OF THE PRACTICE OF LAW. THIS COURSE MEETS THE KUGELMAN HONORS PROGRAM SOCIAL SCIENCES REQUIREMENT.	STUDENT LEARNING OUTCOMES (SLO'S) DESCRIBE THE AMERICAN LEGAL SYSTEM. IDENTIFY BASIC KNOWLEDGE OF SUBSTANTIVE AND PROCEDURAL LAWS AND THEIR APPLICATION WITHIN THE AMERICAN LEGAL SYSTEM. OUTLINE BASIC CIVIL AND CRIMINAL PROCEDURE. USE LEGAL TECHNIQUES TO PERSUASIVELY ADVOCATE FOR A CLIENT'S POSITION. ANALYZE ETHICAL PROBLEMS IN THE PRACTICE OF LAW. SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT
PLA	2	013		SURVEY OF AMERICAN LAW	3		Social Sciences	No Updates		1	Yes	Fall 2025	STUDY OF AMERICAN LAW, FOCUSING ON WHY THERE ARE LAWS, AS WELL AS WHO MAKES AND ENFORCES THE LAWS. COVERS WHAT IS COMMONLY KNOWN AS "EVERYDAY LAW," THAT IS, HOW LAW AFFECTS US IN OUR DAILY LIVES. THIS COURSE SURVEYS THE MAIN AREAS OF PROCEDURAL AND SUBSTANTIVE LAW AND PROVIDES AN OVERVIEW OF THE PRACTICE OF LAW.	STUDENT LEARNING OUTCOMES (SLO'S) DESCRIBE THE AMERICAN LEGAL SYSTEM. IDENTIFY BASIC KNOWLEDGE OF SUBSTANTIVE AND PROCEDURAL LAWS AND THEIR APPLICATION WITHIN THE AMERICAN LEGAL SYSTEM. OUTLINE BASIC CIVIL AND CRIMINAL PROCEDURE. USE LEGAL TECHNIQUES TO PERSUASIVELY ADVOCATE FOR A CLIENT'S POSITION. ANALYZE ETHICAL PROBLEMS IN THE PRACTICE OF LAW. SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT

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POS	2	041		AMERICAN POLITICS	3	Social Sciences	Social Sciences	No Updates		48	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL INVESTIGATE HOW THE NATIONAL GOVERNMENT IS STRUCTURED AND HOW THE AMERICAN CONSTITUTIONAL REPUBLIC OPERATES. IT COVERS THE PHILOSOPHICAL AND HISTORICAL FOUNDATIONS OF AMERICAN GOVERNMENT, INCLUDING BUT NOT LIMITED TO THE DECLARATION OF INDEPENDENCE, THE UNITED STATES CONSTITUTION AND ALL ITS AMENDMENTS, AND THE FEDERALIST PAPERS. THE COURSE EXAMINES THE BRANCHES OF GOVERNMENT AND THE GOVERNMENT'S LAWS, POLICIES, AND PROGRAMS. IT ALSO EXAMINES THE WAYS IN WHICH CITIZENS PARTICIPATE IN THEIR GOVERNMENT AND WAYS THEIR GOVERNMENT RESPONDS TO CITIZENS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL DEMONSTRATE AN UNDERSTANDING OF THE BASIC PRINCIPLES AND PRACTICES OF AMERICA'S CONSTITUTIONAL REPUBLIC. STUDENTS WILL DEMONSTRATE KNOWLEDGE OF THE NATION'S FOUNDING DOCUMENTS, INCLUDING THE DECLARATION OF INDEPENDENCE, THE U.S. CONSTITUTION AND ITS AMENDMENTS, AND THE FEDERALIST PAPERS. STUDENTS WILL DEMONSTRATE KNOWLEDGE OF LANDMARK U.S. SUPREME COURT CASES, LANDMARK LEGISLATION AND LANDMARK EXECUTIVE ACTIONS. STUDENTS WILL DEMONSTRATE KNOWLEDGE OF THE HISTORY AND DEVELOPMENT OF THE AMERICAN FEDERAL GOVERNMENT AND ITS IMPACT ON LAW AND SOCIETY. STUDENTS WILL DEMONSTRATE AN ABILITY TO APPLY COURSE MATERIAL TO CONTEMPORARY POLITICAL ISSUES AND DEBATES. STUDENTS WILL DEMONSTRATE THE ABILITY TO ENGAGE IN DISCUSSION AND CIVIL DEBATE ON AMERICAN POLITICS THAT ARE ASSOCIATED WITH MULTIPLE POINTS OF VIEW. ADDITIONAL SLOS: STUDENTS WILL DEVELOP AND DEMONSTRATE AN UNDERSTANDING OF THE BASIC PRINCIPLES AND PRACTICES OF AMERICAN DEMOCRACY AND HOW THEY ARE APPLIED IN OUR REPUBLICAN FORM OF GOVERNMENT. STUDENTS WILL DEVELOP AND DEMONSTRATE AN UNDERSTANDING OF THE UNITED STATES CONSTITUTION AND ITS APPLICATION. STUDENTS WILL DEVELOP AND DEMONSTRATE KNOWLEDGE OF THE FOUNDING DOCUMENTS AND HOW THEY HAVE SHAPED THE NATURE AND FUNCTIONS OF OUR INSTITUTIONS OF SELF-GOVERNANCE. STUDENTS WILL DEVELOP AND DEMONSTRATE AN UNDERSTANDING OF LANDMARK SUPREME COURT CASES, LANDMARK LEGISLATION, AND LANDMARK EXECUTIVE ACTIONS AND THEIR IMPACT ON LAW AND SOCIETY. STUDENTS WILL SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS. STUDENTS WILL REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT.
PSY	2	012		GENERAL PSYCHOLOGY	3	Social Sciences	Social Sciences	No Updates		55	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL GAIN AN INTRODUCTION TO THE SCIENTIFIC STUDY OF HUMAN BEHAVIOR AND MENTAL PROCESSES. TOPICS MAY BE DRAWN FROM HISTORICAL AND CURRENT PERSPECTIVES IN PSYCHOLOGY.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL BE ABLE TO IDENTIFY BASIC PSYCHOLOGICAL THEORIES, TERMS, AND PRINCIPLES FROM HISTORICAL AND CURRENT PERSPECTIVES. STUDENTS WILL BE ABLE TO RECOGNIZE REAL-WORLD APPLICATIONS OF PSYCHOLOGICAL THEORIES, TERMS, AND PRINCIPLES. STUDENTS WILL BE ABLE TO RECOGNIZE BASIC STRATEGIES USED IN PSYCHOLOGICAL RESEARCH. STUDENTS WILL BE ABLE TO DRAW LOGICAL CONCLUSIONS ABOUT BEHAVIOR AND MENTAL PROCESSES BASED ON EMPIRICAL EVIDENCE. UWF GENERAL EDUCATION SLO(S): SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS (CRITICAL THINKING). REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT (INTEGRITY/VALUES).
PSY	2	012		HONORS GENERAL PSYCHOLOGY	3	Social Sciences	Social Sciences	Addition to GE for 26-27 Academic Year		13	No	N/A	IN THIS COURSE, STUDENTS WILL GAIN AN INTRODUCTION TO THE SCIENTIFIC STUDY OF HUMAN BEHAVIOR AND MENTAL PROCESSES. TOPICS MAY BE DRAWN FROM HISTORICAL AND CURRENT PERSPECTIVES IN PSYCHOLOGY. THIS COURSE MEETS THE KUGELMAN HONORS PROGRAM SOCIAL SCIENCES REQUIREMENT.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL BE ABLE TO IDENTIFY BASIC PSYCHOLOGICAL THEORIES, TERMS, AND PRINCIPLES FROM HISTORICAL AND CURRENT PERSPECTIVES. STUDENTS WILL BE ABLE TO RECOGNIZE REAL-WORLD APPLICATIONS OF PSYCHOLOGICAL THEORIES, TERMS, AND PRINCIPLES. STUDENTS WILL BE ABLE TO RECOGNIZE BASIC STRATEGIES USED IN PSYCHOLOGICAL RESEARCH. STUDENTS WILL BE ABLE TO DRAW LOGICAL CONCLUSIONS ABOUT BEHAVIOR AND MENTAL PROCESSES BASED ON EMPIRICAL EVIDENCE. UWF GENERAL EDUCATION SLO(S): SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS (CRITICAL THINKING). REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT (INTEGRITY/VALUES).
REL	1	300		INTRODUCTION TO WORLD RELIGIONS	3		Humanities	No Updates		28	Yes	Fall 2025	BROAD UNDERSTANDING OF THE MAJOR RELIGIOUS TRADITIONS, INCLUDING ELEMENTS OF THE WESTERN CANON. MAY INCLUDE JUDAISM, CHRISTIANITY, HINDUISM, BUDDHISM, ISLAM AND OTHERS. COMPARATIVE STUDY OF SIMILARITIES AND DIFFERENCES AMONG THESE TRADITIONS.	STUDENT LEARNING OUTCOMES (SLO'S): INTERPRET AND ANALYZE TOOLS AND TECHNIQUES OF COMMUNICATION WITHIN CULTURAL FORMS OR CULTURAL CONTEXTS. (CRITICAL THINKING) IDENTIFY THE INTRINSIC VALUE OF CULTURE AND CULTURAL ARTIFACTS. (INTEGRITY/VALUES)
SPC	2	608		PUBLIC SPEAKING	3		Communication	Updated	Learning Outcomes	36	Yes	Fall 2025	EMPHASIZES THE LINK BETWEEN THE FUNDAMENTAL THEORIES IN SPEECH COMMUNICATION AND EFFECTIVE PUBLIC SPEAKING. INCLUDES PRACTICAL TRAINING AND STUDY IN PUBLIC PRESENTATION SKILLS, AUDIENCE ANALYSIS, SPEECH CONSTRUCTION AND PROBLEM SOLVING USING LECTURE AND EXPERIENTIAL LEARNING FORMAT. CREDIT MAY NOT BE RECEIVED IN BOTH SPC 2608 AND SPC 2016.	STUDENT LEARNING OUTCOMES (SLO'S) BY THE END OF THIS COURSE, STUDENTS WILL BE ABLE TO: 1. RECOGNIZE THE RELATIONSHIP BETWEEN WORDS AND MEANINGS AND IDENTIFY FACTORS THAT CONTRIBUTE TO A SPEAKER'S EFFECTIVE OR INEFFECTIVE USE OF LANGUAGE. 2. BETTER CONTROL THEIR NONVERBAL OUTPUT AS A SPEAKER, FOLLOWING THE STUDY OF PHYSICAL PRESENTATION STRATEGIES AND PRACTICE. 3. CONSTRUCT SPEECH OUTLINES THAT ARE APPROPRIATE TO THE CONTEXT AND OCCASION. 4. PERFORM PUBLIC SPEECHES IN AN EXTEMPORANEOUS FASHION. 5. ORGANIZE AND SYNTHESIZE INFORMATION FOR PUBLIC PRESENTATION FOLLOWING THE STUDY OF TOPICS SUCH AS: 1) ORGANIZING A SPEECH 2) UTILIZING APPROPRIATE SUPPORTING MATERIAL, 3) COMPOSING APPROPRIATE INTRODUCTIONS AND CONCLUSIONS, 4) AND UTILIZING APPROPRIATE VISUAL AIDS. 6. PRODUCE (THROUGH SCAFFOLDED FEEDBACK) EFECTIVE ORAL COMMUNICATIONS THAT SUPPORT AUTHOR INTENT AND ADDRESS A SPECIFIC AUDIENCE.
SPM	2	010		SPORT IN GLOBAL SOCIETY	3		Social Sciences	Removed from General Education		1	Yes	Fall 2025	THE COURSE EXAMINES THE WAYS IN WHICH SPORT CONTRIBUTES TO OR INHIBITS THE FORMATION OF POSITIVE CULTURAL OR SOCIETAL NORMS. THE TOPICS ADDRESSED IN THE COURSE DEMONSTRATE THE DIVERSITY OF SOCIAL IMPACTS SPORT HAS HAD ON GLOBAL SOCIETY AND CULTURE. HISTORICAL AND CONTEMPORARY CASES ARE USED TO ILLUSTRATE THE IMPACTS OF SPORT IN DIFFERENT SOCIAL CONTEXTS.	STUDENT LEARNING OUTCOMES (SLO'S) CRITICAL THINKING: SOLVE PROBLEMS USING SOCIAL SCIENCE METHODS. ANALYZE THE INTENDED AND UNINTENDED SOCIAL CHANGES THAT MAY BE ATTRIBUTED TO SPORT DEVELOPMENT. COMMUNICATION: EXPLAIN HOW SPORT CAN BE INSTRUMENTAL IN BRINGING ABOUT POSITIVE AND NEGATIVE PERSONAL CHANGE. INTEGRITY/VALUES: REASON ETHICALLY IN AN APPROPRIATE DISCIPLINARY CONTEXT. EXPLAIN THE RELATIONSHIP BETWEEN SPORTSMANSHIP AND COMPETITIVENESS AS CONFLICTING ETHICAL VALUES.

