Forensic Sciences Year Book

Faculty of Sciences, University of Windsor

CAUTION...YOU HAVE ENTERED THE CRIME SCENE! AS A FORENSIC SCIENTIST IT IS YOUR DUTY TO FIND ALL PHYSICAL EVIDENCES.

Credits: Munira Jamali and Lara Jamaleddine
In this Yearbook

- Welcome Message
  - Dr. Shashi K. Jasra, Forensic Sciences
- Mentorship in Forensic Sciences
- Program Requirement Sheets
- Forensics Course Sequencing
- Forensic Sciences Research Projects
- Forensic Sciences Research Award
- Forensic Sciences Practicum Placements
- New Technologies at UWindsor Forensic Sciences
- Trends in Forensic Sciences (TIFS-2018) Conference
- Hands on Forensics (CSI-Windsor) Workshops
- Forensics Outreach Activities
- Mock Crime Scene Investigation and Reconstruction
- Forensic Sciences Research Publications
- Forensic Sciences Featured Alumni
Welcome to all current and potential students interested in pursuing a Forensic Sciences degree. We are very excited with the many new developments this academic year. The Forensic programs are adding new mock crime scene condo and investigation laboratory, Forensics Innovation Research Lab as well as Advance Forensic Sciences courses to keep up with the diversity of the Forensic Sciences fields.

The Forensic Sciences is also proud to have incorporated new technologies in the programs. These exciting resources and opportunities are available for our students for Forensic Sciences placements and research:

- Medical Design Suite for Forensic Medicine research
• Video Spectral Comparator (VSC) for high profile document analysis
• CSI-Pix Matcher for Computerized fingerprint analysis
• FARO- Reality Crime Scene Reconstruction
• FARO 3-D Laser Scanner for Crime Scene Investigation
• Speech pro Voice Analysis
• i-Motions Biometrics Research Platform

The Forensic Sciences students at University of Windsor have the privilege to use all these high-profile equipment and software to help them develop the skills for a bright successful Future career. We all are very proud to say that seven Forensic Sciences research projects were presented in the prestigious International Association of Forensic Sciences (IAFS) Conference for 2017.

The Forensic Sciences at University of Windsor continue to have a successful mentorship program with an annual Best Mentor-Mentee pair award. We received an overwhelming response from students to participate as mentors. The dedicated blackboard website helps a lot for better communication and access to uploaded resources. Monthly meetings are organized for all the members to update and guide them on various academic issues. All the members are working enthusiastically to make this program successful

We just had a very successful 5th annual conference Trends in Forensic Sciences Conference on 6th April 2018: www.uwindsor.ca/tifs. This is the only University sponsored Forensic Sciences conference in Canada. The event has become very popular over the years.

The Forensic Sciences programs at University of Windsor gives the students the option to tailor the degree as per their future goals and choose diverse careers in their own area/subject of specialization.

We all are proud with the University of Windsor, online open access Journal of Emerging Forensic Sciences Research http://ojs.uwindsor.ca/ojs/leddy/index.php/JEFSR.
• Don’t forget to visit our Facebook, twitter, and Instagram pages to get regular updates

Forensics@uwindsor.ca

https://www.facebook.com/forensicsatuniversityofwindsor

https://twitter.com/forensicuwindsor

I am waiting eagerly to meet you all in person and continue working for the progress of all Forensic Sciences students

Shashi K. Jasra, M.Phil., Ph.D.
Forensic Sciences, University of Windsor
Email: sjasra@uwindsor.ca
Website: www.uwindsor.ca/forensics
# Mentorship in Forensic Sciences

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Blackboard" /></td>
<td>Website in Blackboard to communicate better</td>
</tr>
<tr>
<td><img src="image" alt="Group" /></td>
<td>Mentor-Mentee Groups</td>
</tr>
<tr>
<td><img src="image" alt="Calendar" /></td>
<td>Monthly academic meetings</td>
</tr>
<tr>
<td><img src="image" alt="Mentor-mentee" /></td>
<td>Mentors are upper year Forensic students</td>
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<tr>
<td><img src="image" alt="Handshake" /></td>
<td>Each Mentee has at least one Mentor</td>
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<tr>
<td><img src="image" alt="No Cost" /></td>
<td>No cost to participate</td>
</tr>
<tr>
<td><img src="image" alt="Award" /></td>
<td>Best Annual Mentor-Mentee Award</td>
</tr>
</tbody>
</table>
Best Mentor-Mentee Award

