



Pediatric and Obstetric-Gynecologic Anesthesiology

» Modality: online

» Duration: 6 months

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-pediatric-obstetric-gynecologic-anesthesiology

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Certificate

# 01 Introduction

Anesthesia in pediatric patients, and recurrently in women and delivery, is specific to the role of the anesthesiologist. Administrative channels, pharmacological dosage or anesthetic approach techniques are some of the issues that should be given special attention in children and women. This program provides an update on the main procedures for pediatric and obstetric-gynecologic anesthesia.

Keeping up to date in the procedures of locoregional anesthesia and pain management is key to provide better patient care.





### tech 06 | Introduction

The need for a differentiated update on obstetric-gynecological anesthesia lies in the fact that the binomial maternal-fetus imposes special conditions that are unique in our environment, to the extent that any therapeutic action has a greater dimension than that of the subject itself. It is therefore necessary to know, supported by solid science, the pathophysiological foundations of maternal-fetal interaction, so that our therapeutic procedures are performed with maximum safety for all.

This program also includes several updated chapters on gynecologic-oncologic anesthesiology, which provide a modern and updated view of the profound therapeutic changes experienced in this field, and the new anesthetic needs to address these new realities.

In a parallel but highly relevant way, the program addresses in depth the consideration of pediatric patients. These patients are their own entity and, on many occasions, present base pathology that differs both in its etiology (congenital diseases) and clinical manifestations, as well as in the way in which they are tolerated, and the criteria established by inexperienced personnel may confuse the degree of severity.

Along with this Postgraduate Diploma's specific scientific considerations, the program also includes psychological and affective factors associated with child illnesses. The experience of their pathological process, hospitalization and separation from their parents can transform an irrelevant process into a terrible nightmare with important psychological consequences.

This **Postgraduate Diploma in Pediatric and Obstetric-Gynecologic Anesthesiology** is the most complete and up-to-date scientific program on the market. The most important features of the program include:

- Clinical cases presented by specialists in anesthesiology and other areas. The
  graphic, schematic, and eminently practical contents with which they are created
  provide scientific and practical information on the disciplines that are essential for
  professional practice.
- Real high-resolution images of pathologies, diagnostic imaging tests and guided procedures.
- Presentation of practical workshops on procedures and techniques.
- Algorithm-based interactive learning system for decision-making in the presented clinical situations.
- Action protocols with the most important advances in the specialty.
- All this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments.
- With a special emphasis on evidence-based medicine and research methodologies in anesthesiology.
- Content that is accessible from any fixed or portable device with an Internet connection.



You will be able to learn, through the latest educational technology, the most recent advances in pediatric and obstetric-gynecologic anesthesia"



This Postgraduate Diploma may be the best investment you can make when choosing a refresher program for two reasons: in addition to updating your knowledge of Pediatric and Obstetric-Gynecologic Anesthesiology, you will obtain a qualification from TECH Technological University"

The teaching staff is made up of a team of leading anesthesiologists, who bring to this training the experience of their work, in addition to recognized specialists in other medical areas.

The multimedia content developed with the latest educational technology will provide the physician with situated and contextual learning, i.e., a simulated environment that will provide immersive training programmed to train in real situations.

This program is designed around Problem Based Learning, whereby the student must try to solve the different professional practice situations that arise during the course. For this reason, you will be assisted by an innovative, interactive video system created by renowned and experienced experts in the field of pediatric and gynecologic anesthesiology with extensive teaching experience.

Incorporate the latest developments in pediatric and obstetric-gynecologic anesthesia to your medical practice and improve patient prognosis.







### tech 10 | Objectives



#### **General Objective**

 Update specialist physicians on the procedures and techniques performed in anesthesia for pediatric and obstetric-gynecologic patients, incorporating the latest advances to increase the quality of their daily medical practice and improve patient prognosis



#### **Specific Objectives**

- Update on the evaluation tools for preoperative anxiety
- Incorporate the prophylaxis techniques for preoperative anxiety
- Assess the consequences of anxiety in children
- Update on the preoperative evaluation procedures in pediatrics. The complementary studies we should request and in which surgeries
- Incorporate the different risk scales in pediatric anesthesia to medical practice.
- Explain what information to divulge in consultation and how
- Review the most appropriate fasting time for each patient, and fasting replacement time
- Identify the latest advances in crystalloid replacement
- Describe the most important aspects in colloid use in children
- Identify the latest advances in monitoring in different subspecialties: Cardiac Surgery, Neurosurgery, Spine Surgery and Neonatal Surgery
- Review the procedures for difficult airway management in pediatric patients
- Update on the approach to increasingly frequent pathologies in children such as asthma, diabetes, obesity and children with OSAHS
- Describe the most important aspects of collateral pathologies in complex pediatric patients such as mucopolysaccharidosis and metabolopathies or myopathies