Statewide Course Numbering System
General Education Course Report

STA	2	023		ELEMENTS OF STATISTICS	3	Mathematics	Mathematics	No Updates		6	Yes	Fall 2025	IN THIS COURSE STUDENTS WILL UTILIZE DESCRIPTIVE AND INFERENTIAL STATISTICAL METHODS IN CONTEXTUAL SITUATIONS, USING TECHNOLOGY AS APPROPRIATE. THE COURSE IS DESIGNED TO INCREASE PROBLEM-SOLVING ABILITIES AND DATA INTERPRETATION THROUGH PRACTICAL APPLICATIONS OF STATISTICAL CONCEPTS. THIS COURSE IS APPROPRIATE FOR STUDENTS IN A WIDE RANGE OF DISCIPLINES AND PROGRAMS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL VISUALIZE AND SUMMARIZE DATA USING DESCRIPTIVE STATISTICS. STUDENTS WILL APPLY BASIC PROBABILITY CONCEPTS TO DRAW REASONABLE CONCLUSIONS. STUDENTS WILL EMPLOY CONCEPTS OF RANDOM VARIABLES, SAMPLING DISTRIBUTIONS, AND CENTRAL LIMIT THEOREM TO ANALYZE AND INTERPRET REPRESENTATIONS OF DATA. STUDENTS WILL CHOOSE AN APPROPRIATE METHOD OF INFERENTIAL STATISTICS, INCLUDING CONFIDENCE INTERVALS AND HYPOTHESIS TESTING, TO MAKE DECISIONS ABOUT A POPULATION BASED ON SAMPLE DATA. STUDENTS WILL MODEL LINEAR RELATIONSHIPS BETWEEN QUANTITATIVE VARIABLES USING CORRELATION AND LINEAR REGRESSION. ADDITIONAL SLOS: DEMONSTRATE THE ABILITY TO DISPLAY AND DESCRIBE DATA. DEMONSTRATE THE ABILITY TO APPLY PROBABILITIES RULES IN SOLVING PROBLEMS. DEMONSTRATE THE ABILITY TO APPLY RULES FOR DISCRETE RANDOM VARIABLES IN SOLVING PROBLEMS. DEMONSTRATE THE ABILITY TO APPLY RULES FOR CONTINUOUS RANDOM VARIABLES IN PROBLEM SOLVING. DEMONSTRATE THE ABILITY TO APPLY RULES FOR ESTIMATION OF PARAMETERS. DEMONSTRATE THE ABILITY TO APPLY HYPOTHESIS TESTING FOR ONE POPULATION. DEMONSTRATE THE ABILITY TO APPLY HYPOTHESES TESTING FOR TWO POPULATIONS. UWF GENERAL EDUCATION SLOS: APPLY MATHEMATICAL PRINCIPLES TO DETERMINE A STRATEGY FOR SOLVING A PROBLEM. EXECUTE APPROPRIATE MATHEMATICAL TECHNIQUES FOR SOLVING A PROBLEM AND INTERPRETING RESULTS OF A SOLUTION.
STA	2	023		HONORS ELEMENTS OF STATISTICS	3	Mathematics	Mathematics	No Updates		2	Yes	N/A	IN THIS COURSE STUDENTS WILL UTILIZE DESCRIPTIVE AND INFERENTIAL STATISTICAL METHODS IN CONTEXTUAL SITUATIONS, USING TECHNOLOGY AS APPROPRIATE. THE COURSE IS DESIGNED TO INCREASE PROBLEM-SOLVING ABILITIES AND DATA INTERPRETATION THROUGH PRACTICAL APPLICATIONS OF STATISTICAL CONCEPTS. THIS COURSE IS APPROPRIATE FOR STUDENTS IN A WIDE RANGE OF DISCIPLINES AND PROGRAMS.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL VISUALIZE AND SUMMARIZE DATA USING DESCRIPTIVE STATISTICS. STUDENTS WILL APPLY BASIC PROBABILITY CONCEPTS TO DRAW REASONABLE CONCLUSIONS. STUDENTS WILL EMPLOY CONCEPTS OF RANDOM VARIABLES, SAMPLING DISTRIBUTIONS, AND CENTRAL LIMIT THEOREM TO ANALYZE AND INTERPRET REPRESENTATIONS OF DATA. STUDENTS WILL CHOOSE AN APPROPRIATE METHOD OF INFERENTIAL STATISTICS, INCLUDING CONFIDENCE INTERVALS AND HYPOTHESIS TESTING, TO MAKE DECISIONS ABOUT A POPULATION BASED ON SAMPLE DATA. STUDENTS WILL MODEL LINEAR RELATIONSHIPS BETWEEN QUANTITATIVE VARIABLES USING CORRELATION AND LINEAR REGRESSION. ADDITIONAL SLOS: DEMONSTRATE THE ABILITY TO DISPLAY AND DESCRIBE DATA. DEMONSTRATE THE ABILITY TO APPLY PROBABILITIES RULES IN SOLVING PROBLEMS. DEMONSTRATE THE ABILITY TO APPLY RULES FOR DISCRETE RANDOM VARIABLES IN SOLVING PROBLEMS. DEMONSTRATE THE ABILITY TO APPLY RULES FOR CONTINUOUS RANDOM VARIABLES IN PROBLEM SOLVING. DEMONSTRATE THE ABILITY TO APPLY RULES FOR ESTIMATION OF PARAMETERS. DEMONSTRATE THE ABILITY TO APPLY HYPOTHESIS TESTING FOR ONE POPULATION. DEMONSTRATE THE ABILITY TO APPLY HYPOTHESES TESTING FOR TWO POPULATIONS. UWF GENERAL EDUCATION SLOS: APPLY MATHEMATICAL PRINCIPLES TO DETERMINE A STRATEGY FOR SOLVING A PROBLEM. EXECUTE APPROPRIATE MATHEMATICAL TECHNIQUES FOR SOLVING A PROBLEM AND INTERPRETING RESULTS OF A SOLUTION.
STA	2	360		INTRODUCTION TO DATA SCIENCE	3		Mathematics	No Updates		1	Yes	Fall 2024	THIS IS A FIRST COURSE IN DATA SCIENCE AT THE UNDERGRADUATE LEVEL. IN ADDITION TO DATA ETHICS, THE DATA SCIENCE CYCLE WILL BE COVERED, INCLUDING DATA WRANGLING, EXPLORATORY DATA ANALYSIS, DATA VISUALIZATION, PREDICTIVE MODELING, AND COMMUNICATING RESULTS. AN EMPHASIS WILL BE PLACED ON CONDUCTING REPRODUCIBLE RESEARCH READY FOR DISSEMINATION. THIS COURSE WILL PROVIDE AN OVERVIEW OF COMMON TOPICS IN DATA SCIENCE. NO PRIOR PROGRAMMING OR STATISTICS EXPERIENCE IS NECESSARY FOR THIS COURSE.	STUDENT LEARNING OUTCOMES (SLO'S) 1. DEMONSTRATE THE ABILITY TO IMPORT DATA INTO SOFTWARE FROM A VARIETY OF SOURCES. 2. DEMONSTRATE THE ABILITY TO PERFORM DATA MANAGEMENT TASKS. 3. DEMONSTRATE THE ABILITY TO CONSTRUCT APPROPRIATE DATA VISUALIZATIONS. 4. DEMONSTRATE THE ABILITY TO CONSTRUCT STATISTICAL MODELS. 5. DEMONSTRATE THE ABILITY TO DRAW CONCLUSIONS USING CONSTRUCTED MODELS. 6. DEMONSTRATE THE ABILITY TO MAKE PREDICTIONS USING CONSTRUCTED MODELS. 7. DEMONSTRATE THE ABILITY TO USE SOFTWARE FOR ANALYSIS AND CONSTRUCT PROFESSIONAL REPORTS INCORPORATING PRINCIPLES OF REPRODUCIBLE RESEARCH 8. APPLY MATHEMATICAL PRINCIPLES TO DETERMINE A STRATEGY FOR SOLVING A PROBLEM. 9. EXECUTE APPROPRIATE MATHEMATICAL TECHNIQUES FOR SOLVING A PROBLEM AND INTERPRET RESULTS OF A SOLUTION.
SYG	2	000		INTRODUCTION TO SOCIOLOGY	3		Social Sciences	No Updates		45	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL GAIN AN UNDERSTANDING OF THE BASIC SOCIOLOGICAL CONCEPTS AND VOCABULARY, INCLUDING THE METHODOLOGICAL TOOLS, SOCIOLOGICAL PERSPECTIVES, AND SCIENTIFIC PROCEDURES USED BY SOCIAL SCIENTISTS TO COLLECT DATA AND CONDUCT RESEARCH. TOPICS GENERALLY INCLUDE: SOCIETY AND CULTURE, INSTITUTIONS, SOCIALIZATION, INFLUENCES, CRIME, CHANGE, GROUPS, SEX, RACE AND ETHNICITY, FAMILY, CLASS, AND POPULATION.	STUDENT LEARNING OUTCOMES (SLO'S) STATE MANDATED GENERAL EDUCATION SLOS: STUDENTS WILL APPLY MULTIPLE SOCIOLOGICAL PERSPECTIVES. STUDENTS WILL IDENTIFY METHODOLOGICAL TOOLS USED TO EVALUATE SOCIOLOGICAL RESEARCH QUESTIONS. STUDENTS WILL UNDERSTAND DYNAMICS BETWEEN INDIVIDUAL AGENCY AND SOCIAL INFLUENCES.
THE	2	000		THEATRE APPRECIATION	3	Humanities	Humanities	No Updates		37	Yes	Fall 2025	IN THIS COURSE, STUDENTS WILL EXPLORE DRAMATIC STRUCTURE, TECHNIQUES, AND VARIOUS ORGANIZATIONAL ELEMENTS. THE COURSE PROVIDES AN INTRODUCTION TO THEATRE AS A COLLABORATIVE ART FORM THROUGH THE CRITICAL ANALYSIS OF ITS HISTORICAL CONTEXT, PRODUCTION, THEORY, AND CONNECTIONS TO THEATRICAL LITERATURE, INCLUDING THE WESTERN CANNON.	STUDENT LEARNING OUTCOMES (SLO'S) GENERAL EDUCATION CORE STATE SLOS: STUDENTS WILL IDENTIFY THE BASIC PRINCIPLES OF THEATRICAL PERFORMANCE, DESIGN, TECHNOLOGY, ORGANIZATION, AND MANAGEMENT. STUDENTS WILL ASSESS THE SOCIAL SIGNIFICANCE AND THE HUMAN CONDITION AS EXPRESSED THROUGH THE PERFORMING ARTS. STUDENTS WILL EXPLORE AND INTERPRET WORKS OF ART UTILIZING CREATIVE AND CRITICAL THINKING SKILLS. STUDENTS WILL DEMONSTRATE COLLEGE-LEVEL WRITING. STUDENTS WILL DEFINE, COMPARE AND CONTRAST THEATER AS BOTH AN EXPRESSIVE ART FORM AND A COMMERCIAL INDUSTRY. ADDITIONAL SLOS: AT THE END OF THIS COURSE, STUDENTS WILL BE ABLE TO: IDENTIFY AND INTERPRET VARIOUS STYLES OF THEATRE. ANALYZE THEATRICAL PRODUCTIONS WITH AN INFORMED CRITICAL EYE. COLLABORATE AND CREATE A SHORT ORIGINAL THEATRICAL PRODUCTION WITHIN A GROUP SETTING. COMMUNICATE EFFECTIVELY AND PERSUASIVELY A CRITIQUE OF A THEATRICAL PRODUCTION AND EXPERIENCE.

Statewide Course Numbering System
General Education Course Report

THE	2	300		SURVEY OF DRAMATIC LITERATURE	3		Humanities	No Updates		5	Yes	Fall 2025	SURVEY OF PLAY SCRIPTS REPRESENTING A SUCCINCT HISTORY OF WESTERN DRAMA. INCLUDES SELECTIONS FROM THE WESTERN CANON.	STUDENT LEARNING OUTCOMES (SLO'S) RECOGNIZE TERMS, CONCEPTS, AND GENRE CONVENTIONS ASSOCIATED WITH DRAMATIC LITERATURE AS ASSESSED THROUGH WRITING ASSIGNMENTS, QUIZZES, EXAMINATIONS, PRESENTATIONS, AND/OR OTHER CLASS PROJECTS; ANALYZE THE RELATIONSHIP OF DRAMATIC LITERATURE TO CULTURAL AND HISTORICAL CONTEXTS AS ASSESSED THROUGH WRITING ASSIGNMENTS, QUIZZES, EXAMINATIONS, PRESENTATIONS, AND/OR OTHER CLASS PROJECTS; PRESENT ORIGINAL CRITICAL AND INTERPRETIVE ARGUMENTS ABOUT DRAMATIC LITERATURE IN THE FORM OF WRITING ASSIGNMENTS, QUIZZES, EXAMINATIONS, PRESENTATIONS, AND OR OTHER CLASS PROJECTS; PARTICIPATE IN CLASSROOM DISCUSSIONS AND/OR OTHER CLASS PROJECTS; DEMONSTRATE READING COMPREHENSION AS ASSESSED THROUGH WRITING ASSIGNMENTS, QUIZZES, EXAMINATIONS, PRESENTATIONS, AND/OR OTHER CLASS PROJECTS. INTERPRET AND ANALYZE TOOLS AND TECHNIQUES OF COMMUNICATION WITHIN CULTURAL FORMA OF CULTURAL CONTEXTS. IDENTIFY THE INTRINSIC VALUE OF CULTURE AND CULTURAL ARTIFACTS. COMPOSE AND REVISE A RESEARCHED ACADEMIC PAPER THAT ADHERES TO DISCIPLINE-SPECIFIC CONVENTIONS.

Board of Trustees
Academic Affairs Committee
August 14, 2025

2024-2025 UWF Institutes and Centers Annual Report

Recommended Action:
Approve the 2024-2025 UWF Institutes and Centers Annual Report

Background Information:
The Florida Board of Governors requires annual reporting to detail Institutes and Centers expenditures information for the prior fiscal year, as outlined in Board of Governors' Regulation 10.015 Institutes and Centers.

Implementation Plan:
Report to be submitted to the Board of Governors by December 1, 2025.

Fiscal Implications:
None

Relevant Authority:
BOG Regulation 10.015 Institutes and Centers

Supports Strategic Direction(s):
Strategic Direction 3: Exceptional Academic Programming and Scholarship Aligned with State Needs, Strategic Direction 4: Community and Economic Engagement, and Strategic Direction 6: Operational Excellence

Supporting Documents:
1. 2024-2025 UWF Institutes and Centers Annual Report

Prepared by:
Jaromy Kuhl, Senior Vice President and Provost, Division of Academic Affairs, jkuhl@uwf.edu

Presenter:
Jaromy Kuhl, Senior Vice President and Provost

I&C Information						Expenditure Information (Fiscal Year 2024-2025)					Staff/Faculty (FY 2024-2025)	Evaluation Information		
1. Institution Name	2. Center Type	3. Center Code	4. Center Name	5A. Center Status (Board Records)	5B. Center Status (Institution)	6.Total FY 2024-25 Expenditures	7. Expenditures: State & E&G	8. Expenditures: Contracts & Grants	9. Expenditures: Fees for Service	10. Expenditures: Private and Trust Funds	11. Staff / Faculty FTE	12. Year of Most Recent Evaluation	13. Year of Prior Evaluation	14. Rational for Missing Evaluations
University of West Florida	University	60.0030	Haas Center for Business Research and Economic Development (CBRED)	Active	Active	$ 662,603.57	$ 408,562.38	$ 110,703.42	$ 115,952.84	$ 27,384.93	6.625	2024-25	2012-13	
University of West Florida	University	60.0070	Archaeology Institute	Active	Active	$ 970,503.40	$ 753,479.01	$ 166,796.94	$ 12,031.18	$ 38,196.27	8.3	2020-21	2012-13	
University of West Florida	University	60.0090	Center for Environmental Diagnostics and Bioremediation (CEDB)	Active	Active	$ 1,804,434.44	$ 1,024,822.08	$ 718,397.25	$ 37,722.47	$ 23,492.64	11.262	2024-25	2016-17	
University of West Florida	University	60.0210	Florida Public Archaeology Network (FPAN)	Active	Active	$ 1,766,062.90	$ 1,701,102.81	$ 56,118.27	$ 4,647.56	$ 4,194.26	8.5	2020-21	2012-13	
University of West Florida	University	60.0230	Center for Cybersecurity	Active	Active	$ 11,230,601.05	$ 1,529,339.26	$ 9,152,190.56	$ 535,800.32	$ 13,270.91	23.105	2024-25	N/A	
University of West Florida	State of Florida	60.9110	Florida Small Business Development Center Network (FSBDCN)	Active	Active	$ 14,602,483.95	$ 5,246,763.89	$ 9,177,563.44	$ 93,468.67	$ 84,687.95	20.188	2024-25	2012-13	
University of West Florida	University	60.9114	UWF Small Business Development Center (Affiliate)	Active	Active	$ 1,841,380.50	$ 853,830.77	$ 651,923.96	$ 169,905.91	$ 165,719.86	15.500	2024-25	2012-13	

Board of Trustees
Academic Affairs Committee
August 14, 2025

2025 UWF Textbook and Instructional Materials Affordability Annual Report

Recommended Action:
Approve the 2025 UWF Textbook and Instructional Materials Affordability Annual Report.

Background Information:
Pursuant to the Florida Board of Governors Regulation 8.003, each university must submit a Textbook and Instructional Materials Affordability Annual Report to the Chancellor of the State University System by September 30 each year.

- The University evaluated the cost for each course section, finding that 64% of all Fall 2024 course sections and 66% of all Spring 2025 course sections had instructional materials of no cost or low cost ($20 or less per credit hour) to students.
- University efforts to reduce the cost of textbooks and instructional materials include requiring no textbooks, using free, online resources, publications, previous or old editions, using Open Educational Resources (OERs), no-cost resources, bundles, rented materials, and department resources. Textbook scholarships are also available and institutional faculty stipends are available to help faculty create OER or Pressbooks. University Libraries continue to offer access to required print textbooks.
- The state sets a compliance threshold at 95% for posting textbooks and instructional materials 45 days prior to the first day of classes. UWF had a Fall 2024 compliance rate of 99.7% and a Spring 2025 compliance rate of 99.2%.

Implementation Plan:
Report to be submitted to the BOG by September 30, 2025.

Fiscal Implications:
No Fiscal Implications

Relevant Authority:
BOG Regulation 8.003 Textbook and Instructional Materials Affordability and Transparency
UWF/REG 3.040, Textbook and Instructional Materials Affordability

Supports Strategic Direction(s):
Strategic Direction 1: Student Centered and Focused and Strategic Direction 3: Exceptional Academic Programming and Scholarship Aligned with State Needs

Supporting Documents:
1. 2025 Textbook Affordability Presentation
2. 2025 UWF Textbook and Instructional Materials Affordability Report

Prepared by:
Dr. Karen Rasmussen, Special Assistant to the Provost's Office, krasmuss@uwf.edu

Presenter:
Dr. Dallas Snider, Vice Provost, Division of Academic Affairs

Office of the Provost
UNIVERSITY of WEST FLORIDA

2025 Textbook Affordability Report

Dallas H. Snider, Ph.D.