- Monthly Peer Logs
- Participation
- Pop Quizzes

The Best Mentor-Mentee Award Recipients for 2017-18 are:

Opehlia Wong - Mentor
Raven Bickford - Mentee

For more information:
Email: Dr. Shashi Jasra (sjasra@uwindsor.ca)
Bachelor of Forensic Science (Honours)  
2018-19 (40 Courses)  
1. Major Requirements (27 Courses)  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>55-140</td>
<td>Biological diversity</td>
<td>55-141</td>
<td>Cell biology</td>
<td>64-130</td>
<td>Physics for Life Sciences1</td>
</tr>
<tr>
<td>55-140</td>
<td>General Chemistry I</td>
<td>55-141</td>
<td>General Chemistry II</td>
<td>62-140</td>
<td>Differential Calculus Or 03-62-139 Functions and Differential Calculus</td>
</tr>
<tr>
<td>60-104</td>
<td>Computer concept for end users</td>
<td>66-141</td>
<td>Introduction to Environmental Science</td>
<td>46-115</td>
<td>Introduction to Psychology /Behavioral Science</td>
</tr>
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Forensic Sciences:  

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</thead>
<tbody>
<tr>
<td>57-110</td>
<td>Introductory Crime scene investigation</td>
<td>57-201</td>
<td>Introduction to Forensic Sciences</td>
<td>57-210</td>
<td>Crime Scene Evidence Analysis</td>
</tr>
<tr>
<td>57-302</td>
<td>Expert Witness Testimony in Court</td>
<td>57-303</td>
<td>Forensic Identification</td>
<td>57-313</td>
<td>Digital Forensic Photography</td>
</tr>
<tr>
<td>57-402</td>
<td>Research in Forensic Sciences (Two Semesters)</td>
<td>57-402</td>
<td>Research in Forensic Sciences</td>
<td>57-410</td>
<td>New Perspectives in Forensic Evidence Analysis</td>
</tr>
<tr>
<td>57-304</td>
<td>Insect Evidence</td>
<td>57-380</td>
<td>Forensic Serology and DNA Applications</td>
<td>57-480</td>
<td>Forensic Medicine: Toxins and Pathology</td>
</tr>
<tr>
<td>57-482</td>
<td>Bioterrorism, Food, and Environment Forensics</td>
<td>57-420</td>
<td>Special Topics in Forensic Sciences</td>
<td></td>
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</tbody>
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Any Three of the Following:  

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-99-219</td>
<td>Law of Evidence in Forensics (Law)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. **Other Requirements**

3. Ten additional courses from one of the three following areas of concentration: Molecular Biology/Biochemistry; or Biology; or Chemistry.

4. 

5. At least six must be at the 300 level or above (55-xxx; 59-xxx; 57-xxx.) The area of concentration must be declared prior to entry of 2nd year studies.

<table>
<thead>
<tr>
<th>Molecular Biology/Biochemistry</th>
<th>Biology</th>
<th>Chemistry</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required Courses</strong></td>
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</tr>
<tr>
<td>55-202 Human Anatomy</td>
<td>55-210 Ecology</td>
<td>59-240 Intro Physical Chem I</td>
</tr>
<tr>
<td>55-211 Genetics</td>
<td>55-211 Genetics</td>
<td>59-241 Intro Physical Chem II</td>
</tr>
<tr>
<td>59-320 Analytical Chemistry</td>
<td>55-325 Community Ecology</td>
<td>59-251 Intro Inorganic Chem II</td>
</tr>
<tr>
<td>59-321 Instrumental Analysis</td>
<td>55-341 Evolution</td>
<td>59-320 Analytical Chemistry</td>
</tr>
<tr>
<td></td>
<td>55-359 Invertebrate Biology</td>
<td>59-321 Instrumental Analysis</td>
</tr>
<tr>
<td></td>
<td>(55-213 is a prerequisite)</td>
<td></td>
</tr>
<tr>
<td><strong>Additional FIVE from 55-xxx, 57-xxx, 59-xxx</strong></td>
<td></td>
<td><strong>Additional FOUR from 55-xxx, 57-xxx, 59-xxx</strong></td>
</tr>
</tbody>
</table>