- Incorporate new indications in ultrasound use
- · Identify the latest developments in inhalation anesthesia
- Update on the procedures for TIVA use in pediatrics. Pediatric TCI
- Describe the particularities in the pediatric use of new drugs such as Sufentanil, Dexmedetomidine and Sugammadex
- Assess the importance of the anesthesiologist outside the operating room in a21st century hospital
- Identify the minimum safety requirements that a facility must meet to perform anesthesia
- Explain the peculiarities of the different environments outside the operating room: MRI, digestive endoscopy, emergency, oncology or evoked potentials
- Analyze the short and long term consequences of pain in children
- Incorporate advanced analgesia techniques in pediatric patients
- Review the basic fundamentals in the anesthetic management of congenital heart disease
- Update on the anesthetic processes in the hemodynamic room
- Incorporate fast-track concepts in pediatric cardiac surgery
- Describe the indications and contraindications of neuroaxial analgesia in pregnant women
- Assimilate the new maintenance modalities for neuroaxial analgesia during pregnancy
- Differentiate the concepts of Working vs Walking epidural
- Identify the complications associated with neuroaxial techniques in labor
- · Review the usefulness of opioid drugs in labor pain relief
- Describe the main characteristics of Remifentanil as a new opioid paradigm for women in labor
- Incorporate the different PCA Modalities for remifentanil for the effective control of labor



- Describe the most common anesthetic factors for cesarean section.
- Incorporate neuroaxial techniques in cesarean section into medical practice.
- Review the uses of general anesthesia, still in common practice.
- Determine the indications for post cesarean analgesia and new regional techniques.
- Describe the specific airway problems in pregnant women.
- Incorporate the protocols for VAD approach in pregnant women.
- Identify the novelties that technology offers for the VAD approach.
- Update on the evidence for the advantages of hemodynamic monitoring
- Review the main aspects of targeted vasoconstrictor prescription.
- Describe the specific characteristics of resuscitation in pregnant women.
- Design coordination efforts between the obstetric-anesthetic team.
- Determine the timing for cesarean section and perimortem cesarean section.
- Incorporate new CPR techniques in AL intoxication.
- Identify the main aspects of anesthesia for fetoscopy and ex utero intrapartum treatments (EXIT).
- Describe tocolysis for EXIT procedures.
- Identify the new definitions of pre-eclampsia and their practical implications.
- Differentiate between entities in pre-eclampsia.
- Explain HELLP as a postpartum problem.
- Incorporate anesthetic and postoperative hypertensive pathology management in pregnancy.
- Review the paradigms for specific obstetric hemorrhage management.
- Update procedures in coagulation monitoring and thromboelastrometry.

- Describe the treatment for severe obstetric hemorrhage: hemocompounds versus factor concentrates
- Describe considerations for the treatment of peripartum cardiomyopathy
- Establish the association between hypertensive disorders in pregnancy and cardiomyopathy risk
- Address obstructive hypertrophic cardiomyopathy in pregnant patients
- Update the procedures before valvulopathies in pregnant women
- Identify new considerations in the etiology of amniotic fluid embolism (ALTE).
- Distinguish the incidence and risk factors for ALS
- Determine a multidisciplinary approach to ALS treatment
- Describe the main signs and symptoms of sepsis in pregnant women and its management.
- Incorporate GDT procedures in septic pregnant patients
- Analyze the optimization of fetal well-being during maternal sepsis treatment.
- Describe the main aspects of postoperative sepsis
- Review the physiology associated with gestational age
- Identify the differences between laparotomy and laparoscopic techniques
- Update on the procedures in laparoscopic surgery in pregnant women
- Identify the systemic effects of cancer and cancer metastasis
- Establish the interactions between antineoplastic and anesthetic drugs
- Incorporate anesthesia techniques in gynecological cytoreductive surgery
- Incorporate ERAS (Enhanced Recovery after Surgery) in Gynecologic Oncologic Surgery
- Determine the new anesthetic requirements for breast oncoplastic surgery
- Describe the techniques of locoregional analgesia and intravenous analgesia
- Explain ultrasound-guided chest wall blocks in breast surgery and establish the new gold standard. Update the procedures in laparoscopic surgery in pregnant women