Vice Provost

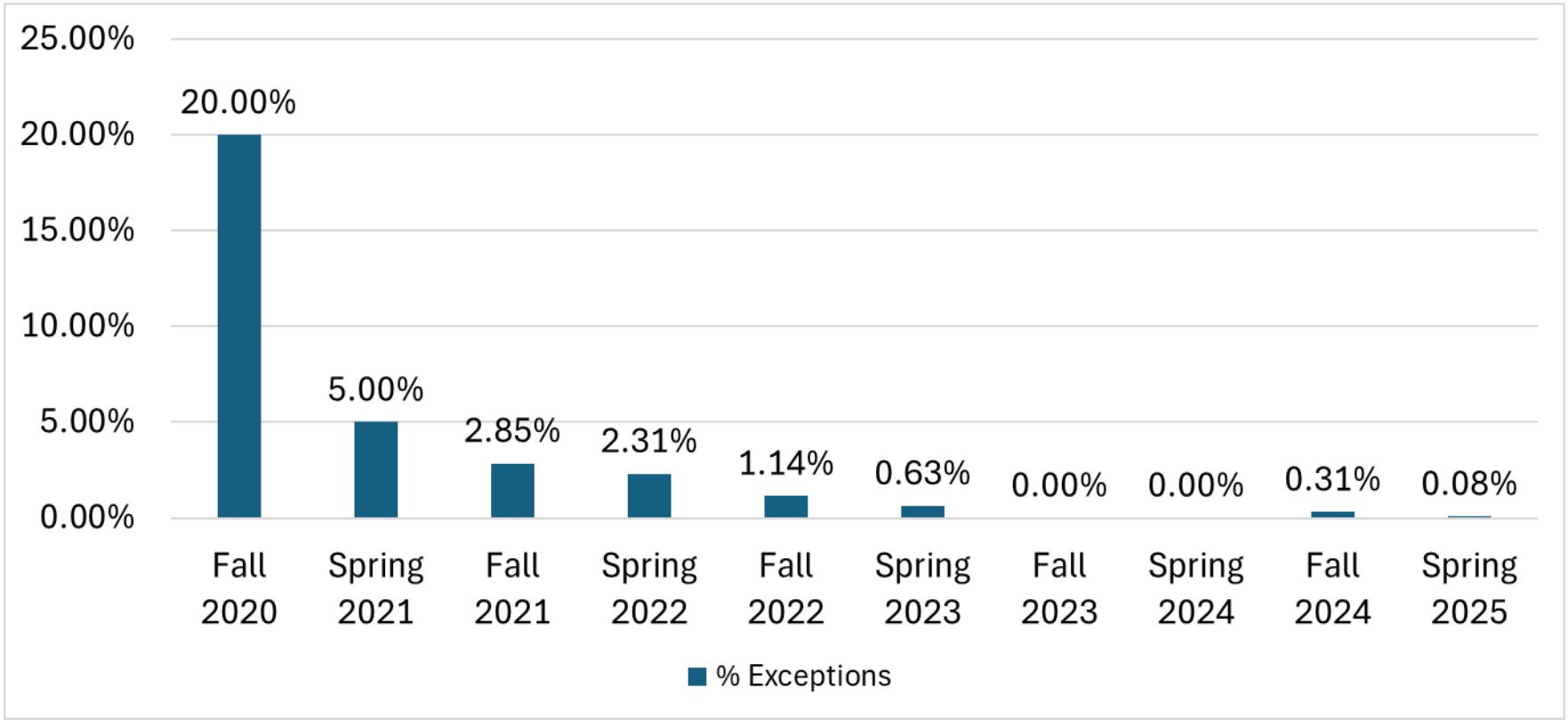
Background

State University System of Florida Board of Governors Regulation 8.003 Textbook and Instructional Materials Affordability and Transparency includes

- Requirements for posting of at least 95% of required and recommended course materials no less than 45 days before the start of a term
- Options for “innovative pricing techniques and payment options for textbooks and instructional materials” can be negotiated by the BOT
- Reporting of initiatives to reduce the cost of course materials
- Reporting of selection process for high enrollment general education courses (top 10% of enrollment for Fall-Spring Terms)

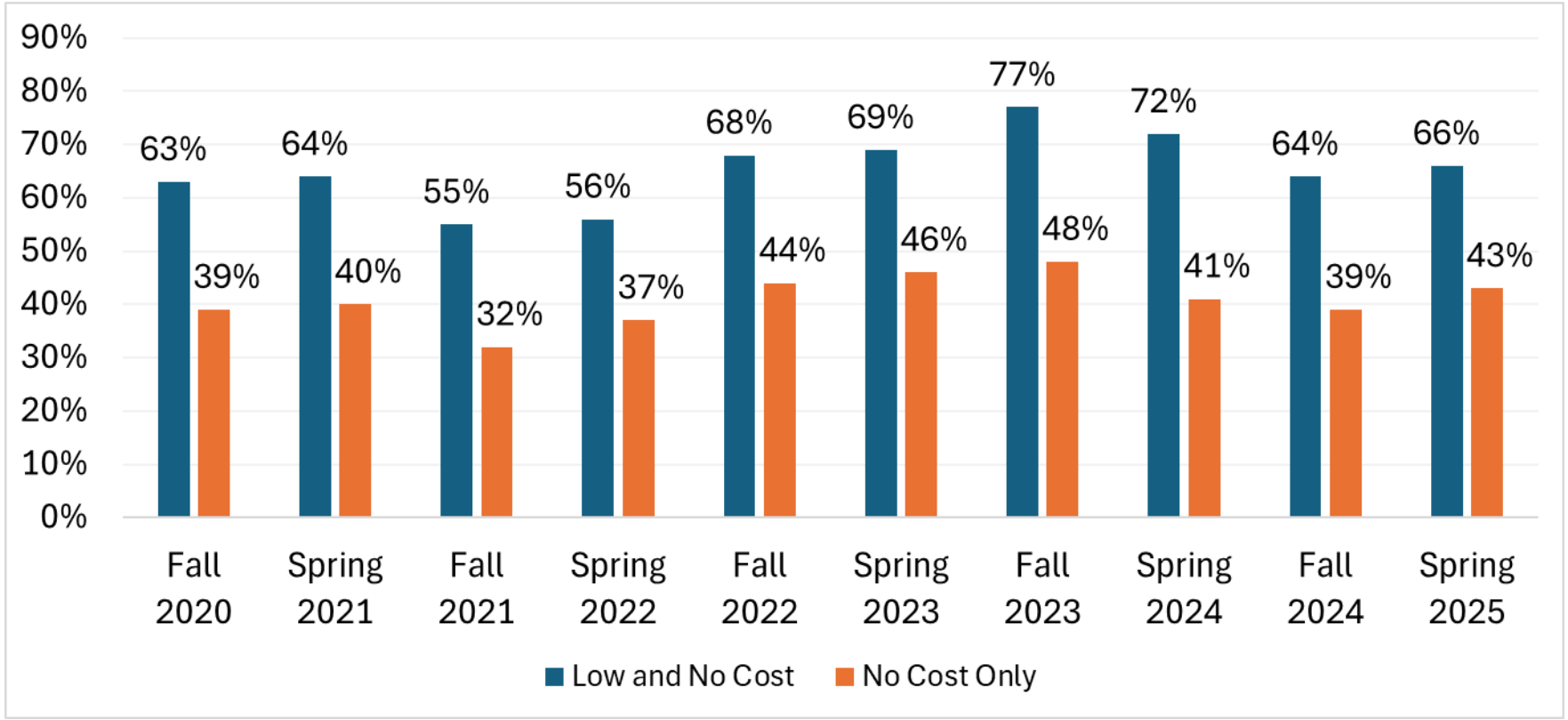
Office of the Provost
UNIVERSITY of WEST FLORIDA

Exceptions to Posting of Materials 45 Days Before Start of Term



Office of the Provost
UNIVERSITY of WEST FLORIDA

% of Sections with Low or No Cost Materials



Office of the Provost
UNIVERSITY of WEST FLORIDA

Total Follett Access Savings

Term	Dollars Saved	% Saved
Spring 2024	$653,633.09	52.1%
Summer 2024	$719,440.62	58.9%
Fall 2024	$1,293,974.59	51.2%
Spring 2025	$1,044,564.88	43.8%

Library Initiatives

- Open Educational Resources/Pressbooks
  - 16 published; 3 in progress
  - reduced textbook costs over $625,000
  - 1,367,218 page views
- Textbook/Course Reserves
  - Access to 4,003 textbooks
  - Borrowed 4,398 times
  - Transaction value of $587,617 (based on average textbook price of $133.61)
  - Does not include e-book versions

Office of the Provost
UNIVERSITY of WEST FLORIDA

Selection Process for High-Enrollment General Education Courses

Course	# of Sections	Δ from 23-24	Decision Maker(s)
AMH 2020, US Since 1877	30	+3	Combination of Individual Faculty, Department Committee, and Department Chair
CHM 2045, Gen Chemistry I	24	+3	Department Committee
ENC 1101, English Comp I	44	+5	Department Committee
ENC 1102, English Comp II	43	+3	Department Committee
LIT 2000, Intro to Literature	23	+1	Individual Faculty
POS 2041, American Politics	23	0	Individual Faculty
PSY 2012, Gen Psychology*	14	+5	Individual faculty, but the chair provides a low-cost option for those who will be using the online Gen Psych shell, using inclusive access textbook as selected by chair.
STA 2023, Elements of Stats	18	+1	Department Committee

Textbook and Instructional Materials Affordability Annual Report

Instructions

1. Complete each tab/worksheet as designed. The template reflects the interpretation of the reporting requirements by Board staff.

Do not edit the content of the template. Expand the response space as needed.

2. **Submit the report in Excel.** The signatures may be submitted in PDF format. Statutory due date is September 29, 2025.

3. If there are questions, contact Tyler Aldinger, Assistant Director of Academic and Student Affairs, at tyler.aldinger@flbog.edu

4. Include the university contact name and email for the staff who completed the report below:

5. Please note some cells are auto-calculated and do not require you to enter a figure. These cells are green.

University Contact Name and Email:

Textbook and Instructional Materials Affordability Annual Report
Fall 2024 and Spring 2025

University Submitting Report:
Date Approved by the University Board of Trustees:
Signature of Chair, University Board of Trustees:
Signature of President:

Textbook and Instructional Materials Selection Process

Report the textbook and instructional materials selection process used for general education courses with high enrollment. Include the course prefix(es) and number(s), the course title(s), and the total number of courses (*n*=). In column "F," use the drop-down arrow in each cell to select the appropriate selection process. The methodology for determining high enrollment courses is as follows: *Order courses (course prefix/number) by headcount enrollment, excluding honors courses. The top 10% of courses are determined as high enrollment.*

General Education Courses with High Enrollment		***Total Number of Course Sections (n =)***	**Selection Process**	**If "other," describe**
Course Prefix & Number	**Course Title**			
AMH 2020	United States Since 1877	30	Combination of the Above	
CHM 2045	General Chemistry I	24	Department Committee	
ENC 1101	English Composition I	44	Department Committee	
ENC 1102	English Comp II	43	Department Committee	
LIT 2000	Introduction to Literature	23	Individual Faculty	
POS 2041	American Politics	23	Individual Faculty	
PSY 2012	General Psychology	14	Individual Faculty	
STA 2023	Elements of Statistics	18	Department Committee	

Course Sections with No Cost for Textbooks/Instructional Materials

Report the total number of course section(s) offered including exceptions and the total number of course sections that did not require or recommend the purchase of a textbook(s)/ instructional materials and/or utilized open educational resources. These may include general education courses, upper level courses, and courses for directed independent study, internships, thesis/dissertation, etc. Include any courses canceled within 45 days of the first day of class in the total number of course sections.

Fall 2024	
Total Number of Course Sections Offered (Including Exceptions)	2573
Total Number of Course Sections Offered with No Cost Materials	997
Percent of Course Sections with No Cost Materials (Auto-Calculated)	39%

Spring 2025	
Total Number of Course Sections Offered (Including Exceptions)	2458
Total Number of Course Sections Offered with No Cost Materials	1047
Percent of Course Sections with No Cost Materials (Auto-Calculated)	43%

Board Action Plan - Low Cost Course Materials

Report the total number of course section(s) offered including exceptions and the total number of course sections that required or recommended textbook(s)/instructional materials for $20 or less per credit hour (e.g., $60 or less for a three-credit-hour course), which meets the State University System of Florida Action Plan for the Pricing of Textbooks and other Instructional Materials. Include any courses canceled within 45 days of the first day of class in the total number of course sections.

Fall 2024	
Total Number of Course Sections Offered (Including Exceptions)	2573
Total Number of Course Sections Offered with the Cost of Materials at $20 or less per credit hour	1647
Percent of Course Sections Offered with the Cost of Materials at $20 or less per credit hour (Auto-Calculated)	64%

Spring 2025	
Total Number of Course Sections Offered (Including Exceptions)	2458
Total Number of Course Sections Offered with the Cost of Materials at $20 or less per credit hour	1629
Percent of Course Sections Offered with the Cost of Materials at $20 or less per credit hour (Auto-Calculated)	66%

Textbook & Instructional Materials Affordability Initiatives

Describe specific initiatives of the institution designed to reduce the costs of textbooks and instructional materials.

Colleges use multiple initiatives to support cost reduction of textbooks and instructional materials:
No Textbooks Required: Alternative resources (e.g., through the Library, Web, etc.) are used by faculty in place of required textbooks.
Free and Public Domain Materials: Faculty identify no-cost materials for use in courses.
Instructor-Provided Materials: Faculty create instructional materials to be used in courses.
Electronic and Online Texts: Faculty use digital resources for instructional materials.
Library and Inclusive Access: Faculty use library reserves, institutional licensing, and inclusive access models (e.g., Pearson+ and Willo Labs) to facilitate both access and cost reduction.
Previous Editions: Instead of automatically moving to new editions, faculty select prior editions which can be acquired through rentals and used book sales.Also the same text can be used for multiple courses over multiple semesters.
Institutional Support: textbook scholarships, stipends for faculty to develop OER, and department-provided internal resources.

Has the *opt-in* provision been implemented by your institution for the purchase of student materials? If yes, describe the impact this has this had on student

Has the *opt-out* provision been implemented by your institution for the purchase of student materials? If yes, describe the impact this has this had on student

Yes, the University of West Florida Bookstore has implemented the opt-out model for the Follett Inclusive Access program. As a result, our data show that more students have been able to save money on their course materials over multiple semesters.

Total Access Savings by Semester-
Spring 2024 - $653,633.09 - 52.1%
Summer 2024 - $719,440.62 - 58.9%
Fall 2024 - $1,293,974.59 - 51.2%

University Policies for the Posting of Textbooks and Instructional Materials & Compliance with the Posting Deadline

Describe policies implemented to ensure the posting of textbooks and instructional materials for at least 95% of all courses and course sections 45 days before the first day of class.

Messaging to faculty and college administrators about textbook orders begins as soon as courses are entered into the system for an upcoming semester. Each College has a textbook liaison who works with chairs regarding textbook and instructional materials orders. The Bookstore works closely with the Vice Provost and faculty to provide up-to-date and timely information about textbook status -- including identifying courses with no identified instructional materials. The schedule for documentation includes notices of: 90 days (courses with no information); 75 days (courses with no information) and 67 days (courses with no information). The check-in dates are posted to calendars to ensure that dates are monitored by all individuals involved in Textbook Affordability efforts. Between 90 and 45 days, the Bookstore also provides weekly updates on orders to the Vice Provost who distributes the information to College textbook liaisons. The Vice Provost provides updated course offerings periodically to the Bookstore to ensure that offerings align across systems. On day 90, the Bookstore sends all faculty instructions on how to check the "shop" website to ensure that each faculty's orders are correct. The Bookstore opens the semester website 67 days prior to the beginning of a term. Student can access required textbooks either by their UWF ID where all their course materials are presented or by course identifier.

Are the policies effective in meeting the reporting requirement? If not, what measures will be taken by the university to increase faculty and staff compliance for meeting the reporting requirement?

The policies are effective and have enabled the development of processes that support meeting the reporting requirement. For example, in Fall 2024 and Spring 2025, there was essentially a 100% compliance with 8 changes in Fall 2024 (.31%) and 2 changes in Spring 2025 (.08%), and, with these policies instructional materials are consistently in conformance. The partnerships between and among the Provost's Office, the Colleges, and the Bookstore provide timely information and assistance, supporting faculty in their determination of textbooks and instructional materials providing access for students.