3. **Open Options (3 courses from any area of study)**
# Combined B.A. in Forensics

**2018-19 (40 Courses)**

## 1. Major Requirements (20 Courses)

### Faculty of Science

<table>
<thead>
<tr>
<th>55-141</th>
<th>55-140</th>
<th>Any one from the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell Biology</td>
<td>Biological Diversity</td>
<td>60-104 (Computer concepts for end users)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>46-115 (Introduction to Psychology/Behavioral Sciences)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>66-141 (Introduction to Environmental Sciences)</td>
</tr>
</tbody>
</table>

#### Faculty of Sciences:

- 65-205 Stats for the Sciences

#### OR

#### Faculty of Arts, Humanities, and Social Sciences:

- 02-250 Basic Quantitative Methods in the Social Sciences

### Forensic Sciences

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<tr>
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<tr>
<td>Introductory Crime Scene investigation</td>
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<tr>
<th>57-313</th>
<th>57-400</th>
<th>57-410</th>
<th>57-411</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forensic Digital Photography</td>
<td>Theory and Practice in Forensic Sciences</td>
<td>(New Perspectives in Forensic Evidence Analysis)</td>
<td>(Advances in Human Identification)</td>
</tr>
</tbody>
</table>

Any Three of the Following:

- 57-304 (Insect Evidence) - 03-55-210 (Ecology is prerequisite)
- 57-380 Forensic Serology and DNA Applications
- 57-420 (Special Topics in Forensic Sciences)
- 57-480 (Forensic Medicine: Toxins and Pathology)
- 57-482 (Bioterrorism, Food, and Environment Forensics)

### Faculty of Arts, Humanities & Social Sciences:

<table>
<thead>
<tr>
<th>48-215</th>
<th>48-323</th>
<th>01-34-226</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of Physical Anthropology</td>
<td>Forensic Anthropology</td>
<td>Law, Punishment, and Morality or 02-43-287 History of crime</td>
</tr>
</tbody>
</table>

### Faculty of Law:

- 08-99-219 Forensic Evidence and the Canadian Legal System (Law)
2. Second Major and Other Requirements (20 Courses)

*Second Major requirements* - other subjects in Arts, Humanities, or Social Sciences: as required by that area of study.

*Other requirements*: additional options (if required) to a total of forty courses.

When a requirement in the combined Forensics program is also required as part of the course requirements for the other combined major, another course must be selected and substituted into the combined Forensics course requirements with the approval of the Forensic Program Chair, Centre for Inter-Faculty Programs".
1. **McKenna Turner, Dr. Amy Durocher, Dr. Pardeep Jasra and Dr. Shashi Jasra**  
   Evaluation of Morphological Effects of Commercially Available Acids on the human Teeth

2. **Pardeep Jasra, Chao Ma, Umang Dalwadi, Dev Shah and Meagan Beaton**  
   Detection of Shoe Print Details Using the FARO® Freestyle3D Laser Scanner

3. **Theresa Tran and Dr. Pardeep Jasra**  
   Degradation of fingernail composition from exposure to industrial chemicals

4. **Alicja Wyrzykowski and Dr. Shashi Jasra**  
   Fingerprint Analysis and Comparison of Individuals with Non-Viable Fingerprint Conditions.

5. **Paul Tucci and Dr. Ramona Maraj, Yukon Research Center**  
   Cross species comparison of taphonomic signatures using latent class clustering.