### tech 14 | Course Management

#### Management



#### Dr. Muedra Navarro, Vicente

- Head of the Anesthesia Service at the General University Hospital Consortium of Valencia.
- Professor-Doctor of Anesthesiology at the Universitat de Valencia
- Degree in Medicine from the University of Valencia
- MIR Specialist in Anesthesiology, Resuscitation and Pain Therapeutics at La Fe University Hospital in Valencia
- PhD in Medicine and Surgery from the University of Valencia
- Professor of the Department of Biomedical Sciences. Faculty of Medicine. CEU Cardenal Herrera University. Valencia
- Director of doctoral theses and Master's Degree theses
- Member of several Health Care Improvement Commissions at La Ribera University Hospital
- University Expert in the Comprehensive Management of the Airway, by the Catholic University of Valencia
- Vice-president of the Department of Anesthesiology and Critical Care in Cardiac Surgery of the Valencian Community
- Member of the Spanish Society of Anesthesiology, Resuscitation and Pain Therapy
- Member of the Spanish Society of Multimodal Rehabilitation
- Head researcher in several research projects with competitive funding from Public Institutions (Carlos III Health Institute)
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### tech 16 | Course Management

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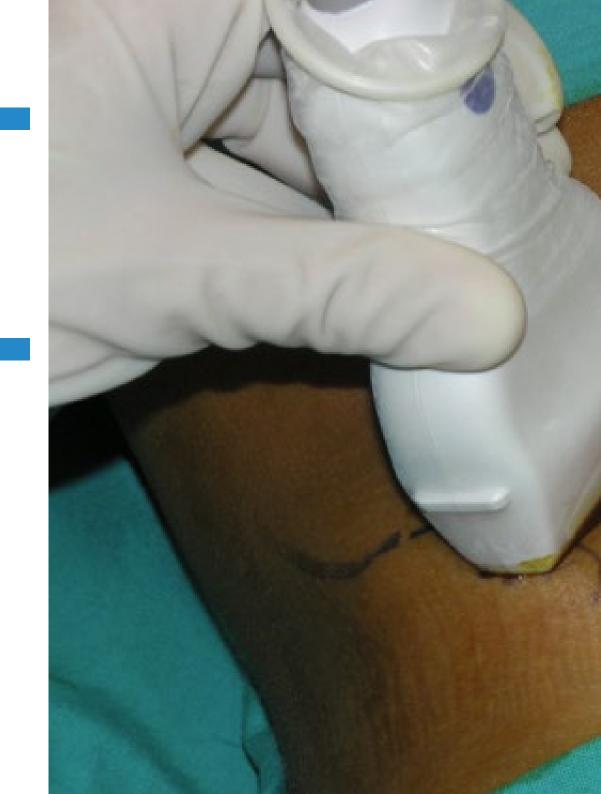
### tech 20 | Structure and Content

#### Module 1. Latest Advances in Anesthesiology

- 1.1. Perioperative Medicine and Multimodal Rehabilitation: Future of Anesthesiology
- 1.2. Hemodynamic Optimization and Target-Guided Fluid Therapy
- 1.3. Clinical Simulation as a Teaching Tool in Postgraduate Education
- 1.4. Evidence-Based Medicine (EBM) in Anesthesiology
- 1.5. Contributions of Anesthesiology to Current Patient Expectations: Clinical Safety Pain Treatment
- 1.6. Pharmacological Developments in Anesthesiology
- 1.7. Perioperative Hemorrhage Preoperative Optimization, Monitoring, New Transfusion Strategies
- 1.8. Research as a Source of Progress in Anesthesiology
- 1.9. New Antiplatelet and Anticoagulant Drugs Involvement in Anesthetic Practice