Published List of Required and Recommended Textbooks and Instructional Materials	
Please use the drop-down options to confirm the published list of required and recommended textbooks and instructional materials includes the following information.	
Information Required	**Affirm Information is Included**
International Standard Book Number (ISBN) or Other Identifying Information	Included
Title	Included
All Authors Listed	Included
Publishers	Included
Edition Number	Included
Copyright Date	Included
Published Date	Included
Searchable by Course Subject, Course Number, Course Title, Name of Instructor, Title of Material, and Author(s) of Material	Included
Material Information is Easily Downloadable by Current and Prospective Student	Included

Published Course Syllabus Requirements	
Please use the drop-down options to confirm the course syllabus of the general education core course options identified pursuant to section 1007.25, Florida Statutes include the following information.	
Information Required	**Affirm Information is Included**
Course Curriculum	Included
Goals, Objectives, and Student Expectations of the Course	Included
How Student Performance will be Measured	Included

Link to Published List of Required and Recommended Textbooks and Instructional Materials
Please provide an active link to the webpage housing the information listed under "Published List of Required and Recommended Textbooks and Instructional Materials.". If each course section has its own website link, please provide one example link.
Please Provide Link Below
https://www.bkstr.com/westfloridastore/home

Link to Published List of Course Syllabi for General Education Courses	
Please provide active links to the webpages housing the information under "Published Course Syllabus Requirements."	
As students register for class, they can access course syllabi through "Classmate" -- an institutional resource that contains comprehensive information about courses. Public searches for general education syllabi is based on term courses where information on syllabi and textbooks are included. Specific courses and offered sections can be searched using the attribute filed under Advanced Search.	
Please Provide Links Below	
Communication	https://apps.banner.uwf.edu/StudentRegistrationSsb/ssb/classSearch/classSearch
Humanities	https://apps.banner.uwf.edu/StudentRegistrationSsb/ssb/classSearch/classSearch
Mathematics	https://apps.banner.uwf.edu/StudentRegistrationSsb/ssb/classSearch/classSearch
Natural Sciences	https://apps.banner.uwf.edu/StudentRegistrationSsb/ssb/classSearch/classSearch
Social Sciences	https://apps.banner.uwf.edu/StudentRegistrationSsb/ssb/classSearch/classSearch

Exceptions

Per Board of Governors Regulation 8.003(1)(h), Textbook and Instructional Materials Affordability, any request for an exception to the compliance deadline shall be submitted in writing to the designated university official and shall provide a reasonable justification for an exception. A course or section added after the notification deadline is exempt from this notification requirement. Include any courses canceled within 45 days of the first day of class in the total number of course sections.

Fall 2024				
Total # of Course Sections (Not Including Exceptions)	# of Course Sections Identified As Exceptions	Total # Of Course Sections Including Exceptions (Column A + Column B) (Auto-Calculated)	% Of Total Course Sections That Were Identified As Exceptions (Auto-Calculated)	Reasons For Exceptions
2565	8	2573	0.31%	Instructor add or change (5) Miscommunication or adoption sent to wrong address (3)

Spring 2025				
Total # Of Course Sections (Not Including Exceptions)	# Of Course Sections Identified As Exceptions	Total # Of Course Sections Including Exceptions (Column G + Column H) (Auto-Calculated)	% Of Total Course Sections That Were Identified As Exceptions (Auto-Calculated)	Reasons For Exceptions
2456	2	2458	0.08%	Instructor Change (1) Instructor removed material (1)

University Requirements for the Posting of Textbooks and Instructional Materials & Compliance with the Posting Deadline

Use the tables below to report the total number of course sections offered at the 45-day posting deadline, the number of course sections that met the posting requirement, the number of course sections that changed materials after the posting deadline, and the number of course sections that did not meet the posting requirement. Include any courses canceled within 45 days of the first day of class in the total number of course sections.

Fall 2024

Total Course Sections at the 45-Day Posting Deadline (Not Including Exceptions)	# Of Course Sections Meeting Requirement (Not Including Course Sections That Changed Adopted Materials After The Deadline)	% Of Course Sections Meeting Requirement (Auto-Calculated)	# Of Course Sections That Changed Adopted Course Materials After The Required Posting Deadline	# Of Course Sections Not Meeting Requirement (Including Course Sections That Changed Adopted Materials After The Deadline)	% Of Course Sections Not Meeting Requirement (Auto-Calculated)
2,573	2,565	99.69%	8	8	0.31%

Spring 2025

Total Course Sections at the 45-Day Posting Deadline (Not Including Exceptions)	# Of Course Sections Meeting Requirement (Not Including Course Sections That Changed Adopted Materials After The Deadline)	% Of Course Sections Meeting Requirement (Auto-Calculated)	# Of Course Sections That Changed Adopted Course Materials After The Required Posting Deadline	# Of Course Sections Not Meeting Requirement (Including Course Sections That Changed Adopted Materials After The Deadline)	% Of Course Sections Not Meeting Requirement (Auto-Calculated)
2,458	2,456	99.92%	2	2	0.08%

****Note: Per Board Regulation 8.003 (1) (h), a course or course section added after the posting requirement is considered an exception and should be reported on the "Exceptions" tab. A request for any other exception to the compliance deadline shall be submitted in writing to the designated university official and shall provide a reasonable justification for an exception. A course or section added after the notification deadline is exempt from this notification requirement.**

Board of Trustees
Academic Affairs Committee
August 14, 2025

Summary of Degree and Course Program Changes Effective Fall 2025

Recommended Action:
Informational

Background Information:
This item provides the Board of Trustees with a summary of degree and course program changes approved through the University governance process effective for Fall 2025.

Actions requiring Board review and approval

- New programs – 3
- Programs with credit hour reductions – 1

Actions not requiring Board review and approval

- New specializations within existing degree programs – 6
- Modified specializations – 92
- Deleted specializations within existing degree programs – 2

- New minors – 0
- Modified minors – 8
- Deleted minors – 1

- New courses added – 129
- Modified courses – 338
- Deleted courses – 23
- Reinstated courses – 21
- Purged courses from 5-year purge process – 52

Implementation Plan:
The UWF follows established timelines and policies of the University Governance process, Board of Trustees, and Board of Governors regarding academic program development.

Fiscal Implications:
Addressed at the time of program approval.

Relevant Authority:

- AC-08 Degree Program Termination

- AC-09 New Academic Degree Program Approval
- BOG Regulation 8.011 Academic Degree Program Coordination and Approval
- BOG Regulation 8.012 Academic Program Termination and Temporary Suspension of New Enrollments

Supports Strategic Direction(s):
Strategic Direction 1: Student Centered and Focused and Strategic Direction 3: Exceptional Academic Programming and Scholarship Aligned with State Needs

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Supporting Documents:
1. New and Deleted Programs – Faculty Senate Actions 2024-2025
2. 5-Year Course Purge List – Courses Deleted from the 2025-2026 Catalog
3. Curriculum Change Requests 2024-2025 Data

Prepared by:
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Presenter:
Dr. Dallas Snider, Vice Provost, Division of Academic Affairs

NEW AND DELETED PROGRAMS
Effective Fall 2025

Compiled by Emily Teets, Assistant Registrar, Registrar's Office.

COLLEGE	CIP CODE	TITLE	DEGREE	APPROVAL DATE
PROGRAM LEVEL (Requires Board of Trustees Action)				
New Programs				
Arts, Social Sciences, Humanities	50.0409	Graphic Design and Digital Media	BFA	5/6/2025
Science, Engineering	14.0801	Civil Engineering	BS	4/22/2025
Health	51.0908	Entry-Level Respiratory Therapy	BS	5/12/2025
Deleted Programs				
None				
Credit Hour Reductions				
UKCOH	51.1005	Clinical Laboratory Sciences	BS	3/20/2025
PROGRAM LEVEL (Board of Trustees Action Not Required)				
New Specializations				
Arts, Social Sciences, Humanities	50.0701	Pre-Art Therapy	BA	4/24/2025
Arts, Social Sciences, Humanities	54.0101	Accelerated Bachelor's (BA) in History/Master's (MA) in History Option	BA	5/13/2025
Arts, Social Sciences, Humanities	50.0409	Illustration	BFA	5/6/2025
Business	52.0201	Business Administration/Sport Management Emphasis	MBA	4/28/2025
Business	52.0801	Financial Planning	BSBA	4/22/2025
Health	51.2201	ABM - Accelerated Bachelor's to Master's - Public Health	BS	5/1/2025
Deleted Specializations				
Arts, Social Sciences, Humanities	24.0103	Interdisciplinary Humanities / Women's, Gender, and Sexuality Studies	BA	4/23/2025
Health	31.0501	Physical Education	BS	5/1/2025
Added Minors				
None				
Deleted Minors				
Arts, Social Sciences, Humanities	N/A	Interdisciplinary Humanities / Women's, Gender, and Sexuality Studies	MINOR	4/23/2025

92	Specializations were modified.
8	Minors were modified.
129	New courses were added.
21	Courses were reinstated
338	Courses were modified.
23	Courses were deleted.
52	Courses were purged from 5-year purge process.

College	Department	Course	Course Title	Material or Supply Fees
CASSH	Anthropology	ANT 4808	Applied Anthropology	
CASSH	Anthropology	SYO 5255	Sociology of Education	
CASSH	Art & Design	ART 1001C	Studio Art for Beginners	
CASSH	Art & Design	ART 1015C	Exploring Artistic Vision	**YES**
CASSH	Art & Design	ART 3718C	Advanced Sculpture: Intro to New Genres	**YES**
CASSH	Communication	COM 5005	Introduction to Graduate Studies in Communication	
CASSH	Communication	COM 6024	Emerging Topics in Health Communication	
CASSH	Communication	COM 6210	Emerging Topics in Organizational Communication	
CASSH	Communication	JOU 4213	Newspaper Design	
CASSH	Communication	JOU 4308	Magazine Writing	
CASSH	English	AML 4302	Single Author Seminar, American Literature, 1700 to the Present	
CASSH	English	ENL 4284	Topics in 20th-Century and Contemporary British Literature	
CASSH	Government	INR 4205	Spying: Fact or Fiction	
CASSH	History & Philosophy	EUH 3200	Early Modern Europe	
CASSH	History & Philosophy	EUH 4511	Tudor and Stuart England	
CASSH	History & Philosophy	HIS 6450	Comparative Slaveries in the Atlantic World	
CASSH	History & Philosophy	PHM 3200	Social and Political Philosophy	
CASSH	Theatre	DAA 3205C	Intermediate Ballet	
DAE	Student Life Skills	SLS 4940	Internship Experience	
HMCSE	Biology	PCB 4253L	Developmental Biology Lab	
HMCSE	Biology	PCB 5235L	Immunology Laboratory	**YES**
HMCSE	Biology	PCB 6971	Thesis	
HMCSE	Civil Engineering & Construction Management	BCN 2272	Blueprint Reading	
HMCSE	Cybersecurity & Information Technology	CET 4743	Network Systems Architecture, Operations and Management	
HMCSE	Cybersecurity & Information Technology	CGS 3183	Basic Web Applications	**YES**
HMCSE	Cybersecurity & Information Technology	CGS 3464	Programming Using Visual Basic	
HMCSE	Cybersecurity & Information Technology	CTS 4139	Information Technology Applications in CompTIA Network+	
HMCSE	Cybersecurity & Information Technology	CTS 4362	Active Directory	
HMCSE	Earth & Environmental Sciences	EVR 5332	Practicum in Environmental Studies	
HMCSE	Earth & Environmental Sciences	GIS 5938	Special Topics in GIS for Archaeology	
HMCSE	Intelligent Systems & Robotics	CAP 6624	Introduction to Machine Learning and Data Science	
HMCSE	Mathematics & Statistics	MAC 3949	Cooperative Education	
HMCSE	Mathematics & Statistics	MAP 6108	Mathematical Modeling and Initial and Boundary Value Problems	
HMCSE	Physics	PHY 2048C	Calculus-Based Physics I Studio	
LBJCOB	Business Administration	ISM 4943	Internship in Management Information Systems	
LBJCOB	Commerce	ECP 6045	General Aviation Economics and Finance	
LBJCOB	Commerce	ECP 6046	Commercial Aviation Economics and Finance	
LBJCOB	Commerce	HFT 3333	Contemporary Club Management	
LBJCOB	Commerce	HFT 3444	Global Citizenship in Hospitality and Tourism	
LBJCOB	Commerce	HFT 4106	Global Hospitality and Tourism Shared Economies	
LBJCOB	Commerce	HFT 4462	Revenue Management for Hospitality Business	
LBJCOB	Commerce	HFT 4481	Advanced Revenue Management and Predictive Analytics in Hospitality	
LBJCOB	Commerce	LEI 4332	Community Tourism Development	
SOE	Teaching, Leadership, & Research	EDF 2085	Teaching Diverse Populations	
SOE	Teaching, Leadership, & Research	EDF 6481	Educational Research	
SOE	Teaching, Leadership, & Research	EDF 7638	Social Change and Reform	
UKCOH	Movement Sciences & Health	APK 4409	Success in Sports	
UKCOH	Movement Sciences & Health	ATR 2010	Advanced Prevention and Care of Injuries in Health, Leisure, and Sports	**YES**
UKCOH	Movement Sciences & Health	ATR 6620	Research in Athletic Training I	
UKCOH	Movement Sciences & Health	PEO 2031	Analysis of Individual Sports	
UKCOH	Public Health	PHC 4363	Occupational Safety and Health in the Health Care Environment	
UKCOH	Social Work	SOW 4674	Social Issues and Intervention Strategies in Social Work Practice with Older Adults	

Curriculum Change Requests (CCRs)

	New	Modified	Deleted	Purged	Reinstated	Total
Programs *	6	0	0	N/A	N/A	6
Specializations	6	92	2	N/A	N/A	100
Minors	0	8	1	N/A	N/A	9
Certificates	11	15	0	N/A	N/A	26
Courses	129	338	23	52	21	563
Total Curriculum Change Requests	152	453	26	52	21	704

* Each new program requires 2 CCR documents in the CourseLeaf system.