6. **Sara Akhdar and Dr. Shashi Jasra**  
   Analyzing a person's voice speaking different languages to see if those four recordings will be matched to the same person.

7. **Olivia Wuerch, Amber Fahim, Dr. Shashi Jasra and Dr. Sirinart Ananvoranich**  
   Creation and verification of bacterial clones using digestion enzymes

8. **Emilee Mancini, Joel Vansteensel and Dr. Shashi Jasra**  
   The Forensic Biometric Analysis of Changes in Heart Rate and Skin Conductance Provoked by Emotional Arousal during Initial Exposure and Subsequent Recollection of Stimuli

9. **Ivana Graic, Dr. Shashi Jasra and Dr. Pardeep Jasra**
Evaluation of techniques to visualize latent fingerprints and alteration in ridge details with time on different soft surfaces.

10. **Felipe Da Silva, Dr. Shashi Jasra, Dr. Pardeep Jasar, Const. John Lasorda and Stf. Sgt. David Deluca**
    Analysis of Falsified Fingerprints: Can a Forgery be Distinguished?

11. **Morgan Amicone and Dr. Shashi Jasra**
    Analyzing the Effect of Stroke on the Human Brian by Detecting Abnormalities in Computed Tomography Scans Using Medical Imaging Software In vivo

12. **Amber Armstrong and Dr. Shashi Jasra**
    Freezing Fingerprints to determine if Secondary Iodine Fuming will aid in the Development and Collection of Fingerprints on Frozen Materials

13. **Meagan Beaton and Dr. Pardeep Jasra**
    Determination of the Brand of Cigarettes based on Metal Contents Estimated by ICP-OES.

14. **Jessie Boycott and Dr. Shashi Jasra**
    Differentiation Between Real and Imitation Voices Using Speech Pro SIS II Software for Voice Biometrics Analysis.

15. **Lyara Kielt, Margue Mc Gregor and Dr. Shashi Jasra**
    The Forensic Biometric Analysis of Changes in Facial Response Provoked by Emotional Arousal During Initial and Subsequent Exposure to Stimuli

16. **Haylee Meloche and John Albanese**
    Examination of “Race” Determination Programs Using Measurements of Femur Bones.

17. **Josilyn Busi and Dr. Shashi Jasra**
    Viability of latent fingerprints on common clothing materials developed using 1,2-Indanedione

18. **Brandi Macdonald and Bruce Vogel, RCMP Peace River Alberta**
    Does Time Deteriorate Footprint Impressions
19. **Mitchell Smithson and John Albanese**  
Stature Estimation Using Fragmented Femora

20. **Munira Jamali and Dr. Shashi Jasra**  
Early Detection of Cerebral Berry Aneurysms using volume rendering in In vivo

21. **Vanessa Owen and Dr. Shashi Jasra**  
In-vivo Medical Design Studio Technology for Clinical Application of MRI Scans of Glioblastomas (Brain cancer).

22. **Ashlyn Groom and Dr. Shashi Jasra**  
Distinction between disguised voices using speech pro SIS-II and sound cleaner filtering analysis
Forensic Sciences Practicum Placements

Windsor Regional Hospital, Pathology Department

Windsor Police Services, Forensic Identification

Chatham Police Services

Toronto Police Services

RCMP

Ontario Provincial Police, Chatham
5th Annual Trends in Forensic Sciences Conference

Friday, April 6, 2018, University of Windsor

Professional Guest Speakers | Research Showcase | CSI-Windsor Workshops | Mock Crime Scene

Lots of Prizes
The opening ceremony of the conference began with Dr. Shashi Jasra – Convenor of the TIFS Conference at the University of Windsor welcoming everyone to the 5th Annual Trends in Forensic Sciences Conference. She invited Dr. Douglas Kneale, Provost and Vice President, Academic, University of Windsor up on stage for the opening ceremony. Dr. Chris Houser, Dean Faculty of Science, University of Windsor, Windsor Police Chief Al Frederick, Dr. Peter Frade of Wayne State University and Dr. Shashi Jasra were next to speak during the ceremony.