#### Module 2. Pediatric Anesthesia

- 2.1. Assessment of the Child's Behavior and Strategies to Minimize Stress and Anxiety During Induction of Anesthesia
- 2.2. Preanesthesia Visit in Pediatrics
- 2.3. Fluid and Hemotherapy in Pediatrics
- 2.4. Anesthetic Monitoring in Pediatric Surgery
- 2.5. Difficult Airway in Pediatric Surgery
- 2.6. Perioperative Management of Associated Pathology
- 2.7. Neonatal and Infant Anesthesia
- 2.8. Ultrasound
- 2.9. General Anesthesia in Pediatric Surgery
- 2.10. Anesthesia Outside the Operating Room
- 2.11. Pain in Children





### Structure and Content | 21 tech

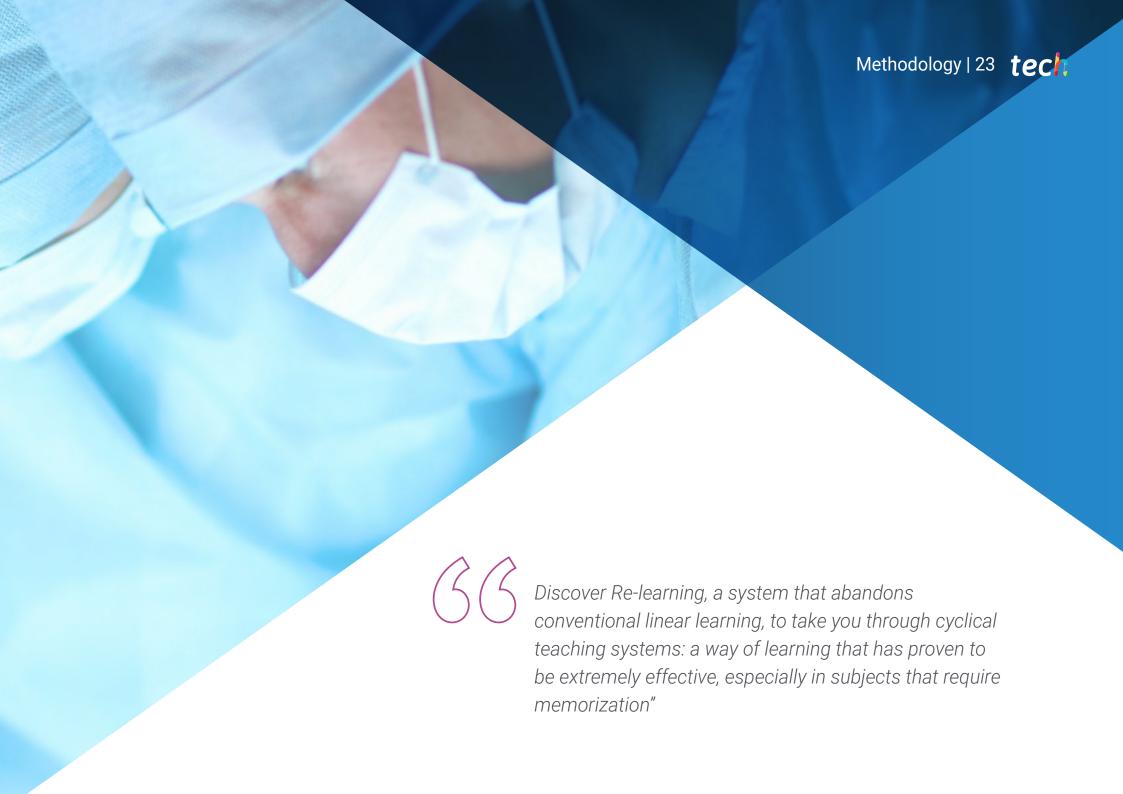
#### Module 3. Obstetric Anesthesia

- 3.1. Analgesic Update in Labor and Delivery
- 3.2. Anesthesia for Cesarean Section
- 3.3. VAD During Pregnancy
- 3.4. CPR in Pregnant Women
- 3.5. Intrauterine Fetal Surgery and Anesthesia
- 3.6. Hypertensive Disorders of Pregnancy
- 3.7. Obstetric Hemorrhage
- 3.8. Cardiopathic Pregnant Woman
- 3.9. Amniotic Fluid Embolism
- 3.10. Maternal Sepsis and Septic Shock
- 3.11. Non-obstetric Surgery in the Pregnant Patient
- 3.12. Anesthesia for Gynecologic and Oncologic Patients
- 3.13. Anesthesia in Breast Cancer



A unique, key, and decisive training experience to boost your professional development"





### tech 24 | Methodology

#### At TECH we use the Case Method

In a given situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you can experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching potential or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in professional medical practice.