Programs

	College	CCR Number	Title	Degree	CIP Code	Approval
New Programs						
	CASSH	R-GRA-DESU00	Graphic Design Common Content (Description)	BFA	50.0409	5/6/2025
	CASSH	U-GRA-BFA-00	Graphic Design and Digital Media	BFA	50.0409	5/6/2025
	HMCSE	R-CVE-DESU00	Civil Engineering Common Content (Description)	BS	14.0801	4/22/2025
	HMCSE	U-CVE-BS-00	Civil Engineering	BS	14.0801	4/22/2025
	UKCOH	R-RET-DESU00	Entry Level Respiratory Therapy BS Common Content	BS	51.0908	5/17/2025
	UKCOH	U-RET-BS-00	Entry-Level Respiratory Therapy	BS	51.0908	5/12/2025
	Count	**6**				

Deleted Programs						
NONE						
	Count	**0**				

Modified Programs						
NONE						
	Count	**0**				

Courses

College	CCR Number	Title	CIP Code	Approval
New Courses				
CASSH	AMS 2010	Civil Discourse and the American Political Order	540102	4/11/2025
CASSH	ANT 2000H	Honors Introduction to Anthropology	450201	4/11/2025
CASSH	ART 3733	Portrait Sculpture	500702	4/11/2025
CASSH	ART 3713	Figure Sculpture	500702	4/11/2025
CASSH	ART 4941	Internship in Pre-Art Therapy	500702	4/11/2025
CASSH	CCJ 4955	Inside-Out Prison Program	430104	4/11/2025
CASSH	CCJ 6950	Criminal Justice Leadership Portfolio	430104	4/11/2025
CASSH	COM 3930	Special Topics in Communication Studies	090101	4/11/2025
CASSH	COM 4381	AI and Strategic Communications	090101	4/11/2025
CASSH	COM 5385	AI and Strategic Communications	090101	4/11/2025
CASSH	DSC 4024	Terrorism and Homeland Security	430104	4/11/2025
CASSH	DSC 5025	Terrorism and Homeland Security	430104	4/11/2025
CASSH	ENC 4601	AI Tools for Workplace Writing	231304	4/11/2025
CASSH	ENC 5605	AI Tools for Workplace Writing	231304	4/11/2025
CASSH	GRA 4882C	Advanced Comics: The Advanced Practice of Sequential Art and Design	500409	4/11/2025
CASSH	GRA 4146	AI for Creative Design	500409	4/11/2025
CASSH	GRA 5148	AI for Creative Design	500409	4/11/2025
CASSH	HUM 2020	Introduction to Humanities	240103	4/11/2025
CASSH	IDS 4764	AI Applied	300000	4/11/2025
CASSH	IDS 4072	Adulting 101: Practical Professional Skills for New Graduates	300000	4/11/2025
CASSH	IDS 5765	AI Applied	300000	4/11/2025
CASSH	MMC 3930	Special Topics in Digital Storytelling and Journalism	090102	4/11/2025
CASSH	MUL 2010H	Honors Music Appreciation	500902	4/11/2025
CASSH	PHI 4681	Ethics of AI	380101	4/11/2025
CASSH	PHI 5687	Ethics of AI	380101	4/11/2025
CASSH	PLA 4955	Inside-Out Prison Program	220302	4/11/2025
CASSH	PUR 3930	Special Topics in Advertising, Public Relations, and Social Media	090902	4/11/2025
CASSH	TPA 2232C	Technical Theatre-Costumes and Makeup	500501	4/11/2025
CASSH	TPA 2000	Theatrical Design for Performers	500501	4/11/2025
CASSH	TPP 2101L	Acting Studio-Freshman/Sophomore	500501	4/11/2025
DAE	EVR 2001H	Honors Introduction to Environmental Science	030103	4/11/2025
DAE	HUM 2020H	Honors Introduction to Humanities	240103	4/11/2025
DAE	IDH 3916	High Impact Experience	300000	4/11/2025
DAE	PLA 2013H	Honors Survey of American Law	220302	4/11/2025
COB	CAI 4802	Artificial Intelligence and Machine Learning for Cybersecurity	110102	4/11/2025
COB	CAI 6804	Artificial Intelligence and Machine Learning for Cybersecurity	110102	4/11/2025
COB	CAI 4930	Emerging Trends in Artificial Intelligence	110102	4/11/2025
HMCSE	CAI 5931	Emerging Trends in Artificial Intelligence	110102	4/11/2025

HMCSE	CEG 3011	Geotechnical Engineering	140802	4/11/2025
HMCSE	CEG 3011L	Geotechnical Engineering Lab	140802	4/11/2025
HMCSE	CEG 4801	Geotechnical Engineering Design	140802	4/11/2025
HMCSE	CES 3100	Structural Analysis	140803	4/11/2025
HMCSE	CES 4605	Structural Steel Design	140803	4/11/2025
HMCSE	CES 4702	Reinforced Concrete Design	140803	4/11/2025
HMCSE	CGN 2328	Computer Graphics for Engineering	140801	4/11/2025
HMCSE	CGN 3501	Civil Engineering Materials	140801	4/11/2025
HMCSE	CGN 3501L	Civil Engineering Materials Lab	140801	4/11/2025
HMCSE	CGN 4803L	Civil Engineering Capstone I	140801	4/11/2025
HMCSE	CGN 4804L	Civil Engineering Capstone II	140801	4/11/2025
HMCSE	CGN 4930	FE Exam Review Seminar	140801	4/11/2025
HMCSE	CGN 4901L	Directed Study in Civil Engineering	140801	4/11/2025
HMCSE	CGN 4931	Special Topics in Civil Engineering	140801	4/11/2025
HMCSE	CGN 4940L	Internship in Civil Engineering	140801	4/11/2025
HMCSE	CHM 3805	RCR Ethics, Rigor, Data Reproducibility	400501	4/11/2025
HMCSE	CWR 3201	Water Resource Engineering	140805	4/11/2025
HMCSE	CWR 3201L	Water Resource Engineering Lab	140805	4/11/2025
HMCSE	CWR 4202	Hydraulic Engineering Design	140805	4/11/2025
HMCSE	EEL 4510	Communication Networks	141001	4/11/2025
HMCSE	ENV 3001	Environmental Engineering	140802	4/11/2025
HMCSE	ENV 3001L	Environmental Engineering Lab	140802	4/11/2025
HMCSE	ENV 4514	Environmental Engineering Design	140802	4/11/2025
HMCSE	ENV 4351	Solid Waste Engineering	140802	4/11/2025
HMCSE	ENV 4330	Hazardous Waste Engineering	140802	4/11/2025
HMCSE	GEO 4214	Aeolian Geomorphology	450701	4/11/2025
HMCSE	GEO 5216	Aeolian Geomorphology	450701	4/11/2025
HMCSE	GIS 4301	GIS for Environmental Analysis	450702	4/11/2025
HMCSE	GIS 5305	GIS for Environmental Analysis	450702	4/11/2025
HMCSE	STA 2023H	Honors Elements of Statistics	270501	4/11/2025
HMCSE	SUR 2102	Introduction to Geomatics	143801	4/11/2025
HMCSE	SUR 2102L	Introduction to Geomatics Lab	143801	4/11/2025
HMCSE	TTE 3004	Transportation Engineering	140804	4/11/2025
HMCSE	TTE 4804	Highway Engineering Design	140804	4/11/2025
HMCSE	ZOO 5256C	Marine Invertebrate Zoology	260701	4/11/2025
LBJCOB	ENT 3614	Entrepreneurial Creativity and Innovation	520701	4/11/2025
LBJCOB	FIN 3124	Financial Planning	520801	4/11/2025
LBJCOB	FIN 4133	Retirement Planning	520801	4/11/2025
LBJCOB	FIN 4128	Capstone in Financial Planning	520801	4/11/2025
LBJCOB	FIN 4132	Estate Planning	520801	4/11/2025

Courses

LBJCOB	ISM 4545	Business Analytics with AI	521201	4/11/2025
LBJCOB	MAN 3281	Agile Principles and Practices in Management	520201	4/11/2025
LBJCOB	RMI 3119	Insurance Planning	520215	4/11/2025
UKCOH	APK 3610C	Designing Resistance Training Programs	310505	4/11/2025
UKCOH	APK 4220	Biomechanics of Human Movement	310505	4/11/2025
UKCOH	APK 4220L	Biomechanics of Human Movement Laboratory	310505	4/11/2025
UKCOH	APK 5226	Biomechanics of Human Movement	310505	4/11/2025
UKCOH	APK 5210	Neuromechanics of Human Movement	310505	4/11/2025
UKCOH	BSC 4855	Bioterrorism: The Interprofessional Response	260101	4/11/2025
UKCOH	HSC 3589	Behavior Analysis Foundations in Health Science	510000	4/11/2025
UKCOH	HSC 3117	Behavior Assessment in Health Science	510000	4/11/2025
UKCOH	HSC 3650	Ethics of Behavior Analysis in Health Science	510000	4/11/2025
UKCOH	HSC 4682	Behavior Analysis Methods in Health Science	510000	4/11/2025
UKCOH	HSC 4681	Behavior Intervention in Health Science	510000	4/11/2025
UKCOH	HSC 4680	Behavior Analysis of Performance in Health Science	510000	4/11/2025
UKCOH	HSC 5588	Applied Behavioral Theory in Health Promotion	510000	4/11/2025
UKCOH	MCB 2010	Microbiology for Health Sciences	260502	4/11/2025
UKCOH	MCB 2010L	Microbiology Lab for Health Sciences	260502	4/11/2025
UKCOH	NGR 6835L	Family Nurse Practitioner IV Practicum	513801	4/11/2025
UKCOH	PET 3471	Sports Officiating	131314	4/11/2025
UKCOH	PET 4532	Sports Performance Analytics	131314	4/11/2025
UKCOH	PHC 4666	Pandemics and Microbial Threats to Health	512201	4/11/2025
UKCOH	PHC 4533	Foundations of Maternal and Child Health	512201	4/11/2025
UKCOH	PHC 4712	Applied Qualitative Research Methods	512201	4/11/2025
UKCOH	PHC 4048	Epidemiology for Public Health Practice	512201	4/11/2025
UKCOH	PHC 5530	Foundations of Maternal and Child Health	512201	4/11/2025
UKCOH	PHC 6585	Communication in Public Health	512201	4/11/2025
UKCOH	RET 3266L	Fundamentals of Mechanical Ventilation Lab	510908	4/11/2025
UKCOH	RET 3448	Advanced Therapeutics & Patient Monitoring Concepts in Respiratory Therapy	510908	4/11/2025
UKCOH	RET 3884	Clinical Practicum I	510908	4/11/2025
UKCOH	RET 3885	Clinical Practicum II	510908	4/11/2025
UKCOH	RET 3028	Foundations of Respiratory Therapy	510908	4/11/2025
UKCOH	RET 3028L	Foundations of Respiratory Therapy Lab	510908	4/11/2025
UKCOH	RET 3487	Cardiopulmonary Anatomy & Physiology	510908	4/11/2025
UKCOH	RET 3354	Cardiopulmonary Pharmacotherapy	510908	4/11/2025
UKCOH	RET 3493	Patient Assessment	510908	4/11/2025
UKCOH	RET 3493L	Patient Assessment Lab	510908	4/11/2025
UKCOH	RET 3445	Cardiopulmonary Diseases & Diagnostics	510908	4/11/2025
UKCOH	RET 3445L	Cardiopulmonary Diseases & Diagnostics Lab	510908	4/11/2025
UKCOH	RET 3266	Fundamentals of Mechanical Ventilation	510908	4/11/2025

UKCOH	RET 4950	Respiratory Therapy Capstone Project	510908	4/11/2025
UKCOH	RET 4887	Clinical Practicum IV	510908	4/11/2025
UKCOH	RET 4616	Professional Healthcare Presence: Leadership, Administration, & Education	510908	4/11/2025
UKCOH	RET 4277	Critical Care Management	510908	4/11/2025
UKCOH	RET 4277L	Critical Care Management Lab	510908	4/11/2025
UKCOH	RET 4718	Neonatal-Pediatric Respiratory Care	510908	4/11/2025
UKCOH	RET 4718L	Neonatal-Pediatric Respiratory Care Lab	510908	4/11/2025
UKCOH	RET 4050	Evidence-Based Practice in Respiratory Care	510908	4/11/2025
UKCOH	RET 4886	Clinical Practicum III	510908	4/11/2025
UKCOH	RET 4535	Disease Management: Extended Respiratory Therapy Services	510908	4/11/2025
UKCOH	RET 4930	RT Seminar: Exam Preparation & Career Guidance	510908	4/11/2025
Count	**129**			

Modified Courses				
CASSH	AMH 2010	United States to 1877	540102	4/11/2025
CASSH	AMH 2020	United States Since 1877	540102	4/11/2025
CASSH	AML 2010	American Literature I	231402	4/11/2025
CASSH	AML 2020	American Literature II	231402	4/11/2025
CASSH	ANG 6002	Proseminar in Anthropology	450201	4/11/2025
CASSH	ANT 2000	Introduction to Anthropology	450201	4/11/2025
CASSH	ANT 2400	Current Cultural Issues	450201	4/11/2025
CASSH	ANT 4191C	Anthropological Data Analysis	450201	4/11/2025
CASSH	ANT 4523	Field Methods in Forensic Anthropology	450201	4/11/2025
CASSH	ARH 1000	Art Appreciation	500703	4/11/2025
CASSH	ARH 2050	Western Survey I: Prehistory to the Medieval Period	500703	4/11/2025
CASSH	ARH 2051	Western Survey II: Renaissance to Contemporary	500703	4/11/2025
CASSH	ARH 3724	History of Graphic Design	500703	4/11/2025
CASSH	ARH 3871	Women in Art	500703	4/11/2025
CASSH	ARH 4930	Theory and Methods in Art History	500703	4/11/2025
CASSH	ART 1015C	Exploring Artistic Vision	500702	4/11/2025
CASSH	ART 3213C	Ideas and Concepts in Art	500702	4/11/2025
CASSH	ART 3714C	Advanced Sculpture	500702	4/11/2025
CASSH	CCJ 2002	Survey of Crime and Justice	430104	4/11/2025
CASSH	CCJ 3553	Family Violence and Crime	430104	4/11/2025
CASSH	CCJ 4939	Criminal Justice Seminar	430104	4/11/2025
CASSH	COM 4250	Strategic Communication for the Sciences	090101	4/11/2025
CASSH	COM 4301	Applied Communication Research	090101	4/11/2025
CASSH	COM 4566	Social Media Agency	090101	4/11/2025
CASSH	CPO 2002	Comparative Politics	451001	4/11/2025
CASSH	CRW 2001	Introduction to Creative Writing	231302	4/11/2025

Courses

CASSH	DIG 3309C	Digital 2D Animation	090702	4/11/2025
CASSH	ENC 1101	English Composition I	231304	4/11/2025
CASSH	ENL 2010	History of English Literature I	231404	4/11/2025
CASSH	ENL 2020	History of English Literature II	231404	4/11/2025
CASSH	EUH 1000	Western Perspectives I	540103	4/11/2025
CASSH	EUH 1001	Western Perspectives II	540103	4/11/2025
CASSH	FRE 1120C	French I	160901	4/11/2025
CASSH	FRE 1121C	French II	160901	4/11/2025
CASSH	GRA 3139C	Motion Graphics	500409	4/11/2025
CASSH	GRA 3521C	UX/UI Design	500409	4/11/2025
CASSH	GRA 3881C	Comics: Sequential Art and Design	500409	4/11/2025
CASSH	GRA 4950C	Graphic Design Portfolio/Presentation	500409	4/11/2025
CASSH	HIS 2050	Explore History	540101	4/11/2025
CASSH	INR 2002	International Politics	450901	4/11/2025
CASSH	ITA 1120C	Italian 1	160902	4/11/2025
CASSH	ITA 1121C	Italian 2	160902	4/11/2025
CASSH	JPN 1120C	Japanese I	160302	4/11/2025
CASSH	JPN 1121C	Japanese II	160302	4/11/2025
CASSH	JPN 2200	Japanese III	160302	4/11/2025
CASSH	JPN 2201	Japanese IV	160302	4/11/2025
CASSH	LIT 2000	Introduction to Literature	231401	4/11/2025
CASSH	LIT 2030	Introduction to Poetry	231401	4/11/2025
CASSH	MMC 2000	Principles of Mass Communication	090102	4/11/2025
CASSH	MUH 2004	The Music Experience - Concerts	500902	4/11/2025
CASSH	MUL 2010	Music Appreciation	500902	4/11/2025
CASSH	MVS 1314	Applied Music Bass	500911	4/11/2025
CASSH	MVS 2324	Applied Music Bass	500911	4/11/2025
CASSH	MVS 3334	Applied Music Bass	500911	4/11/2025
CASSH	MVS 4344	Applied Music Bass	500911	4/11/2025
CASSH	PHH 3100	Ancient Philosophy	380101	4/11/2025
CASSH	PHI 2010	Introduction to Philosophy	380101	4/11/2025
CASSH	PHI 2103	Critical Thinking	380101	4/11/2025
CASSH	PHI 2603	Ethics in Contemporary Society	380101	4/11/2025
CASSH	PHI 3500	Metaphysics	380101	4/11/2025
CASSH	PHI 4300	Skepticism, Knowledge, and Truth	380101	4/11/2025
CASSH	PLA 2013	Survey of American Law	220302	4/11/2025
CASSH	POS 2041	American Politics	451001	4/11/2025
CASSH	PUR 3100	Writing for Public Relations	090902	4/11/2025
CASSH	REL 1300	World Religions	380201	4/11/2025
CASSH	SPC 2608	Public Speaking	090101	4/11/2025