During the opening ceremony, Dr. Douglas Kneale said motivating words as always and the importance of Forensics to commemorate the conference and its impact on the University of Windsor. Windsor Police Chief – Al Frederick started off the opening ceremony by saying that “The world has recognized Forensic Sciences as the key to our happiness… the key to public safety.” He emphasized the collaboration between the police agency and the academic world.

Following the Windsor Police Chief, Dr. Peter Frade stressed the proposal of the collaboration of a graduate program between Wayne State University and the University of Windsor – promising an exciting start to the day. The presentations were then underway, with a series of guest speakers introduced by Master of Ceremonies Munira Jamali and Regan Pardo.
Pictured from left: Dr. Pardeep Jasra, Provost and Vice President, Academic Dr. Douglas Kneale, Forensics Program Chair Dr. Shashi Jasra and Dean of Science Dr. Chris Houser

“The world has recognized Forensic Sciences as the key to our happiness... the key to public safety.”
Windsor Police Chief – Al Frederick
Trends in Forensic Sciences (TIFS-18) Conference

CSI-Windsor Workshop Session A 2018

**Trace Evidence and Microscopy – Station Leader:** Peter Truong

**Speech Pro Software – Station Leader:** Jessie Boycott and Sara Akhdar

**Biometrics – Station Leader:** Emilee Mancini

**3D Footwear Impressions – Station Leader:** McKenna Turner

**Forensic Entomology – Station Leader:** Theresa Tran and Vanessa Owen

**Blood Spatter Patterns – Station Leader:** Lyara Kielt and Amber Armstrong

*Mr. Philip Beckman presenting FARO Reality Software*
Trends in Forensic Sciences (TIFS-18) Conference

CSI-Windsor Workshop Session B 2018

Trivia Game Station – Station Leaders: Ahmed Abdallah and Aya-El-Sabbagh
Fingerprint Analysis – Station Leaders: Josilyn Busi and Amber Armstrong
Firearms and Ballistics – Station Leaders: Theresa Tran and

Document Examination – Station Leaders: Peter Truong and Olivia Wuerch

Document Analysis Station run by Peter Truong (pictured) and Olivia Wuerch
Trends in Forensic Sciences (TIFS-18) Conference

Forensic Research Showcase at TIFS-18
Forensic Research Showcase at TIFS-18
TIFS-18: CSI- Windsor Workshops
TIFS-18 Photo booth!
Mock Crime Scene Investigation and Reconstruction
Trends in Forensic Sciences (TIFS-18) Conference

Acknowledgements

Conference Founders/Convenors:
Dr. Shashi Jasra
Dr. Pardeep Jasra

Conference Student Coordinators:
Regan Pardo
Munira Jamali

Guest Presenters:
Dr. Gary Berman
Philip Beckman
Brooke Fox
Emerson Camisso
Andrea Djolovic
Jaclyn Slaney

Student Presenters:
Emilee Mancini
Lyara Kielt and Margue Mcgregor
Olivia Wuerch
Meagan Beaton
Munira Jamali
Jessie Boycott

ALL Sponsors: www.uwindsor.ca/tifs
Crime Scene Condo and Forensics Innovation Research Lab
GRAND OPENING!
Crime Scene Condo and Forensics Innovation Research Lab
GRAND OPENING!
Crime Scene Condo and Forensics Innovation Research Lab
GRAND OPENING!
HALLOWEEN PARTY!
2017 and 2018
Forensics Outreach and Workshops

CSI WINDSOR
Hands-On Workshops
By:
Dr. Shashi Jasra, Dr. Pardeep Jasra
Student Credits: Reem Hamami, Ashlyn Groom, Cassandra Banner, Regina Sarweh, Joel Vansteensel, Aikede Aikebaier, Hiba Alginahi

Participant Name ___________________________ Date ______________
For Current and More Information visit:

- www.uwindsor.ca
- www.uwindsor.ca/tifs
- https://www.facebook.com/forensicsatuniversityofwindsor
- Follow us on Twitter Forensics@uwindsor.ca