Did you know that this method was developed in 1912 at Harvard for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method"

#### The effectiveness of the method is justified by four fundamental achievements:

- Students who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
- 2. The learning process has a clear focus on practical skills that allow the student to better integrate into the real world.
- 3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
- Students like to feel that the effort they put into their studies is worthwhile.
   This then translates into a greater interest in learning and more time dedicated to working on the course.



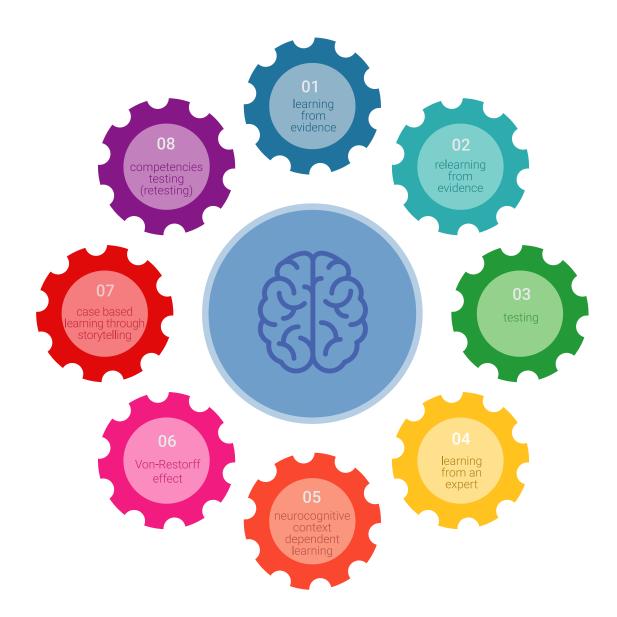


### **Re-learning Methodology**

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our University is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.

The physician will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-theart software to facilitate immersive learning.



### Methodology | 27 tech

At the forefront of world teaching, the Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 250,000 physicians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Re-learning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

In our program, learning is not a linear process, but rather a spiral (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by our learning system is 8.01, according to the highest international standards.

In this program you will have access to the best educational material, prepared with you in mind:



#### **Study Material**

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is really specific and precise.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



#### **Latest Techniques and Procedures on Video**

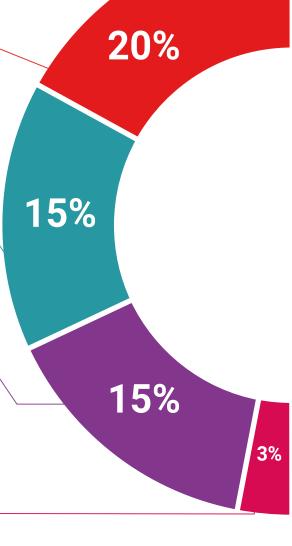
We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



#### **Interactive Summaries**

We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

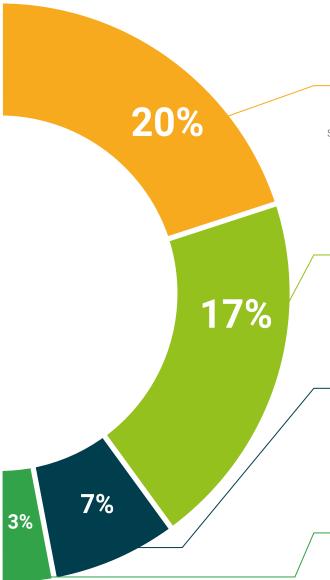
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".





#### **Additional Reading**

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.



#### **Expert-Led Case Studies and Case Analysis**

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### **Testing & Retesting**

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



#### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.



Learning from an expert strengthens knowledge and memory, and generates confidence in our difficult future decisions.

#### **Quick Action Guides**

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We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.





### tech 32 | Certificate

This **Postgraduate Diploma in Pediatric and Obstetric-Gynecologic Anesthesiology** is the most complete and up-to-date scientific program on the market.

After the student has passed the evaluations, they will receive their corresponding certificate issued by **TECH Technological University via tracked delivery.** 

This qualification contributes significantly to the professional's continuing education and enhances their training with a highly regarded university syllabus, and is 100% valid for all public examinations, professional careers and job vacancies.

Title: Postgraduate Diploma in Pediatric and Obstetric-Gynecologic Anesthesiology
Official Number of Hours: 500



<sup>\*</sup>Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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## university

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