Courses

CASSH	SPN 1120C	Spanish I	160905	4/11/2025
CASSH	SPN 1121C	Spanish II	160905	4/11/2025
CASSH	SYG 2000	Introduction to Sociology	451101	4/11/2025
CASSH	THE 2000	Theatre Appreciation	500501	4/11/2025
CASSH	THE 2300	Survey of Dramatic Literature	500501	4/11/2025
CASSH	THE 2925	Run Crew	500501	4/11/2025
CASSH	THE 3092	Casting/Advanced Crew/Design	500501	4/11/2025
CASSH	TPA 2200C	Technical Theatre-Sets and Lights	500501	4/11/2025
CASSH	TPA 3004L	Rendering for the Stage	500501	4/11/2025
CASSH	TPA 4077C	Scene Painting	500501	4/11/2025
CASSH	TPP 2190	Run Crew/Performance	500501	4/11/2025
CASSH	TPP 2513	Movement for the Actor	500501	4/11/2025
CASSH	TPP 2744C	Voice for the Actor	500501	4/11/2025
CASSH	TPP 2120	Acting Improvisation	500501	4/11/2025
DAE	IDH 1040	Honors Core: Humanities	300000	4/11/2025
DAE	IDH 1041	Honors Core: Social Sciences	300000	4/11/2025
DAE	IDH 1043	Honors Core: Natural Sciences	300000	4/11/2025
DAE	IDH 3055	Honors Thesis Research Methods	300000	4/11/2025
DAE	IDH 3701	Service Learning and E-Portfolio Development	300000	4/11/2025
HMCSE	AST 1002	Descriptive Astronomy	400201	4/11/2025
HMCSE	BCN 4720C	Scheduling	151001	4/11/2025
HMCSE	BSC 1005	General Biology for Non-Majors	260101	4/11/2025
HMCSE	BSC 1085	Anatomy and Physiology I	260101	4/11/2025
HMCSE	BSC 2010	Biology I	260101	4/11/2025
HMCSE	CEN 4054	Six Sigma Green Belt	110201	4/11/2025
HMCSE	CHM 1020	Concepts in Chemistry	400501	4/11/2025
HMCSE	CHM 2045	General Chemistry I	400501	4/11/2025
HMCSE	CGS 2020	Introduction to Machine Learning	110101	4/11/2025
HMCSE	CIS 2530	Introduction to Cybersecurity	110101	4/11/2025
HMCSE	CIS 4592	Capstone Project	110101	4/11/2025
HMCSE	CIS 6950	Information Technology Capstone	110101	4/11/2025
HMCSE	CNT 4007	Theory and Fundamentals of Networks	110901	4/11/2025
HMCSE	COP 3014	Algorithm and Program Design	110201	4/11/2025
HMCSE	COP 4864	Client-Side Programming	110201	4/11/2025
HMCSE	COT 3100	Discrete Structures	110701	4/11/2025
HMCSE	CTS 4121	Information Technology Applications in CompTIA Security+	111001	4/11/2025
HMCSE	CTS 4323	Server Administration	111001	4/11/2025
HMCSE	EEL 6692	Wearable Robotics	141001	4/11/2025
HMCSE	EML 3011	Mechanics of Materials	141901	4/11/2025
HMCSE	EML 3016	Thermal Fluid Systems II	141901	4/11/2025

Courses

HMCSE	EML 4961	Fundamentals of Engineering - Mechanical Exam Prep	141901	4/11/2025
HMCSE	ESC 2000	Introduction to Earth Science	400601	4/11/2025
HMCSE	ETI 3445	Construction Estimating	151001	4/11/2025
HMCSE	EVR 2001	Introduction to Environmental Science	030103	4/11/2025
HMCSE	EVR 4941	Internship in Environmental Sciences	030103	4/11/2025
HMCSE	GEA 2000	Nations and Regions of the World	450701	4/11/2025
HMCSE	GLY 2010	Physical Geology	400601	4/11/2025
HMCSE	MAC 1105	College Algebra	270101	4/11/2025
HMCSE	MAC 1105C	College Algebra with Lab	270101	4/11/2025
HMCSE	MAC 2311	Analytic Geometry and Calculus I	270101	4/11/2025
HMCSE	MGF 1130	Mathematical Thinking	270101	4/11/2025
HMCSE	MGF 1131	Mathematics in Context	270101	4/11/2025
HMCSE	PCB 4315	Tropical Marine Ecology	260101	4/11/2025
HMCSE	PCB 4601	Plant Ecology	260101	4/11/2025
HMCSE	PCB 5605	Plant Ecology	260101	4/11/2025
HMCSE	PHY 1020	Conceptual Physics	400801	4/11/2025
HMCSE	PHY 2048	Calculus-Based Physics I	400801	4/11/2025
HMCSE	PHY 2053	Algebra-Based Physics I	400801	4/11/2025
HMCSE	STA 2023	Elements of Statistics	270501	4/11/2025
HMCSE	STA 4012	Data in Society	270501	4/11/2025
HMCSE	STA 4091	Data in the Workplace	270501	4/11/2025
HMCSE	STA 5015	Data in Society	270501	4/11/2025
HMCSE	STA 6094	Data in the Workplace	270501	4/11/2025
HMCSE	STA 6235	Modeling in Regression	270501	4/11/2025
LBJCOB	AFR 1101	Heritage and Values I	280101	4/11/2025
LBJCOB	AFR 1112	Heritage and Values II	280101	4/11/2025
LBJCOB	AFR 2130	Team and Leadership Fundamentals I	280101	4/11/2025
LBJCOB	AFR 2132	Team and Leadership Fundamentals II	280101	4/11/2025
LBJCOB	AFR 3221	Leading People/Effective Communications I	280101	4/11/2025
LBJCOB	AFR 3232	Leading People/Effective Communication II	280101	4/11/2025
LBJCOB	AFR 4211	National Security, Leadership Responsibilities & Commissioning Preparation I	280101	4/11/2025
LBJCOB	AFR 4214	National Security, Leadership Responsibilities & Commissioning Preparation II	280101	4/11/2025
LBJCOB	ECO 2013	Principles of Economics Macro	520601	4/11/2025
LBJCOB	ECO 3003	Principles of Economic Theory and Public Policy	520601	4/11/2025
LBJCOB	ECO 3101	Intermediate Microeconomics	520601	4/11/2025
LBJCOB	ECO 3203	Intermediate Macroeconomics	520601	4/11/2025
LBJCOB	ECO 4431	Business and Economic Forecasting	520601	4/11/2025
LBJCOB	ECO 4704	International Trade and Commercial Policy	520601	4/11/2025
LBJCOB	ECP 4613	Urban and Regional Economic Development	520601	4/11/2025
LBJCOB	ENT 2612	Entrepreneurial Creativity and Innovation	520701	4/11/2025

Courses

LBJCOB	FIN 2104	Personal Finance	520801	4/11/2025
LBJCOB	FIN 3144	Personal Finance with Business Applications	520801	4/11/2025
LBJCOB	FIN 4414	Financial Theory and Practice	520801	4/11/2025
LBJCOB	FIN 4424	Problems in Corporate Finance	520801	4/11/2025
LBJCOB	FIN 4514	Security Analysis and Portfolio Management	520801	4/11/2025
LBJCOB	GEB 3453	Business Ethics and Stakeholder Management	520101	4/11/2025
LBJCOB	GEB 5870	MBA Foundations: e-Business Systems	520101	4/11/2025
LBJCOB	GEB 5871	MBA Foundations: Managerial Economics	520101	4/11/2025
LBJCOB	GEB 5875	MBA Foundations: Management Skills and Applications	520101	4/11/2025
LBJCOB	GEB 5876	MBA Foundations: Marketing Management	520101	4/11/2025
LBJCOB	MAR 4156	Seminar in International Marketing	521401	4/11/2025
LBJCOB	MAR 4403	Sales Management	521401	4/11/2025
LBJCOB	MAR 4721	Digital Marketing	521401	4/11/2025
LBJCOB	MAR 4841	Services Marketing	521401	4/11/2025
LBJCOB	SPM 2010	Sport in Global Society	310504	4/11/2025
LBJCOB	TAX 4316	Taxation of Flow-Through Entities	521601	4/11/2025
SOE	EDF 3234	Applied Foundations of Education	130901	4/11/2025
SOE	EDF 6222	Concepts of Applied Behavior Analysis	130901	4/11/2025
SOE	EDF 6225	Foundations of Applied Behavior Analysis	130901	4/11/2025
SOE	EDF 6229	Curriculum Design for Behavior Analysts	130901	4/11/2025
SOE	EDF 6557	Ethics in Applied Behavior Analysis	130901	4/11/2025
SOE	EDG 3945	Clinical Experience 1	130101	4/11/2025
SOE	EDG 4334	Universal Design for Learning in Community Learning Environments	130101	4/11/2025
SOE	EDG 4940	Student Teaching	130101	4/11/2025
SOE	EME 2040	Introduction to Emerging Technology	130501	4/11/2025
SOE	EME 6414	Web-Based Instructional Tools	130501	4/11/2025
SOE	SCE 4310	Teaching Science in Elementary Schools	131316	4/11/2025
SOE	EDA 6063	Introduction to Educational Leadership	130401	4/11/2025
SOE	EDA 6503	The Principalship	130401	4/11/2025
SOE	EDF 1005	Introduction to Education	130901	4/11/2025
SOE	EDF 3234	Applied Foundations of Education	130901	4/11/2025
SOE	EDF 6691	Foundations of Education: A Bioecological Systems Perspective	130901	4/11/2025
SOE	EDG 2041	Exploring Inquiry Teaching	130101	4/11/2025
SOE	EDG 3945	Clinical Experience 1	130101	4/11/2025
SOE	EDG 4323	Methods of K-12 Literacy Instruction	130101	4/11/2025
SOE	EDG 4351	Educational Assessment	130101	4/11/2025
SOE	EDG 4373	Integrated Arts and Contemporary Educational Tools	130101	4/11/2025
SOE	EDG 4442	Effective Learning Environments	130101	4/11/2025
SOE	EDG 4936	Senior Seminar and Clinical Practicum in Reading	130101	4/11/2025
SOE	EDG 4948	Apprenticeship Teaching	130101	4/11/2025

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SOE	EDG 4949	Clinical Experience 2	130101	4/11/2025
SOE	EDG 5250	Principles of Curriculum	130101	4/11/2025
SOE	EDH 6362	Foundations of Leadership and Supervision	130406	4/11/2025
SOE	EEX 4254	Instructional Strategies for Teaching Students with Exceptionalities	131001	4/11/2025
SOE	ESE 4322	Instruction, Management, and Assessment: Secondary Education	131205	4/11/2025
SOE	ESE 4940	Clinical Practicum for Secondary Education	131205	4/11/2025
SOE	LAE 3324	Teaching Language Arts in the Middle and Secondary Schools	131305	4/11/2025
SOE	LAE 5468	Literature for Children and Young Adults	131305	4/11/2025
SOE	MAE 4310	Teaching Mathematics in Elementary Schools	131311	4/11/2025
SOE	MAE 4320	Teaching Mathematics in Middle and Secondary Schools	131311	4/11/2025
SOE	RED 3310	Literacy Instruction for the Elementary Learner	131315	4/11/2025
SOE	RED 5375	Advanced Methods of K-12 Literacy Instruction	131315	4/11/2025
SOE	RED 6060	Teaching Literacy in the Secondary School	131315	4/11/2025
SOE	RED 6240	Differentiation of Reading Instruction	131315	4/11/2025
SOE	RED 6546	Reading Assessment and Diagnosis	131315	4/11/2025
SOE	SCE 4310	Teaching Science in Elementary Schools	131316	4/11/2025
SOE	SSE 4113	Social Studies for Elementary Teachers	131318	4/11/2025
SOE	SSE 4324	Teaching Social Studies in the Middle and Secondary Schools	131318	4/11/2025
SOE	TSL 4080	ESOL Principles and Practices	131401	4/11/2025
SOE	TSL 4081	Teaching English to ESOL Students	131401	4/11/2025
SOE	TSL 5085	ESOL Principles and Practices	131401	4/11/2025
SOE	TSL 5142	ESOL Curriculum and Materials Development	131401	4/11/2025
SOE	TSL 5345	Methods of Teaching ESOL	131401	4/11/2025
SOE	TSL 5525	Cross Cultural Communication and Understanding	131401	4/11/2025
UKCOH	APK 3110	Exercise Physiology	310505	4/11/2025
UKCOH	APK 4200	Neuromechanics of Human Movement	310505	4/11/2025
UKCOH	APK 4941C	Exercise Science Internship	310505	4/11/2025
UKCOH	ATR 6621	Research in Athletic Training II	510913	4/11/2025
UKCOH	ATR 6845	Athletic Training Clinical Experience IV	510913	4/11/2025
UKCOH	BSC 4854	Bioterrorism	260101	4/11/2025
UKCOH	BSC 5856	Bioterrorism: The Interprofessional Response	260101	4/11/2025
UKCOH	CLP 4390	Introduction to Forensic Psychology	422801	4/11/2025
UKCOH	DEP 2004	Human Development Across the Lifespan	422703	4/11/2025
UKCOH	GEY 4001	Gerontology	301101	4/11/2025
UKCOH	HSA 3111	Understanding U.S. Healthcare	510701	4/11/2025
UKCOH	HSA 3140	Strategic Planning in Healthcare	510701	4/11/2025
UKCOH	HSA 4002	Healthcare Administration	510701	4/11/2025
UKCOH	HSA 4383	Quality Improvement in Healthcare	510701	4/11/2025
UKCOH	HSA 4191	Health Information Systems	510701	4/11/2025
UKCOH	HSA 6103	Health Services Administration	510701	4/11/2025

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UKCOH	HSA 6106	Health Delivery Systems	510701	4/11/2025
UKCOH	HSA 6175	Healthcare Finance	510701	4/11/2025
UKCOH	HSA 6197	Health Informatics	510701	4/11/2025
UKCOH	HSA 6342	Human Resources in Healthcare	510701	4/11/2025
UKCOH	HSA 6435	Decision Making in Healthcare	510701	4/11/2025
UKCOH	HSA 6436	Health Economics	510701	4/11/2025
UKCOH	HSA 6707	Strategic Planning in Healthcare Administration	510701	4/11/2025
UKCOH	HSA 6944	Internship in Health Administration	510701	4/11/2025
UKCOH	HSA 6947	Healthcare Administration Capstone	510701	4/11/2025
UKCOH	HSC 2100	Personal, Family and Community Health	510000	4/11/2025
UKCOH	HSC 3510	Data Analysis in the Health Sciences	510000	4/11/2025
UKCOH	HSC 4720	Methodology in Applied Behavior Analysis in Health Science	510000	4/11/2025
UKCOH	MLS 3194	Clinical Genetics	511005	4/11/2025
UKCOH	MLS 3621	Clinical Biochemistry	511005	4/11/2025
UKCOH	MLS 4221C	Urinalysis/Body Fluids for the MLT to MLS track	511005	4/11/2025
UKCOH	MLS 4306C	Hematology for the MLT to MLS track	511005	4/11/2025
UKCOH	MLS 4335C	Hemostasis and Thrombosis for the MLT to MLS track	511005	4/11/2025
UKCOH	MLS 4626C	Clinical Chemistry I for the MLT to MLS	511005	4/11/2025
UKCOH	MLS 4631C	Clinical Chemistry II for the MLT to MLS	511005	4/11/2025
UKCOH	MLS 4704	Clinical Management Portfolio for the MLT to MLS track	511005	4/11/2025
UKCOH	MLS 4705	Special Clinical Topics	511005	4/11/2025
UKCOH	NGR 5108	Foundations of Nursing Practice Across the Lifespan	513801	4/11/2025
UKCOH	NGR 5108L	Foundations of Nursing Practice Across the Lifespan Clinical Immersion	513801	4/11/2025
UKCOH	NGR 5140	Pathophysiology Across the Lifespan	513801	4/11/2025
UKCOH	NGR 5171	Pharmacology Across the Lifespan	513801	4/11/2025
UKCOH	NGR 5241	Care of Adults Across the Lifespan - Common Health Problems	513801	4/11/2025
UKCOH	NGR 5241L	Care of Adults Across the Lifespan - Common Health Problems Clinical Immersion	513801	4/11/2025
UKCOH	NGR 5242	Care of Adults Across the Lifespan - Complex Health Problems	513801	4/11/2025
UKCOH	NGR 5242L	Care of Adults Across the Lifespan - Complex Health Problems Clinical Immersion	513801	4/11/2025
UKCOH	NGR 5352	Nursing Care of Women, Children, and Families	513801	4/11/2025
UKCOH	NGR 5352L	Nursing Care of Women, Children, and Families Clinical Immersion	513801	4/11/2025
UKCOH	NGR 5507	Mental Health Nursing Across the Lifespan	513801	4/11/2025
UKCOH	NGR 5507L	Mental Health Nursing Across the Lifespan Clinical Immersion	513801	4/11/2025
UKCOH	NGR 5636	Population Health Promotion and Management Across the Lifespan	513801	4/11/2025
UKCOH	NGR 5636L	Population Health Promotion and Management Across the Lifespan Clinical Immersion	513801	4/11/2025
UKCOH	NGR 5700	Systems Leadership and Health Policy	513801	4/11/2025
UKCOH	NGR 5871	Informatics and Healthcare Technologies in Practice	513801	4/11/2025
UKCOH	NGR 5888	Healthcare Quality and Safety in Professional Nursing Practice	513801	4/11/2025
UKCOH	NGR 6002	Advanced Health Assessment	513801	4/11/2025
UKCOH	NGR 6003C	Health Assessment and Promotion Across the Lifespan with Lab	513801	4/11/2025

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UKCOH	NGR 6111	Foundations of Nursing Science	513801	4/11/2025
UKCOH	NGR 6140	Advanced Pathophysiology	513801	4/11/2025
UKCOH	NGR 6172	Advanced Pharmacology	513801	4/11/2025
UKCOH	NGR 6201	Family Nurse Practitioner I Seminar	513801	4/11/2025
UKCOH	NGR 6201L	Family Nurse Practitioner I Practicum	513801	4/11/2025
UKCOH	NGR 6202	Family Nurse Practitioner III Seminar	513801	4/11/2025
UKCOH	NGR 6202L	Family Nurse Practitioner III Practicum	513801	4/11/2025
UKCOH	NGR 6301	Family Nurse Practitioner II Seminar	513801	4/11/2025
UKCOH	NGR 6301L	Family Nurse Practitioner II Practicum	513801	4/11/2025
UKCOH	NGR 6343	Care of Women and Families	513801	4/11/2025
UKCOH	NGR 6343L	Care of Women and Families Practicum	513801	4/11/2025
UKCOH	NGR 6605	Care of Persons Across the Lifespan - Transition to Professional Nursing Practice	513801	4/11/2025
UKCOH	NGR 6605L	Care of Persons Across the Lifespan - Transition to Professional Nursing Practice Clinical	513801	4/11/2025
UKCOH	NGR 6638	Advanced Population Health Promotion and Management	513801	4/11/2025
UKCOH	NGR 6710	Advanced Nursing Practice for the Nurse Educator	513801	4/11/2025
UKCOH	NGR 6710L	Advanced Nursing Practice for the Nurse Educator Practicum	513801	4/11/2025
UKCOH	NGR 6715	Nursing Education Seminar I	513801	4/11/2025
UKCOH	NGR 6715L	Nursing Education I Practicum	513801	4/11/2025
UKCOH	NGR 6718	Nursing Education Seminar II	513801	4/11/2025
UKCOH	NGR 6718L	Nursing Education II Practicum	513801	4/11/2025
UKCOH	NGR 6727	Nursing Leadership III Seminar	513801	4/11/2025
UKCOH	NGR 6727L	Nursing Leadership III Practicum	513801	4/11/2025
UKCOH	NGR 6728	Nursing Leadership I Seminar	513801	4/11/2025
UKCOH	NGR 6728L	Nursing Leadership I Practicum	513801	4/11/2025
UKCOH	NGR 6729	Nursing Leadership II Seminar	513801	4/11/2025
UKCOH	NGR 6729L	Nursing Leadership II Practicum	513801	4/11/2025
UKCOH	NGR 6734	Project Development and Management for Healthcare Professionals	513801	4/11/2025
UKCOH	NGR 6793	Fiscal Administration for the Health Professional	513801	4/11/2025
UKCOH	NGR 6803	Integration of Evidence in Advanced Nursing Practice	513801	4/11/2025
UKCOH	NGR 6835	Family Nurse Practitioner IV Seminar - Transition to Professional Practice	513801	4/11/2025
UKCOH	NGR 6872	Information Technology and Data Analysis for the Healthcare Professional	513801	4/11/2025
UKCOH	NGR 6893	Health Systems Leadership and Policy Strategies	513801	4/11/2025
UKCOH	NUR 3026	Person Centered Care I	513801	4/11/2025
UKCOH	NUR 3026L	Person Centered Care I Lab	513801	4/11/2025
UKCOH	NUR 3067	Health Assessment and Promotion	513801	4/11/2025
UKCOH	NUR 3081	Professional Nursing Practice	513801	4/11/2025
UKCOH	NUR 3095	Introduction to Pharmacology	513801	4/11/2025
UKCOH	NUR 3125	Pathophysiology for Nurses	513801	4/11/2025
UKCOH	NUR 3138C	Health Assessment and Promotion in Nursing Practice	513801	4/11/2025
UKCOH	NUR 3145	Pharmacology	513801	4/11/2025

UKCOH	NUR 3215	Person Centered Care II	513801	4/11/2025
UKCOH	NUR 3215L	Person Centered Care II Lab	513801	4/11/2025
UKCOH	NUR 3505	Mental Health Nursing	513801	4/11/2025
UKCOH	NUR 3505L	Mental Health Nursing Lab	513801	4/11/2025
UKCOH	NUR 3805	Professional Nursing Practice	513801	4/11/2025
UKCOH	NUR 3871	Healthcare Informatics	513801	4/11/2025
UKCOH	NUR 4125	Pathophysiology	513801	4/11/2025
UKCOH	NUR 4165	Essentials of Evidence-Based Nursing Practice	513801	4/11/2025
UKCOH	NUR 4169	Integration of Evidence in Professional Nursing Practice	513801	4/11/2025
UKCOH	NUR 4216	Person Centered Care III	513801	4/11/2025
UKCOH	NUR 4216L	Person Centered Care III Lab	513801	4/11/2025
UKCOH	NUR 4257	Person Centered Care IV	513801	4/11/2025
UKCOH	NUR 4257L	Person Centered Care IV Lab	513801	4/11/2025
UKCOH	NUR 4286	Concepts of Quality and Safety in Nursing	513801	4/11/2025
UKCOH	NUR 4445	Person Centered Care of Families	513801	4/11/2025
UKCOH	NUR 4445L	Person Centered Care of Families Lab	513801	4/11/2025
UKCOH	NUR 4615	Person Centered Population Health	513801	4/11/2025
UKCOH	NUR 4615L	Person Centered Population Health Lab	513801	4/11/2025
UKCOH	NUR 4636	Epidemiology and Population Health Strategies	513801	4/11/2025
UKCOH	NUR 4826	Transformational Nursing Leadership	513801	4/11/2025
UKCOH	NUR 4827	Leadership in Nursing	513801	4/11/2025
UKCOH	NUR 4828	Systems Innovation and Change Agents in Healthcare	513801	4/11/2025
UKCOH	NUR 4895	Evidence-Based Population Health Practice	513801	4/11/2025
UKCOH	PHC 2082	Informatics and Your Health	512201	4/11/2025
UKCOH	PHC 4101	Essentials of Public Health	512201	4/11/2025
UKCOH	PHC 4930	Public Health Seminar	512201	4/11/2025
UKCOH	PHC 5198	Applied Qualitative Research Methods	512201	4/11/2025
UKCOH	PSY 2012	General Psychology	420101	4/11/2025
UKCOH	SOW 2192	Understanding Relationships in the 21st Century	440701	4/11/2025
UKCOH	SOW 4700	Substance Use, Prevention, and Treatment	440701	4/11/2025
UKCOH	SOW 5532	Foundation Year Field Instruction and Integrative Seminar	440701	4/11/2025
UKCOH	SOW 5710	Substance Use Treatment: Theories, Practices, and Policies	440701	4/11/2025
Count	**338**			

Deleted Courses				
CASSH	ART 2821	The Self, Creativity, Your Career and Visual Culture	500702	4/11/2025
CASSH	CCJ 3678	Race, Gender, Ethnicity, and Crime	430104	4/11/2025
CASSH	DSC 3012	Terrorism	430104	4/11/2025
CASSH	DSC 4013	Homeland Security	430104	4/11/2025
CASSH	DSC 5020	Terrorism	430104	4/11/2025

Courses

CASSH	DSC 6045	Homeland Security	430104	4/11/2025
CASSH	TPA 4504	Performing Arts Administration	500501	4/11/2025
HMCSE	CIS 6415	Advanced Computer Systems and Networks	110101	4/11/2025
HMCSE	MGF 1106	Mathematics for Liberal Arts I	270101	4/11/2025
HMCSE	MGF 1107	Mathematics for Liberal Arts II	270101	4/11/2025
LBJCOB	HFT 3941	Field Study in Hospitality, Recreation and Resort Management	520901	4/11/2025
LBJCOB	MAN 4102	Global Perspectives	520201	4/11/2025
LBJCOB	MAN 5116	Management of Diversity	520201	4/11/2025
SOE	EME 5316	Instructional Technology Leadership	130501	4/11/2025
SOE	EME 6408	Integrated Technology Learning Environments	130501	4/11/2025
SOE	EME 8698	Doctoral Seminar-Ed.D. Capstone	130501	4/11/2025
SOE	EDH 6368	Equity and Justice in Higher Education	130406	4/11/2025
UKCOH	EXP 6506	Advanced Cognitive Psychology	422704	4/11/2025
UKCOH	NSP 3845	Academic Writing in Nursing I	513801	4/11/2025
UKCOH	NSP 4846	Academic Writing in Nursing II	513801	4/11/2025
UKCOH	NUR 3835	Achieving Professionalism II	513801	4/11/2025
UKCOH	NUR 3872	Healthcare Informatics for Nursing	513801	4/11/2025
UKCOH	SOP 6069	Advanced Social Psychology	422707	4/11/2025
Count		**23**		

Purged Courses				
CASSH	ANT 4808	Applied Anthropology	450201	4/11/2025
CASSH	SYO 5255	Sociology of Education	451101	4/11/2025
CASSH	ART 1001C	Studio Art for Beginners	500702	4/11/2025
CASSH	ART 1015C	Exploring Artistic Vision	500702	4/11/2025
CASSH	ART 3718C	Advanced Sculpture: Intro to New Genres	500702	4/11/2025
CASSH	COM 5005	Introduction to Graduate Studies in Communication	090101	4/11/2025
CASSH	COM 6024	Emerging Topics in Health Communication	090101	4/11/2025
CASSH	COM 6210	Emerging Topics in Organizational Communication	090101	4/11/2025
CASSH	JOU 4213	Newspaper Design	090401	4/11/2025
CASSH	JOU 4308	Magazine Writing	090401	4/11/2025
CASSH	AML 4302	Single Author Seminar, American Literature, 1700 to the Present	231402	4/11/2025
CASSH	ENL 4284	Topics in 20th-Century and Contemporary British Literature	231404	4/11/2025
CASSH	INR 4205	Spying: Fact or Fiction	450901	4/11/2025
CASSH	EUH 3200	Early Modern Europe	540103	4/11/2025
CASSH	EUH 4511	Tudor and Stuart England	540103	4/11/2025
CASSH	HIS 6450	Comparative Slaveries in the Atlantic World	540101	4/11/2025
CASSH	PHM 3200	Social and Political Philosophy	380101	4/11/2025
CASSH	DAA 3205C	Intermediate Ballet	500301	4/11/2025
DAE	SLS 4940	Internship Experience	309999	4/11/2025

Courses

HMCSE	PCB 4253L	Developmental Biology Lab	260101	4/11/2025
HMCSE	PCB 5235L	Immunology Laboratory	260101	4/11/2025
HMCSE	PCB 6971	Thesis	260101	4/11/2025
HMCSE	BCN 2272	Blueprint Reading	151001	4/11/2025
HMCSE	CET 4743	Network Systems Architecture, Operations and Management	450201	4/11/2025
HMCSE	CGS 3183	Basic Web Applications	110101	4/11/2025
HMCSE	CGS 3464	Programming Using Visual Basic	110101	4/11/2025
HMCSE	CTS 4139	Information Technology Applications in CompTIA Network+	111001	4/11/2025
HMCSE	CTS 4362	Active Directory	111001	4/11/2025
HMCSE	EVR 5332	Practicum in Environmental Studies	030103	4/11/2025
HMCSE	GIS 5938	Special Topics in GIS for Archaeology	450702	4/11/2025
HMCSE	CAP 6624	Introduction to Machine Learning and Data Science	110899	4/11/2025
HMCSE	MAC 3949	Cooperative Education	270101	4/11/2025
HMCSE	MAP 6108	Mathematical Modeling and Initial and Boundary Value Problems	270301	4/11/2025
HMCSE	PHY 2048C	Calculus-Based Physics I Studio	400801	4/11/2025
LBJCOB	ISM 4943	Internship in Management Information Systems	521201	4/11/2025
LBJCOB	ECP 6045	General Aviation Economics and Finance	520601	4/11/2025
LBJCOB	ECP 6046	Commercial Aviation Economics and Finance	520601	4/11/2025
LBJCOB	HFT 3333	Contemporary Club Management	520901	4/11/2025
LBJCOB	HFT 3444	Global Citizenship in Hospitality and Tourism	520901	4/11/2025
LBJCOB	HFT 4106	Global Hospitality and Tourism Shared Economies	520901	4/11/2025
LBJCOB	HFT 4462	Revenue Management for Hospitality Business	520901	4/11/2025
LBJCOB	HFT 4481	Advanced Revenue Management and Predictive Analytics in Hospitality	520901	4/11/2025
LBJCOB	LEI 4332	Community Tourism Development	520901	4/11/2025
SOE	EDF 2085	Teaching Diverse Populations	130901	4/11/2025
SOE	EDF 6481	Educational Research	130901	4/11/2025
SOE	EDF 7638	Social Change and Reform	130901	4/11/2025
UKCOH	APK 4409	Success in Sports	310505	4/11/2025
UKCOH	ATR 2010	Advanced Prevention and Care of Injuries in Health, Leisure, and Sports	510913	4/11/2025
UKCOH	ATR 6620	Research in Athletic Training I	510913	4/11/2025
UKCOH	PEO 2031	Analysis of Individual Sports	310501	4/11/2025
UKCOH	PHC 4363	Occupational Safety and Health in the Health Care Environment	512201	4/11/2025
UKCOH	SOW 4674	Social Issues and Intervention Strategies in Social Work Practice with Older Adults	440701	4/11/2025
Count	**52**			

Reactivated/Reinstated Courses				
CASSH	AMH 6149	Transformations of America	540102	4/11/2025
CASSH	ANG 5520L	Human Osteology Lab	450201	4/11/2025
CASSH	ANT 4525L	Human Osteology Lab	450201	4/11/2025
CASSH	HIS 4491	History of Medicine and Society	540101	4/11/2025

Courses

CASSH	HIS 5087	Museology and Museography	540101	4/11/2025
CASSH	LAH 4131	Atlantic Indians': How Indigenous and African Peoples Shaped Europe & the Americas	540101	4/11/2025
CASSH	LAH 4135	Spanish Conquest of the Americas	540101	4/11/2025
CASSH	LAH 4451	Greater Mexico: Central America from Conquest to the 20th Century	540101	4/11/2025
CASSH	LAH 4474	The Colonial Caribbean	540101	4/11/2025
CASSH	LAH 6139	Early American Borderlands	540101	4/11/2025
CASSH	LAH 6476	Colonial Caribbean	540101	4/11/2025
CASSH	POT 5207	American Political Thought	451001	4/11/2025
CASSH	TPA 3344	Drafting for the Stage	500501	4/11/2025
HMCSE	CEN 4721	Human-Computer Interaction	110201	4/11/2025
HMCSE	CEN 6074	Software Assurance and Security	110201	4/11/2025
HMCSE	CNT 6519	Wireless Network Security	110901	4/11/2025
HMCSE	COP 6727	Advanced Database Systems	110201	4/11/2025
HMCSE	MAT 6904	Mathematics Research 2	270101	4/11/2025
LBJCOB	FIN 5567	Derivatives Fund Management	520801	4/11/2025
LBJCOB	ISM 4114	Business Information Systems Development	521201	4/11/2025
LBJCOB	TAX 6405	Estate Gift and Trust Taxation	521601	4/11/2025
Count	**21**			

Notes:

* MUH 2004 is listed on our 2025-2026 General Education Course List as MUH 2930. This course number changed during General Education revisions.

** ART 1015C and PHY 2048C were purged effective Fall 2026 due to the new General Education processes. Both courses will be included as Removed/Deleted for our 2026-2027 General Education Course List.

Specializations

College	CCR Number	Title	Degree	CIP Code	Approval
New	**Specializations**				
CASSH	U-ART-BA-05	Pre-Art Therapy	BA	50.0701	4/24/2025
CASSH	U-HIS-BA-02	Accelerated Bachelor's (BA) in History/Master's (MA) in History Option	BA	54.0101	5/13/2025
CASSH	U-GRA-BFA-01	Illustration	BFA	50.0409	5/6/2025
LBJCOB	M-BUM-MBA-38	Business Administration/Sport Management Emphasis	MBA	52.0201	4/28/2025
LBJCOB	U-FIN-BSBA04	Financial Planning	BSBA	52.0801	4/22/2025
UKCOH	U-PUB-BS-01	ABM - Accelerated Bachelor's to Master's - Public Health	BS	51.2201	5/1/2025
Count		**6**			
Deleted	**Specializations**				
CASSH	U-PHI-BA-06	Interdisciplinary Humanities / Women's, Gender, and Sexuality Studies	BA	24.0103	4/23/2025
UKCOH	U-HLE-BS-08	Physical Education	BS	31.0501	5/1/2025
Count		**2**			
Modified	**Specializations**				
CASSH	M-ANT-MA-00	Anthropology	MA	45.0201	3/5/2025
CASSH	R-ART-DESU00	Art BA Common Content (Description)	BA	50.0701	4/7/2025
CASSH	R-COM-DESU00	Communication BA Common Content (Description)	BA	09.0102	2/24/2025
CASSH	R-IHU-DESU00	Interdisciplinary Humanities BA Common Content (Description)	BA	24.0103	4/7/2025
CASSH	U-ANT-BA-00	Anthropology	BA	45.0201	5/20/2025
CASSH	U-MRT-BA-02	Maritime Studies	BA	30.2901	5/25/2025
CASSH	U-PHI-BA-02	Philosophy	BA	38.0101	2/25/2025
CASSH	U-THE-BA-00	Theatre	BA	50.0501	4/22/2025
CASSH	U-THE-BFA-01	Musical Theatre	BFA	50.0501	4/22/2025
CASSH	U-THE-BFA-02	BFA Acting	BFA	50.0501	4/22/2025
CASSH	U-THE-BFA-03	BFA Design and Technology	BFA	50.0501	4/22/2025
HMCSE	M-CYB-MS-01	Cybersecurity	MS	11.1003	3/5/2025
HMCSE	M-DAT-MS-00	Data Science, M.S.	MS	11.0802	3/5/2025
HMCSE	M-ENV-MS-00	Environmental Science - Thesis Track	MS	03.0104	3/5/2025
HMCSE	M-INF-MS-03	Information Technology MS	MS	11.0103	4/29/2025
HMCSE	R-BLY-DESM00	Biology MS Common Content (Description)	MS	26.0101	3/5/2025
HMCSE	R-CPS-DESM00	Computer Science MS Common Content (Description)	MS	11.0101	4/28/2025
HMCSE	U-BLY-BS-00	Biology	BS	26.0101	4/9/2025
HMCSE	U-BLY-BS-03	ABM BS Biology/ MS in Biology	BS	26.0101	4/11/2025
HMCSE	U-BMD-BS-00	Biomedical Sciences	BS	26.0102	4/11/2025
HMCSE	U-BMD-BS-01	ABM BS Biomedical Sciences/MS in Biology	BS	26.0102	4/22/2025

Specializations

HMCSE	U-CHM-BA-00	Chemistry (BA)	BA	40.0501	4/7/2025
HMCSE	U-CHM-BS-00	Chemistry (BS)	BS	40.0501	4/7/2025
HMCSE	U-CON-BS-01	Construction Management	BS	15.1001	4/11/2025
HMCSE	U-CPS-BS-10	Software Development	BS	11.0101	4/11/2025
HMCSE	U-ENV-BS-01	Environmental Management	BS	03.0104	4/7/2025
HMCSE	U-ENV-BS-02	Natural Science	BS	03.0104	4/7/2025
HMCSE	U-ENV-BS-06	ABM BS Environmental Management/ Master of Science in Environmental Science	BS	03.0104	5/12/2025
HMCSE	U-ENV-BS-07	ABM BS Natural Science/ MS in Environmental Science	BS	03.0104	5/12/2025
HMCSE	U-MBY-BS-00	Marine Biology	BS	26.1302	4/24/2025
HMCSE	U-MBY-BS-01	ABM BS Marine Biology / MS in Biology	BS	26.1302	4/24/2025
LBJCOB	M-ADM-MSA-17	Public Administration	MSA	52.0206	3/5/2025
LBJCOB	M-ADM-MSA-18	Sport Administration	MSA	52.0206	3/5/2025
LBJCOB	M-BUM-MBA-01	Business Administration/General	MBA	52.0201	4/14/2025
LBJCOB	M-BUM-MBA-07	Business Administration/Accounting Emphasis	MBA	52.0201	3/5/2025
LBJCOB	M-BUM-MBA-08	Business Administration/Entrepreneurship Emphasis	MBA	52.0201	3/5/2025
LBJCOB	M-BUM-MBA-09	Business Administration/Supply Chain Logistics Management Emphasis	MBA	52.0201	3/5/2025
LBJCOB	M-BUM-MBA-17	Business Administration/Business Analytics Emphasis	MBA	52.0201	3/5/2025
LBJCOB	M-BUM-MBA-37	Business Administration/Human Resource Management Emphasis	MBA	52.0201	3/5/2025
LBJCOB	M-BUM-MBA-20	Business Administration/Hospitality and Tourism Leadership Emphasis	MBA	52.0201	3/5/2025
LBJCOB	M-BUM-MBA-28	Business Administration/Cybersecurity Management Emphasis	MBA	52.0201	3/5/2025
LBJCOB	M-BUM-MBA-30/31	Business Administration/Aviation Economics Emphasis	MBA	52.0201	3/5/2025
LBJCOB	M-BUM-MBA-32	Business Administration/Finance Emphasis	MBA	52.0201	3/5/2025
LBJCOB	R-ADM-DESM00	Administration MSA Common Content (Description)	MSA	52.0206	3/5/2025
LBJCOB	R-BUM-DESM00	Business MBA Common Content (Description)	MBA	52.0201	3/5/2025
LBJCOB	R-FIN-DESU00	Finance BSBA Common Content (Description)	BSBA	52.0801	4/7/2025
LBJCOB	U-ACC-BSBA01	Professional Accountancy	BSBA	52.0301	4/7/2025
LBJCOB	U-ACC-BSBA04	Accelerated Bachelor’s (BSBA in Accounting) to Master’s (MAcc)	BSBA	52.0301	4/7/2025
LBJCOB	U-FIN-BSBA02	Financial Management	BSBA	52.0801	4/22/2025
LBJCOB	U-SPM-BS-03	Sport Management	BS	31.0504	4/10/2025
SOE	M-COL-MED-02	College Student Affairs Admin	MEd	13.1102	7/24/2025
SOE	M-CUR-MED-01	Elementary Education Comprehensive	MEd	13.0301	7/24/2025
SOE	M-CUR-MED-02	Middle Level Education Comprehensive	MEd	13.0301	7/24/2025
SOE	M-CUR-MED-04	Secondary Education Comprehensive	MEd	13.0301	7/24/2025
SOE	M-ESE-MA-06	Exceptional Student Education Comprehensive - Applied Behavior Analysis	MA	13.1001	3/5/2025
SOE	M-ESE-MA-07	Exceptional Student Education Comprehensive - Special Education	MA	13.1001	7/24/2025
SOE	M-REA-MED-00	Reading Education	MEd	13.1315	7/24/2025
SOE	R-CUR-DESD00	Curriculum & Instruction EdD Common Content (Description)	EdD	13.0301	5/13/2025

SOE	R-ELE-DESU01	Elementary Education BA Common Content (Description)	BA	13.1202	4/22/2025
SOE	R-ESE-DESU00	Exceptional Student/Elementary Education Certification BA Common Content (Description)	BA	13.1001	4/22/2025
SOE	R-INS-DESD00	Instructional and Performance Technology Common Content (Description)	EdD	13.0501	3/5/2025
SOE	R-REA-DESM00	Reading Education MEd Common Content (Description)	MEd	13.1315	7/24/2025
SOE	U-ELE-BA-01	Elementary Education	BA	13.1202	7/24/2025
SOE	U-ESE-BA-01	Exceptional Student/Elementary Education Certification, BA	BA	13.1001	7/24/2025
UKCOH	M-CMH-MS-09	Health Promotion and Wellness	MS	51.1504	4/29/2025
UKCOH	M-FNP-MSN-01	Family Nurse Practitioner	MSN	51.3805	4/29/2025
UKCOH	M-HLE-MS-03	Exercise Science	MS	31.0501	4/29/2025
UKCOH	M-HLE-MS-08	Sports Performance and Coaching	MS	31.0501	4/10/2025
UKCOH	M-HTH-MHA-00	Master of Healthcare Administration (M.H.A.)	MHA	51.0701	3/5/2025
UKCOH	M-NUR-MSN-06/09	Nursing Education	MSN	51.3801	4/29/2025
UKCOH	M-NUR-MSN-10	Direct Entry MSN	MSN	51.3801	4/29/2025
UKCOH	M-NUR-MSN-11	Nursing Leadership	MSN	51.3801	4/29/2025
UKCOH	M-PUB-MPH-01	Master of Public Health - Generalist concentration	MPH	51.2201	5/12/2025
UKCOH	M-PUB-MPH-04	Master of Public Health - Health Promotion, Education and Behavior concentration	MPH	51.2201	5/12/2025
UKCOH	M-PUB-MPH-05	Master of Public Health - Global Health concentration	MPH	51.2201	5/12/2025
UKCOH	M-PSY-MA-08	Licensed Mental Health Counsel	MA	42.0101	3/5/2025
UKCOH	M-SOW-MSW-09	Social Work - Advanced Standing	MSW	51.1503	3/5/2025
UKCOH	R-ATH-DESM01	Athletic Training MS (Common Content)	MS	51.0913	3/5/2025
UKCOH	R-HLE-DESU00	Sports Coaching and Physical Education BS Common Content (Description)	BS	31.0501	4/3/2025
UKCOH	R-PSY-DESM00	Psychology MA Common Content (Description)	MA	42.0101	4/29/2025
UKCOH	U-CLN-BS-01	Clinical Lab Sciences	BS	51.1005	4/7/2025
UKCOH	U-CLN-BS-02	Clinical Laboratory Sciences MLT to MLS	BS	51.1005	4/7/2025
UKCOH	U-EXS-BS-00	Exercise Science	BS	31.0505	4/7/2025
UKCOH	U-EXS-BS-01	Accelerated BS Exercise Science/MS Exercise Science	BS	31.0505	4/11/2025
UKCOH	U-HLE-BS-13	Phys Education/Teacher Education	BS	31.0501	5/13/2025
UKCOH	U-HLE-BS-19	Sports Performance and Coaching	BS	31.0501	5/6/2025
UKCOH	U-HTH-BS-13	Healthcare Administration	BS	51.0000	4/7/2025
UKCOH	U-HTH-BS-20	Health Sciences	BS	51.0000	4/7/2025
UKCOH	U-HTH-BS-21	Behavior Analysis Specialization	BS	51.0000	4/7/2025
UKCOH	U-NUR-BSN-10	Dr. D. W. McMillan BSN Program (Pre-Licensure)	BSN	51.3801	4/11/2025
UKCOH	U-NUR-BSN-11	Dr. D. W. McMillan BSN Program (RN - BSN)	BSN	51.3801	4/11/2025
UKCOH	U-PUB-BS-00	Bachelor of Science in Public Health	BS	51.2201	4/4/2025
Count		**92**			

Minors

	College	CCR Number	Title	Degree	CIP Code	Approval
New Minors						
NONE						
	Count	**0**				
Modified Minors						
	CASSH	U-ANT-MIN-05	Medical Humanities	MINOR	N/A	2/25/2025
	CASSH	U-INT-MIN-02	Spanish	MINOR	N/A	1/6/2025
	CASSH	U-MRT-MIN-01	Maritime Studies Minor	MINOR	N/A	2/25/2025
	CASSH	U-THE-MIN-01	Theatre	MINOR	N/A	4/3/2025
	DAE	U-HON-MIN-00	Honors 4-Year Pathway	MINOR	N/A	4/7/2025
	DAE	U-HON-MIN-02	Honors 2-Year Pathway	MINOR	N/A	4/7/2025
	HMCSE	U-BLY-MIN-01	Biology Minor	MINOR	N/A	4/7/2025
	HMCSE	U-CHM-MIN-01	Chemistry Minor	MINOR	N/A	4/7/2025
	Count	**8**				
Deleted Minors						
	CASSH	U-PHI-MIN-01	Interdisciplinary Humanities / Women's, Gender, and Sexuality Studies	MINOR	N/A	4/23/2025
	Count	**1**				

Certificates

	College	CCR Number	Title	Degree	CIP Code	Approval
New Certificates						
	CASSH	M-CRJ-CERT00	Criminal Justice Leadership Graduate Certificate	CERT	N/A	4/28/2025
	CASSH	M-ENG-CERT00	AI in the Workplace	CERT	N/A	4/28/2025
	CASSH	M-POL-CERT00	Graduate Civic Literacy Certificate	CERT	N/A	4/28/2025
	CASSH	U-ENG-CERT00	AI in the Workplace	CERT	N/A	1/6/2025
	CASSH	U-POL-CERT00	Civic Literacy Certificate	CERT	N/A	4/24/2025
	CASSH	U-WLS-CERT01	Spanish Language and Culture Certificate	CERT	N/A	4/24/2025
	HMCSE	M-DAT-CERT03	Data in the Workplace Certificate	CERT	N/A	4/28/2024
	SOE	M-ABA-CERT08	Applied Behavior Analysis in Organizations Certificate	CERT	N/A	4/28/2024
	SOE	M-ABA-CERT09	Research in Applied Behavior Analysis	CERT	N/A	4/28/2024
	SOE	U-INS-CERT00	Instructional Design Certificate	CERT	N/A	5/9/2025
	SOE	U-INS-CERT01	Instructional Technology Certificate	CERT	N/A	5/9/2025
	Count	**11**				
Modified Certificates						
	CASSH	M-HIS-CERT07	Historic Preservation Certificate	CERT	N/A	3/5/2025
	CASSH	U-COM-CERT01	Social Media Communication	CERT	N/A	2/25/2025
	CASSH	U-INT-CERT00	Japanese Language and Culture Certificate	CERT	N/A	1/6/2025
	CASSH	U-WLS-CERT00	French Language and Culture Certificate	CERT	N/A	4/3/2025
	HMCSE	M-GIS-CERT00	Graduate GIS CERT	CERT	N/A	4/28/2025
	HMCSE	U-CYB-CERT02	Cyber Technologies Certificate	CERT	N/A	4/11/2025
	HMCSE	U-DAT-CERT02	Data in the Workplace Certificate	CERT	N/A	4/11/2025
	HMCSE	U-ENV-CERT05	Geographic Information Science	CERT	N/A	4/7/2025
	HMCSE	U-MEC-CERT00	Engineering Professional Certificate	CERT	N/A	4/7/2025
	LBJCOB	U-BUM-CERT05	Human Resources Management	CERT	N/A	4/7/2025
	LBJCOB	U-BUM-CERT11	Advanced Business Analytics Certificate	CERT	N/A	4/7/2025
	UKCOH	M-NUR-CERT00	Post-Masters Nursing Education Graduate Certificate	CERT	N/A	4/30/2025
	UKCOH	M-PUB-CERT09	Public Health Certificate - Environmental and Occupational Health	CERT	N/A	5/5/2025
	UKCOH	M-PUB-CERT10	Public Health Certificate - Emergency Management and Infection Control	CERT	N/A	5/5/2025
	UKCOH	U-ABA-CERT02	Undergraduate ABA Certificate	CERT	N/A	4/7/2025
	Count	**15**				
Deleted Certificates						
	NONE					
	Count	**0**				